The future of public space

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AMSTERDAM
INSTITUTE FOR
ADVANCED
METROPOLITAN
SOLUTIONS

The future of public space

Part I – Physical activity

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Executive Summary

We live in an increasingly urbanized world, yet physical inactivity and social isolation have become silent global epidemics that are adversely impacting public health. To tackle these challenges, more and more cities are promoting physical activity (PA) as a public health priority. Regular amounts of PA, through sports, play and mobility, can improve health outcomes and contribute to increased levels of social cohesion and wellbeing. Additionally, urban planners, urban scholars and community-based organizations (CBOs) are calling for the renewal of the association between the built environment and public health which has waned in the last three decades.

In 2016, the Amsterdam Institute of Advanced Metropolitan Solutions (AMS) and *La Fabrique de la Cité* committed to a three-year research partnership to investigate the relationship between public space and the well-being of urban dwellers with the support of Arup. In our inaugural year, we focused on how to design public spaces that support opportunities for PA and social cohesion. By the end of the project, AMS Institute and *La Fabrique de la Cité* give input to municipalities and private actors to better monitor and evaluate public space interventions in relation to broader policy goals.

After conducting a series of urban innovation and design workshops held in Paris and Amsterdam, our researchers identified four types of design interventions that promote PA and social cohesion within public space: permanent interventions, temporary interventions, public policies that support community appropriation, and ICT-based solutions.

The purpose of this report is to present the opportunities and challenges encountered while designing public spaces that aimed to promote PA and social cohesion. Through our global benchmark of design interventions, we illustrate how public spaces are being reimagined in a number of ways to achieve public health goals. We then present some open-source, field-tested, evidence-based design protocol and monitoring toolboxes for valorising proposed urban planning interventions. Finally, we bring focus to the city of Amsterdam, where the municipality is implementing and attempting to monitor urban design interventions as part of its Moving City initiative.

For urban designers, planners and policymakers to create truly inclusive and equitable public spaces they must first consider the geophysical conditions and cultural norms of the target urban community and the funding, resources and skills of the stakeholders involved. When redesigning public spaces, it is important to understand that there is no such thing as one-size fits all solutions.

Project methodology

WHAT
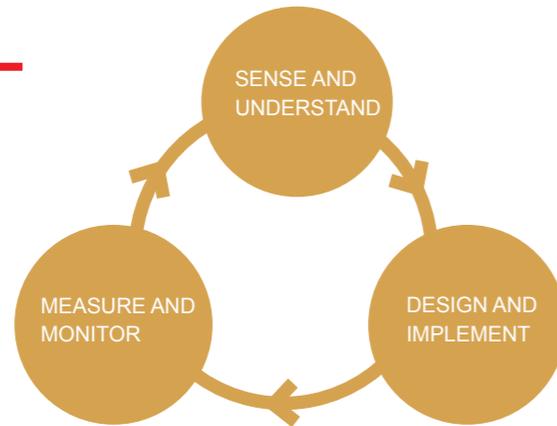
The goal of this year's project is to show different ways of designing public spaces in order to increase sport practice & PA and understanding which inputs are needed for each kind of design. Furthermore, the project aims to explore possible solutions for monitoring and evaluating these interventions.

BY WHOM

AMS Institute, *La Fabrique de la Cité* are currently leveraging their diverse partner network and world-class research assets to investigate the relationship between public space, health and social cohesion in the Plaine Commune district of Paris and Amsterdam. The initial cooperation between AMS and LFDLC has developed into a growing consortium of partners.
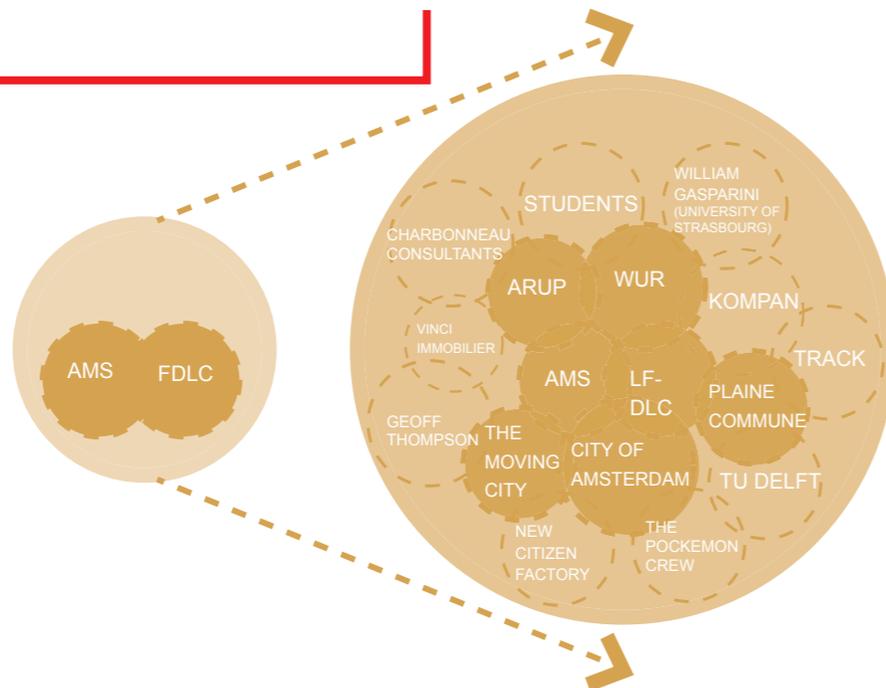
HOW
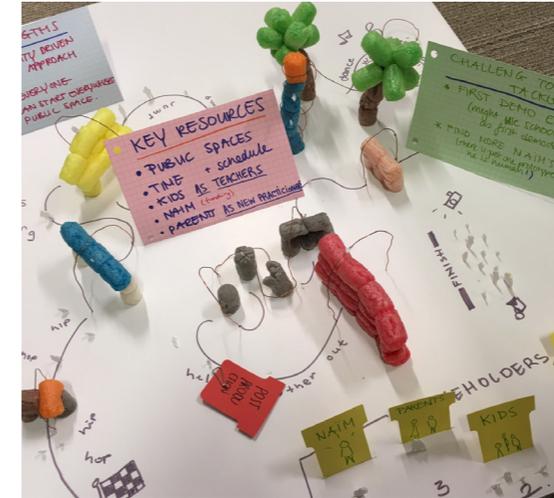
Paris Workshop: Design-thinking

This workshop focused on four predefined topics of interest: sports and the planning of public spaces; temporary sports installations and citizen initiatives; revealing the potential of public spaces through the practice of sports; new technologies and digital innovation for sport.

The workshop followed design thinking methods, which helped to channel the participants' thought process through creative exercises and brainstorming sessions towards concrete innovative solutions.

Amsterdam field workshop: evidence based

The second workshop drew upon research from *La Fabrique de la Cité*, AMS Institute and Arup. Reflecting on innovative public spaces de¬veloped throughout the world and assessing ongoing programs designed to promote physical activity, it aimed to discover ways to improve health in cities via participatory design and temporary installations, using Amsterdam as a case study. Participants visited two locations (Banne Noord and Breedveld, Amsterdam) in order to understand best practices and exchange ideas and experiences. Participants then discussed possible interventions and methods for evaluation and monitoring.

Project timeline

Dec 2016

First Workshop *La Fabrique de la Cité*, AMS Institute and Arup

Mar 2017

Paris Workshop: Plaine Commune Workshop focused on different ways to increase PA in public spaces through its design. Definition of typologies of intervention.

May 2017

Workshop Amsterdam. Workshop focused on assessment tools and evaluation toolkit.

Jul 2017

International Seminar *La Fabrique de la Cité* - Lyon: session about health in the city
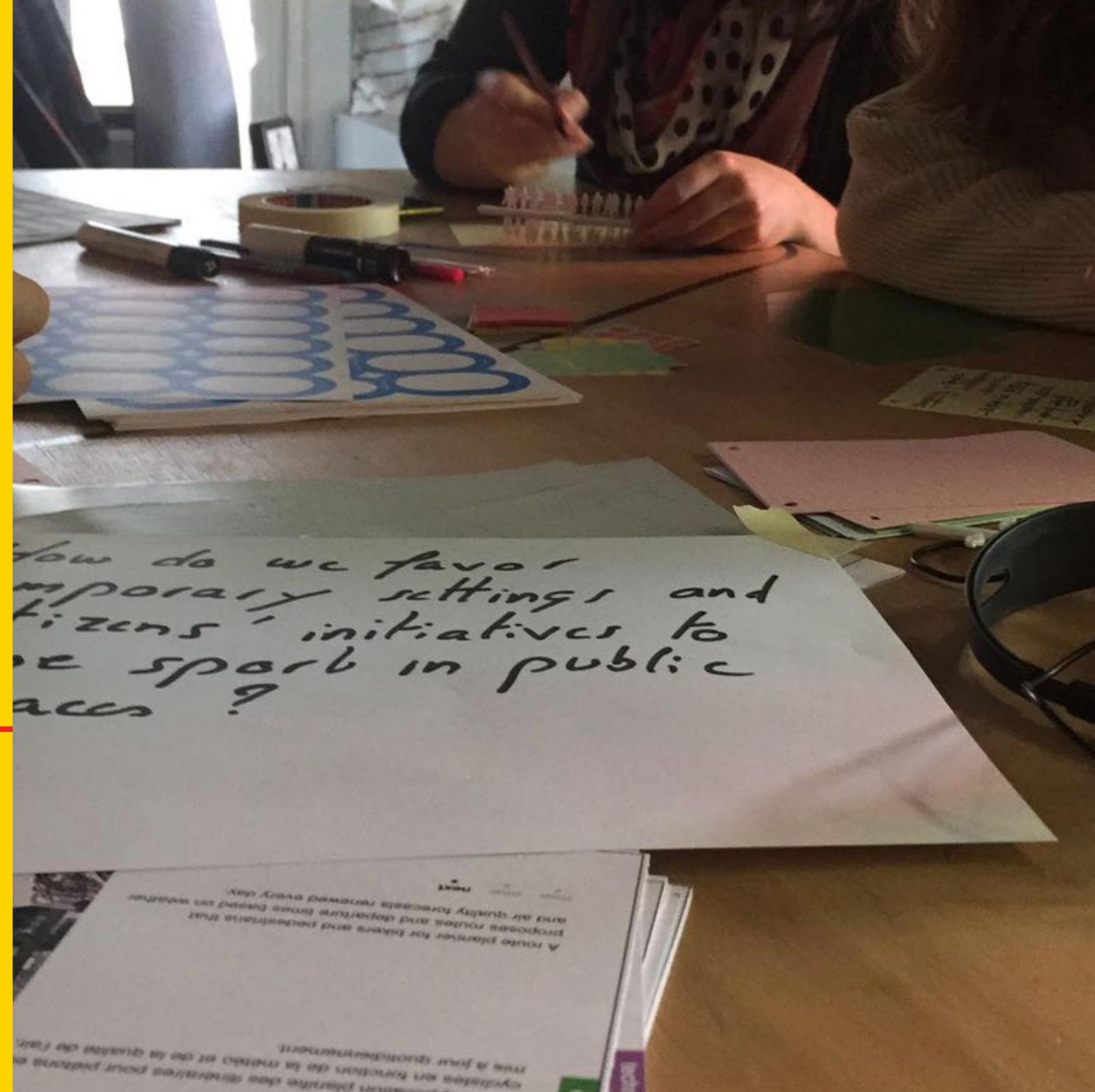
Sep 2017

Results of student's fieldwork in Amsterdam and Plaine Commune. Work started in May.

Mar 2018

Release of the first publication 'The Future of Public Space: Physical Activity'

2018

Partnership anniversary

Introduction

Health and social integration in today's cities

Cities are the undisputed cradles of civilization, where economic, creative and cultural capital converge. Thanks to the explosion in productivity brought about by the industrial revolution, urban sanitation policies, and radical innovations in agriculture and medicine more of us are living longer, healthier and wealthier lives than ever before. That being said; modernity is not without its drawbacks. Between poor diets, soaring levels of economic inequality, a century of car-centric urban planning and the ascendant age of computer-meditated sociability urban dwellers are living increasingly isolated, physically inactive and unhealthy lifestyles.

Physical inactivity[1,2] and social isolation[3,4,5] are silent pandemics sweeping the globe responsible for three to five million deaths a year due to non-communicable diseases associated with rising rates obesity, cardiovascular disease, diabetes and poor mental health (e.g. anxiety, depression). In fact, physical inactivity has been cited as the fourth leading risk factor for global mortality, and it is estimated that countries such as Germany and the United States spend about €1.7 billion and €47 billion a year respectively on indirect social and healthcare costs[6].

In recent years, state and municipal governments worldwide have made the promotion of physical activity (PA) a public health priority[7,8,9,10]. The long-term health benefits of regular PA through sports, play and active modes of transport (running, cycling, and walking), are well documented[11,12,13]. PA[14] is defined as "*any bodily movement produced by skeletal muscle that results in energy expenditure.*" The World Health Organization (WHO) defines health as "*a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity[15].*" Yet despite municipal proclamations and recommendations from healthcare professionals, physical inactivity is still a persistent problem in many urban communities.

After decades of estrangement, there is a growing chorus of health care professionals, academics, policymakers and community-based organizations (CBOs) calling for a more holistic public policy approach that renews the association between urban design and public health first pioneered in the 19th and early 20th century[16,17]. One of the key assets cities have that directly impacts the daily lives of all citizens are public spaces, or shared material spaces such as parks, civic squares, plazas and streets, accessible day and night, free of charge.

If you were to ask a random pedestrian on the sidewalk what they thought public space was, they would probably think of outdoor recreational spaces, such as public parks, playgrounds, and sports facilities, that are open to the public and free to use. And they would be partially correct. But within the academy, the concept of public space has a number of contesting (and oftentimes politically charged) definitions.

In a very basic sense, you can understand public space as diametrically opposed to the private sphere of the home, whose entrance is (ostensibly) under the control of the individual householder. In public spaces such as city streets, the public is[18] "*not only a region of social life located apart from the realm of family and close friends, but also . . . [the] realm of acquaintances and strangers.*" This ties nicely to Jane Jacobs's observation that[19] "*great cities are not like towns only larger; they are not like suburbs only denser. They differ from towns and suburbs in basic ways, and one of these is that cities are, by definition, full of strangers*".

Henry Lefebvre[20] makes a subtle but very important conceptual distinction between public space as *representational space* and as a *space of representation*. The former understands public spaces as politically benign, planned, ordered and secure spaces that do not

tolerate disorder, unsolicited interactions or political activity and where only *appropriate* users are allowed. For the latter, public spaces are expressly associated with notions of democracy as a space that can be *appropriated* by citizens to express their political claims to the public-at-large.

In this way, public spaces have enabled women, immigrants, minorities and the working class, social groups whose rights have been historically denied, to construct meaning together within a shared spatial context and claim their right to be considered part of the public. Furthermore, high quality public spaces are also associated with notions of social cohesion, or that feeling of a sense of community where individuals can freely interact based on trust, belonging, mutual respect and shared norms and values.

In March 2016, the Amsterdam Institute of Advanced Metropolitan Solutions (AMS Institute), an Amsterdam-based urban research institute and *La Fabrique de la Cité*, a Paris-based urban innovation think tank, committed to a three year-long research programme called the "Future of Public Spaces" to investigate the relationship between public space and the well-being of urban dwellers with support from Arup, a world-renowned engineering and design consultancy. In our inaugural year, we focused on how to tackle the pressing urban challenges of physical inactivity and social isolation through designing public spaces that support opportunities for PA, such as sports, play and mobility.

Sports and play in public space are fertile research vectors as they include a large variety of activities that any urban dweller regardless of age, sex, gender or socioeconomic status can participate in. Committing to sports and PA in public space may also generate social cohesion through communities of practice that transcend cultural and socioeconomic differences. Previous studies have shown that social cohesion has a positive effect on the public's health[21]. And while the

relationship between PA and health is also widely-known [22,23], its connection to public space and social cohesion has only recently received attention from urban planners and policymakers.

Present Challenges of Designing Public Spaces for PA

Health Is Complex

There are a number of variables that make studying the relationship between PA, health and the built environment particularly challenging. For starters, health and wellbeing are determined by a complex array of genetic, lifestyle, socioeconomic and environmental factors. Furthermore, committing to PA alone does not directly result in any specific health outcome[24].

Equitable Access

While public spaces such as streets, public parks and plazas are freely accessible and exist to be used by the public for a variety of purposes, there may be a conflict of interest between those who wish to use it for PA and other general purposes (leisure, entertainment, culture, mobility). Urban dwellers may not feel comfortable committing to PA in public without organization and guidance, or because of safety concerns. There may also be an element of exclusion if users feel a public space is designated for particular kinds of users (young men, senior citizens, children).

Design

Numerous studies reveal that urban design features, such as connectivity, residential density, land use mix, physically proximity to recreational public spaces (parks, trails, open green space), and perceptions of their safety and attractiveness are positively *associated*

with higher levels of PA[25]. But in many cities, working class and predominately non-white communities tend to have worse access to parks and public recreational spaces than wealthier white communities. This only works to compound the plight of poor communities, especially those of color, who already suffer from diseases associated with physical inactivity such as obesity and diabetes at disproportionally higher levels than the general population. As such, urban designers need to account for and seek to improve existing health inequalities.

Designing public spaces to meet broader public health goals is also problematic because traditional urban planning interventions can be very expensive. There is also a lack of prescriptive evidence for planners and policymakers to decide about *which types* of interventions they should invest in[26] and the means by which they can be *monitored and evaluated* to assess their impact on public health. On the other hand, while the field of urban design and planning affords researchers with the concepts and approaches for designing the built environment[27] the field of public health has valuable evidence-based research methods that are increasingly being used by architects and urban planners to quantify and assess the broader impacts of the built environment on health[28].

To tackle these challenges, this publication will answer the following questions:

What types of urban interventions promote Physical Activity (PA), well-being, and social cohesion within public space?

How can municipal authorities monitor, quantify, and benchmark these interventions?

In chapter 2, we provide a brief history of public space and its relationship to health. In chapter 3, we will answer the first problem through a (global) benchmark of design interventions in public space: permanent physical interventions (from street furniture to urban design scale); temporary physical interventions; public policies that support community appropriation; and ICT-based solutions (mobile apps and digital urban planning tools). In chapter 4, we will answer the second problem by presenting a benchmark of design protocol & monitoring toolboxes. In chapter 5, we will bring focus to the city of Amsterdam where both design interventions and monitoring are being used. And, finally, we will conclude with a research outlook.

1   (Sallis et al., 2016)
2   (Ng & Popkin, 2012)
3   ("Social isolation, loneliness could be greater threat to public health than obesity," 2017)
4   (Cacioppo, Grippo, London, Goossens, & Cacioppo, 2015)
5   (Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015)
6   (Trogdon, Finkelstein, Hylands, Dellea, & Kamal&Bahl, 2008)
7   (Beaglehole et al., 2011)
8   (Organization, 2015)
9   (Senthlingam)
10 (Trogdon et al., 2008)
11 (Janssen & LeBlanc, 2010)
12 (Penedo & Dahn, 2005)
13 (Warburton, Nicol, & Bredin, 2006)
14 (Caspersen, Powell, & Christenson, 1985)
15 (Organization, 1948)
16 (Hallal et al., 2012)
17 (World Health Organization Centre for Health Development, 2011, p. 2)
18 (Sennett, 1992)
19 (Jacobs, 2016)
20 (Lefebvre, 1991)
21 (Echeverría, Diez-Roux, Shea, Borrell, & Jackson, 2008; Rios, Aiken, & Zautra, 2011)
22 (Haskell et al., 2007);(Caspersen et al., 1985); (Health & Services, 1996)
23 (Echeverría et al., 2008; Rios et al., 2011)
24 (Activity, Use, & Medicine, 2005)
25 (Barker & Gutman, 2014);(McCann, 2013);(Dahmann, Wolch, Joassart-Marcelli, Reynolds, & Jerrett, 2010)
26 (Koohsari, Badland, & Giles-Corti, 2013)
27 (Sallis, Owen, & Fisher, 2015)
28 (Heath et al., 2012),(Refshauge, Stigsdotter, Lamm, & Thorleifsdottir, 2015)

# Public Space, Health and Social Inclusion

One does not have to go that far back in time to see when urban planning was considered a vital tool for securing public health. The explosion of urban growth that accompanied the industrial revolution during the 19th century created cities that were overpopulated and horribly polluted. Prior to the acceptance of the germ theory, scientists believed disease was caused by miasma, a poisonous vapour rising from rotting matter, hence why urban populations constantly dealt with deadly outbreaks of water-borne diseases like cholera and typhoid fever. This all changed by the middle of the 19th century when social reformer Sir Edwin Chadwick published his *Report on the Sanitary Condition of the Labouring Population of Great Britain* (1842)[1], where he described the city as having a living metabolism and "*a social body through which water must incessantly circulate, leaving it again as dirty sewage.*"

A few years later, Dr. John Snow, father of modern medical hygiene and epidemiology, published the first part of his research[2] *On the Mode of Communication of Cholera* (1855) which suggested there was a strong link between the spread of infectious diseases in the UK and the lack of waste supply and sanitation (WSS) infrastructures. Their texts became seminal within the hygienist movement in Europe and the United States which promoted housing, a potable water supply and the efficient removal of waste as essential public goods funded by income taxes. This was a truly epochal shift in western political consciousness as the health and welfare of working-class communities was seen as more important than the immediate needs of capital.

Over the next century, cities instituted ambitious public works projects to construct now standard urban infrastructures (comprehensive sewerage systems, public waterworks, paved streets, ventilated buildings, viaducts, water towers, sewerage filtration techniques) whose effect on sanitary conditions and public health cannot be overstressed. The decrepit and congested conditions of inner cities also became one of the main drivers for the creation of open
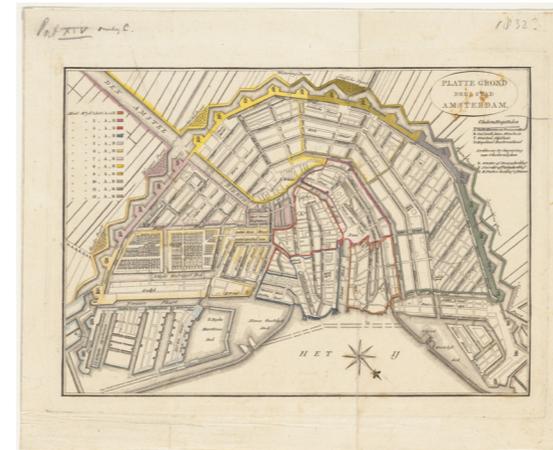
Map of Amsterdam illustrating cholera areas, 1832. (Stadsarchief Amsterdam, 2017).
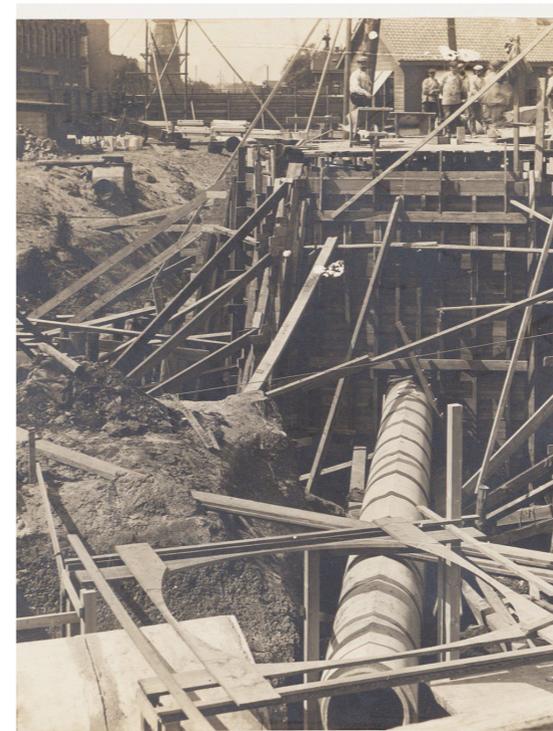
New sewage system in Amsterdam
(Stadsarchief Amsterdam, 2017).

recreational spaces such as parks. In their 1933 Athens Charter[3], the International Congress of Modern Architecture made a strongly worded call for the provision of parks as an essential principle of urban planning, calling them "*the lungs of the city*".

Parallel to these developments was the further rationalization and standardization of public space to mirror those changes happening in industry, the most important of which was the emphasis within urban planning to develop mobility infrastructures around the automobile. In this way, city streets, the most ubiquitous and utilized public spaces, were studied and developed less by prioritizing pedestrian needs and more according to what kinds of (private) motorized transportation they allowed[4]. Prominent urban scholars Gehl and Gemoze (2001)[5] have derided the car as "*invading*" public space, leaving "*not much physical space left, and when other restrictions and irritants such as dirt, noise and visual pollution are added, it doesn't take long to impoverish city life.*"

In many cities which developed after the invention of the car, especially in the United States, Australia, and Canada, urban landscapes exclude pedestrian traffic altogether. Gehl says that "*such cities are not intended for walking. Sidewalks have disappeared in the city centres as well as residential areas, and all the uses of the city have gradually been adapted to serve the motorist.*" Although not conclusive, there is a growing body of scientific evidence suggesting that urban environments that have poor quality public space and prioritize automobiles, singular land use and limited public transport access are contributing to the explosion of physical inactivity[6].

The ascendant "*age of the car*" was concomitant with two broader trends in policy and culture that many scholars claim have contributed to the steady "*erosion*" of public space and community. Within the policy realm, there has been a retreat of the state in favour of market-based forms of governance and economic development[7]. Beginning around the 1980s, cash-strapped municipal governments, especially

in the UK and the United States, began selling off formally state-managed urban infrastructures and public spaces, such as open-air squares, gardens and parks, to private firms who have transformed them into so-called privately owned public spaces (Pops)[8]. Although retaining many of the same physical attributes of traditional public space, corporate-controlled urban environments tend to emphasize security rather than interaction with strangers and entertainment rather than politics[9].

The second trend is the alleged erosion of public life brought about by the rise of individualism and the loss in confidence in public and community experiences. Building on Sennett's thesis from *Decline of the Public Man* (1977), Loukaitou-Sideris (1996) assert[10] that:

[since the 1960s this] "fragmentation of the public realm has been accompanied by fear, suspicion, tension and conflict between different social groups. This fear results in the spatial segregation of activities in terms of class, ethnicity, race, age, type of occupation and the designation of certain locales that are only appropriate for certain persons and uses."

Their hypothesis coheres with the heightened levels of urban decay observed across the United States and some parts of Europe in the 1970s and 1980s, as well as the massive migration of middle class families away from racially-mixed inner-city neighbourhoods toward exurbs and suburbs[11]. Puntam (1995) says[12] this retreat into the private sphere has been compounded by the ubiquitous use of personalized telecommunication devices (e.g. radio, television, the internet) and the privatization of leisure activities.

Worpole & Knox (2007)[13] argue that it is important to frame conversations about public space to reflect how people actually use it, and that for the general public "*ownership and appearance do not define the value of space, rather the opportunities it provides for shared use and activity.*"

In their examination of 39 public space projects across the globe, Gehl & Gemoze (2001) concluded[33]:

"In a society in which increasingly more of daily life takes place in the private sphere–private homes, at private computers, in private cars, at private workplaces and in strictly controlled and privatized shopping centres–there are clear signs that the city and city spaces have been given a new and influential role as public space and forum."

Municipal governments from Portland, Oregon to Curitiba, Brazil are pouring billions into reconquering the city from the car through urban design interventions that emphasize sports, pedestrian movement and public life, such as constructing bike lanes, revitalizing open green spaces and implementing pedestrian or car-free zones. To combat the nested negative consequences of contemporary urbanism (obesity, the privatization of leisure activities, and poor mental health outcomes), healthcare professionals, academics[14] and municipalities[15] are calling for the immediate reunification of public health goals and urban planning, realizing that "*urban planning can, and should, play a role in making the impact of urbanisation on health beneficial for people*"[16]. These sentiments are backed by studies that show that the built environment is a potential facilitator or barrier to PA within urban contexts[17].

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Sports and public space, a new relationship with strong potential(s)

Between Amsterdam's Moving City program, Plaine Commune and the upcoming 2024 Olympic games in Paris, Strasbourg's Sports City initiative, and Mumbai's informal soccer fields cities all over the world are trying to encourage sports and physical activity within public space. Some questions remain: what are the perks of developing sports practices within urbanity when dedicated spaces like parks, basketball courts and football pitches already exist? Should physical activity be a key subject for urban designers? And what influence does urban planning and design have on physical activity?

For several years now, sports and physical activity have been increasingly practiced within public space for a number of reasons:

- Diversification of practiced sports
Besides jogging, fitness trails, cycling or street sports (skateboarding, urban dance…) other niches types, such as Swedish gymnastics, yoga, table tennis, which are usually practiced indoors, are now being practiced in the streets.

- Diversification of places to practice
Even if open green spaces remain the privileged space for sports (parks, gardens, riverbanks, etc.), practitioners are increasingly recognizing the value of city streets. This may include guided practice within city squares or even rooftops, benches and scaffolds, which can appropriated for calisthenics and parkour.

- Diversification of users practicing sports in the public space
Beyond pioneer users such as sports enthusiasts – who usually are men in excellent physical condition – marginalized groups, adolescents and children are also using streets and sports fields as an urban playground for expression and practicing niche sports (skateboarding,

Children playing at the
"Hygiëaplein. Sport- en spelmiddag, 1991"
(Stadsarchief Amsterdam, 2017).

break dancing). In sum, physical activity is being generalized to all genders, ages and social groups. Nonetheless, sports practice and access to facilities remains very unequal and differentiated.

The value of practicing physical activity in public space comes from its free, inclusive and self-organized nature. It is not necessary to register in a sports club beforehand or pay entry fees. Sports in public spaces may, a priori, be practiced anywhere, at any time, by anyone, spontaneously or not – within the limits of the rule of law and order and good neighborliness, of course.

This specificity has various consequences. First, public spaces exist to be appropriated by users as they see fit. And, moreover, as the human imagination is infinite, it is impossible to think of all the possible practices people might come up with.

Second, sport activities do not generate the same scale of potential conflict. Indeed, in the moment of practicing sports in a public space you implicitly constrain how it may be potentially used by others. Noise or unintended property damage generated by sports practice, the quality of public space after use, the timing of practices during the day, as well as the spectacle it creates for passersby will considerably condition the acceptability of sports within public space.

Thirdly, public space is not neutral. It is a space of contestation. Public space is a space through which one discovers and experiences the city. It may not be only perceived as a functional space and be treated as such. As a social space, physical activity and sports may contribute to the sense of urbanity within the city.

Indeed, as Jean-Pierre Augustin notes, playfulness and sport can create a new spatiality which supports or contravenes assumed socio-spatial representations. Consider break dancing troupes like the Pockemon Crew in Lyon, France, who laid their claim to public space, if not a right to the city, through practicing their performances in a

Children playing at the
"Hygiëaplein. Sport- en spelmiddag, 1991"
(Stadsarchief Amsterdam, 2017).

square in front of the city's opera house without societal acceptance or institutional approval. Today, they are embraced by the municipality as a means of creating social cohesion within disenfranchised immigrant communities while making the city a more exciting and animated place to be. This suggests that public spaces have a very specific social complexity, where on the one hand it is the subject of public policy and control efforts while on the other public authorities can't dictate exactly how it is used by the citizenry.

Sports and physical activity in the public space as a response to societal challenges of social inclusion and public health?
The upward trend of physical activity and sports practice within public space may suffice to justify the need for them to become genuine subjects within urban design. How can cities use urban design to guide sports practices while minimizing potential user conflict? Should cities create more dedicated sport facilities? Or, on the contrary, should multifunctional public spaces be promoted to accommodate sports like any other use? How can urban furniture be designed to meet the needs of most users? Jean-Pierre Charbonneau's works prove there is no one-size-fits-all solution. Responses first and foremost depend on what is sought in the promotion of sports in the public space.

Indeed, practicing sports and physical activity in public spaces may constitute an interesting solution to the issues of public health and social inclusion. As far as health is concerned, the relation with sports seems almost consensual. The perk of developing sports practice in the public space rather than indoors comes from its free and self-organized nature, which in theory, makes it open to everyone.

According to William Gasparini there is a strong sociological bias which curbs physical activity, especially among socioeconomically disadvantaged groups and women. Sports is a social practice which, when done within non-dedicated spaces, is subjected to other users' scrutiny. As such, municipalities and/or civil society may need to nudge citizens in the right direction through guided exercise

programmes.
Is there really a link between sports practices that arise from personal initiative undertaken within spaces developed by public authorities? And how can such practices foster a sense of belonging and community?

Public spaces have the capacity of uniting society. As Marie-Christine Jaillet says, "*the city is above all a place of density, contact and social "friction" where society in all its diversity is staged. It gives to everyone the possibility to establish contact and broaden their social networks while providing anonymity.*" Yet the city "*fragments [...], and organizes in an extreme geographical contiguity, the constitution of socially differentiated beehives [...] [depriving] the urban space from its ability to arrange social relationships, to open a "shareable" space*" (Jaillet, 1997). Mobility is subject to the risk of losing fluidity because of rising symbolic frontiers and of underused public spaces. And when the city loses its friction capacity, it also loses its capacity to "make society". Thus, sports and physical activity may shed light on the following questions:

- How to give access to the public space?
Making the space available is not enough, notably for disadvantaged groups. It is necessary to facilitate its use and continued appropriation by the public. The advantage of physical activity is that it offers a reason to occupy space and give it a function.

- How to draw closer two worlds and people who do not know each other?
Physical activity may be a driver for acquaintance by sharing common practice that transcends cultural and social difference.

**- How to open up spaces?**
By encouraging movement, the creation of a track enables social mixing.

In view of these elements, practicing self-organized physical activity in a free and open space is beneficial for both society and well-being. A purely technical approach to developing public spaces for sports is not sufficient. To build a healthy city, it is necessary to guide users and favor existing sporting facilities, as well as help disadvantage groups to have more physically active lifestyles. To promote social inclusion, equipment and spaces encouraging collective games must be devised. The same applies to urban timelines and safety enabling practices in the public space for all, independent of age, ethnic background and gender. However, it is necessary to take action in order to avoid any conflict of use that would generate tensions between residents and sports practitioners, as well as promote social dialogue and raise awareness. Transversality and a holistic approach are key.

A typology was developed to draw out multiple pathways to promote physical activity in the public space. This work included two events: first in the framework of a creativity workshop to test the identified typologies, then, of a student project using it to propose a public space redevelopment concept encouraging sports and social inclusion in Plaine Commune.

1 (Chadwick, 1842)

2 (Snow, 1855)

3 (Gold, 1998)

4 (Pesch, 2017)

5 (Gehl & Gemzøe, 2001)

6 (Association, 2009);(Committee, 2010)

7 (Jones, 2014);(Harvey, 2005)

8 (Luk, 2009);(Németh, 2009);(Dewenter & Malatesta, 1997)

9 (Garreau, 2011);(Crilley, 1993)

10 (Loukaitou&Sideris, 1996)

11 (Omi & Winant, 2014);(Bolt, Van Kempen, & Van Ham,

2006 (Forrest, 2006)

12 (Putnam, 1995)

13 (Knox & Worpole, 2007)

14 Boarnet & Takahashi, 2011; Frank & Kavage, 2008;
Giles-Corti & Whitzman, 2012; Hoehner, Brennan, Brownson,
Handy, & Killingsworth, 2003; Malizia, 2006; Sloane, 2006;
Vernez Moudon, 2005

15 (e.g., National Heart Founda- tion of Australia, 2009;
The City of New York, 2010)

16 (Development, 2010)

17 (Ball et al., 2008; McGinn, Evenson, Herring, Huston, & Rodriguez,
2007; Sallis & Glanz, 2006)
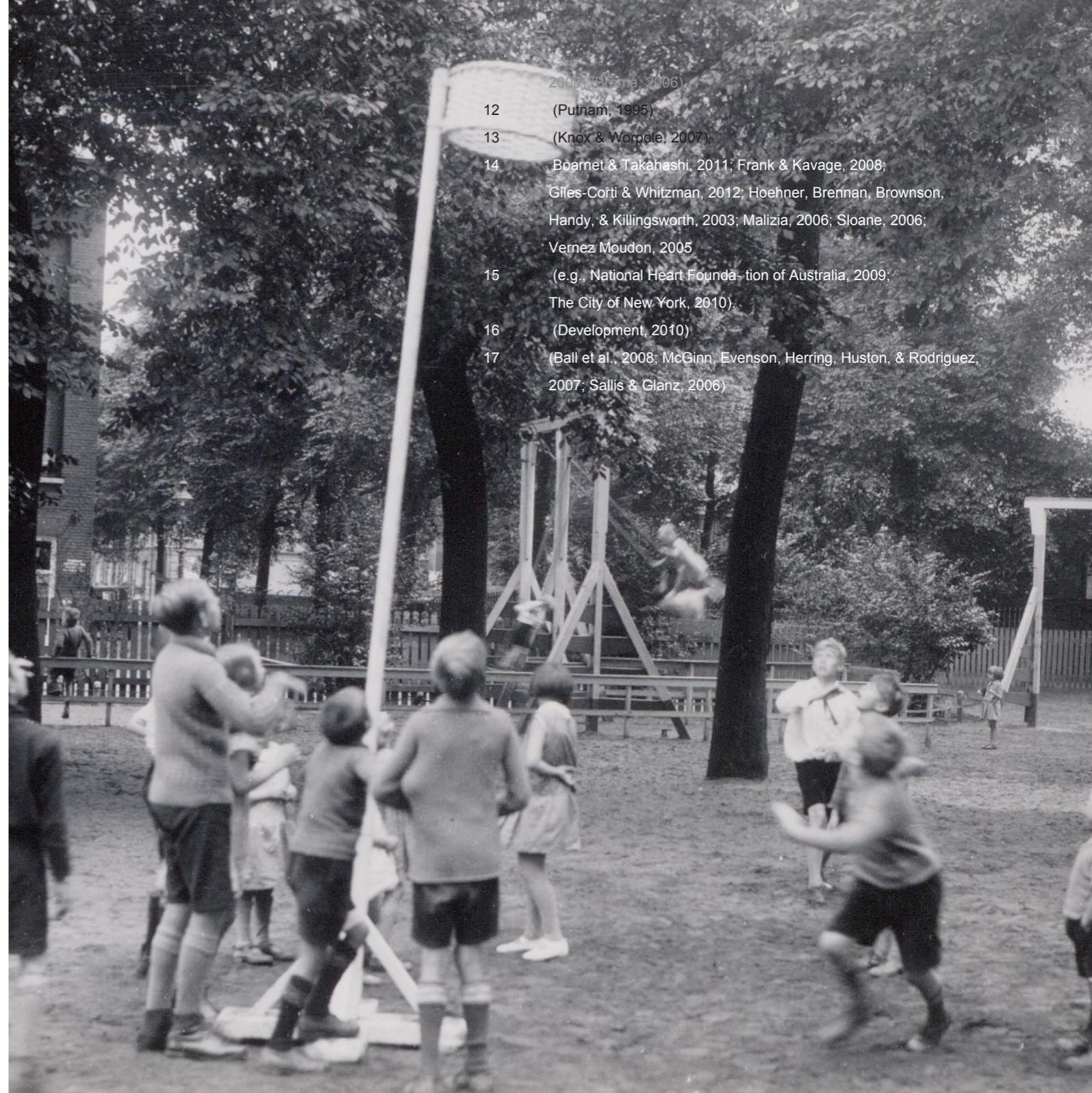
Chapter 3
Design Intervention Typologies

When redesigning public spaces, it is important to understand that there is no such thing as one-size fits all solutions. We live in a heterogeneous world where no two cities are alike, each with vastly different levels of development, budgets, governance models and stakeholder experience. And every city is composed of neighborhoods with their own urban morphology, social problems, levels of wealth and cultural norms. The cost of an urban intervention can vary widely depending on scale (street, square, neighborhood, citywide). Urban design propositions may come from citizen groups or businesses, or perhaps the city wants to temporarily try out new design ideas without investing too much into it. Urban planners, policy makers, community-based organizations and the private sector must be cognizant of each of these issues in order to create appropriate design solutions that have equitable outcomes. With this in mind, our researchers have identified four categories of design interventions that support PA and social cohesion within public space: permanent physical interventions (from street furniture to urban design scale); temporary physical interventions; public policies that support community appropriation; and ICT-based tools (mobile apps and digital platforms).

Typologies

Temporary Urban Interventions

Permanent Urban Interventions

The Appropriated City

ICT

Permanent urban interventions

One of the key ways of creating public spaces is through permanent design interventions part-and-parcel of 'classical' urban design and planning. Urban environments can be designed in countless ways to furnish opportunities for sport, play, active transport and greater social cohesion, from (relatively) low-cost options like the installing sports facilities and transforming abandoned or underutilized urban areas (factories, condemned housing, landfills) into an open (green) spaces to traditional high impact interventions, such as the wholesale redesign of urban districts to encourage walking and cycling. Then again, municipal governments are sometimes reluctant to redesign public spaces because permanent interventions can be very expensive depending on the scale of the project (street, square, neighbourhood, citywide). Permanent interventions are, by their very nature, more fixed and thus more difficult to retrofit when planners finally decide to reorient the use of the spaces. Additionally, there are different design considerations for public spaces that are multifunctional and those specifically designated for sports.

Permanent Urban Interventions

Charbonneau Consultants: promoting sport and PA throught low-cost design

Jean-Pierre Charbonneau is a Paris-based urban planner and policy consultant who was worked on the rehabilitation of over 1,300 public spaces in approximately 50 cities all over the world, from Bordeaux, Lyon, Copenhagen and Naples to the metropoles of South America. Within his own practice, Charbonneau emphasizes the importance of the user-centred, participatory design approach, where locals themselves are involved in the designing public facilities they themselves will use. In March 2017, he was a keynote speaker at a *La Fabrique de la Cité* workshop where he presented five of his successful low-cost design interventions that promote PA and sports.

La Masson, France

In La Masson, a working-class district of Montpellier, his team is transforming an underused open public space into a multifunctional linear park. Through the deceptively simple act of cleaning up dead foliage and removing unnecessary pavement they created an 800-meter long greenway with benches, picnic tables, resting points, and outdoor fitness facilities. Designers are working closely with locals of various ages in the design sports facilities and urban furniture to ensure park amenities are inclusive of all users.

Saint-Étienne, France

Saint-Étienne is a medium-sized city (pop. 172,000) that came to prominence during the industrial revolution through weapons manufacturing and coal mining. After the collapse of France's domestic coal industry in the 1980s, the city went into a steep economic decline. After considerable amount of municipal investment, Saint-Étienne has since successfully rebranded itself as a 'Design City' with a robust bicycle manufacturing sector. Despite economic redevelopment efforts, little was spent on urban renewal and the quality of its public spaces, ergo its urban quality of life, fell significantly, and in less than 10 years Saint-Étienne lost more than 10 percent of its population.

To curb the tide of urban decay, the mayor called on Charbonneau and his team for help. Researchers came up with a two-pronged strategy. First, similar to La Masson, they cleaned up and revitalized an unused area of the city and turned it into a 12 hectares green space with low-costs sports facilities for less than €500,000. They then went about designing what Charboneau calls 'small places of everyday life', 150 small squares across the city that would quickly improve the quality of life of residents to be deployed over the course of seven years. Following his explicit inclusive design ethos, the team organized participatory design workshops where policymakers and locals worked with 15 local artists, designers and architects to cooperatively conceptualize and redesign 20 to 30 of these spaces each year[1].

1. (Charbonneau, 2017)

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Building Blocks for Child Friendly Cities
Rotterdam, The Netherlands

In 2007, the municipality of Rotterdam created a research group to come up with a way to make the city more playful and inclusive of children to stop the trend of people moving out of the city to raise their families. In general, the Netherlands is a greying country that is getting older, but Rotterdam is one of the few cities that has a growing population under 27 years old. After three years, researched published Building Blocks for Child Friendly Cities, an urban planning toolbox that allows urban designers and policy makers to scan neighbourhoods and quantify their "child friendliness". According to a project document, a child friendly city doesn't just allocate more parks and playgrounds for children to play around in, but rather understands children as "*an intrinsic part of the city and should be allowed space everywhere to be young, to blossom and to become an asset.*"

The 'Building Blocks' method consist of four metrics that can be used to discern the strengths and weakness of particular neighbourhoods: child friendly housing, public space, nearby facilities, and safe traffic routes. For the sake of brevity, we will only discuss the step that deals with public spaces. They stress the importance of the condition of outdoor play areas, green play areas, and the use of space between the front door and the street. The city has since used the method to spearhead a number of ambitious urban redevelopment initiatives whose success has encouraged municipalities in other parts of the Netherlands and Belgium to use the method to guide their own redevelopment[2].

2. ("Child Friendly Cities,")

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ATAL Opportunity Areas
London, UK

Active transport Accessibility Level (ATAL) Opportunity Areas is an award-winning urban design concept developed by the ARUP and the ATAL team that was selected for the 2015 "London Housing Crisis" competition by New London Architecture and the Mayor of London. It aims to tackle the persistent shortage of affordable housing in the English capital through 'unlocking' housing density in the parts of the city with poor accessibility to public transport systems through "smart" investment in active transport methods.

The ATAL team asserts that the present master plan of London restricts housing density by tying it to a district's Public Transport Accessibility Level (PTAL). Based on their research, by decoupling urban planning from 'transport accessibility' and emphasizing 'active transport', or urban infrastructures that encourage walking and cycling, the housing density in over half the city could be doubled[3], all while creating transportation corridors that accommodate more physically active modes of travel. Although theory has not yet been put to practice, municipal officials and property developers who participated in preliminary design workshops hosted by the city have been very enthusiastic about the concept.

3. (Summaries of GLA Workshops for Winners of the New London Architecture Housing Ideas Competition 2016)

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Sports City
Strasbourg, France

Strasbourg, the largest city in the East of France, is considered the world capital of *sport-santé*, or "sports as health", where doctors are allowed to prescribe sports and PA to patients as a mean to combat chronic, non-communicable diseases like diabetes, obesity and various cardiovascular diseases. In 2012, the municipality issued a number of sweeping policies calling for the rehabilitation of public space and all publicly-owned infrastructures to promote active transport and sports activity.

Following a participatory design approach, the municipality wanted to include inhabitants within the design process as much as possible so that planning outcomes match their needs, and to do that requires surveys and workshops, and lots of them. That task has fallen on William Gasparini, a sociology professor and co-director of the Sport Policies and Territorial Planning laboratory at the University of Strasbourg whose research focuses on developing new ways of designing and practicing sports in public space.

He and his team have developed les vitaboucles, a network of paths and fitness areas that allows users to do various forms of PA: sports, running, walking, cycling and body building exercises. Within the network there are four open-ended circuits that are color-coded based on difficulty, allowing users to start where they want and explore the city in different ways based on their fitness levels.

Active Design Guidelines
New York City, New York, USA

Despite its reputation for being a walking city if there ever was one in the United States, more than half of New York City's 14 million residence are either over-weight or obese[4]. In 2010, the New York City Departments of Design, Construction, Health and Mental Hygiene, Transportation, and City Planning and the Office of Management and Budget collaborated with leading architectural and planning academics in Active Design Guidelines, an award-winning urban planning approach to help architects and urban planners create healthier buildings, streets, and urban spaces[5].

As the name entails, active design means the design of buildings and public spaces that encourage more active lifestyles, thus improving the health and welling of residents. Strategies range from the obvious, such as pedestrians are "*less likely to walk down streets and less likely to bike, if they didn't feel safe, or if the infrastructure wasn't complete,*" to perhaps a bit more obtuse understanding of what qualities a street must have to encourage PA: "*the degree to which streets and other public spaces are visually defined by buildings, walls, trees and other vertical elements.*"

One of the city's first municipal initiatives to use the active design approach is the ongoing NYC Plaza Program, a highly ambitious project that is seeing the municipal government teaming up with NGOs, CBOs and civil society to convert underutilized streets and pockets of land into vibrant public spaces. This decision was taken based on the findings that people must live within a 10-minute walk of a park to actually use it. The active design approach has made a particular splash across the pond in the United Kingdom, where it is being deployed in dozens of new housing schemes, parks, playgrounds and streets thanks to the Design Council, an influential charity that provides guidance to municipalities, communities, and developers in built environment projects[6].

4. http://www1.nyc.gov/site/doh/health/health-topics/obesity.page
5. https://centerforactivedesign.org/guidelines/
6. http://www.designcouncil.org.uk/resources/guide/active-design-designing-plac-es-healthy-lives

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Barcelona 2013-2018 mobility plan

The Catalonian metropolis of Barcelona is trying to shift the car-centric city to a superblocks model which calls for retrofitting of existing streets, sidewalks and accompanying infrastructure to accommodate more opportunities for recreation, PA and alternative means of shared transport (muses, trollies, carpooling, bicycle networks, etc.)[7]. A superblock is smaller than a neighbourhood but larger than an actual block, and will on average house between 5,000 and 6,000 people. The pilot superblock in the Eixample neighbourhood is composed of nine adjacent blocks connected in a grid. Cars and buses can only drive in the farthest perimeters of the block. The only vehicles than can enter inside the blocks must be owned by residents or local businesses, and, even then, they must drive at a maximum of 10 km/h (a considerable reduction of the city wide 50 k/m). Besides the obvious environmental benefits arising from improved air quality and reduced traffic accidents, by freeing neighbourhoods from the tyranny of motor vehicles city streets are transformed into "citizen spaces" that encourage PA, play, social cohesion and human exchanges.

When the superblocks plan is completely rolled out in 2018, they city hopes to reduce car use by a staggering 21 percent, create over 300 km of new cycling lanes, and introduce a hyper efficient 'orthagonal' public bus system which would mean that anyone in the city would be no further than 300 metres from a bus stop. If everything goes according to plan, urban planners will have 'reconquered' half of the almost 14 million square metres of the city presently dedicated to private vehicle transport and given it back to pedestrian use. "*We want these public spaces to be areas where one can exercise all citizen rights: exchange, expression and participation, culture and knowledge, the right to leisure,*" says Salvador Rueda, Director of the municipal agency for urban ecology and one of the primary instigators of the Superblocks plan[8].

"Our objective is for Barcelona to be a city in which to live. As a Mediterranean city, its residents spend a long time on the streets – those streets need to be second homes, or extensions of one's residence, at all times … Public spaces need to be spaces to play, where green is not an anecdote – where the neighbourhood's history and local life have a presence."

7. (LET'S FILL STREETS WITH LIFE: Establishing Superblocks in Barcelona, 2016)
8. (Bausells, 2016É

Lessons learned

Put simply, the built environment is the fundamental texture of any city, and by designing new public spaces you create more potential opportunities to be physically active. Permanent interventions can be strong symbols of the municipality's commitment to the wellbeing of those living in the vicinity. And from these cases we can see that they do not necessarily have to be extremely expensive to have broad-based impact. Urban planners usually take more time when planning permanent interventions, where, as in Saint-Étienne and New York City, community members and organizations themselves can be involved in the co-designing of public spaces they themselves will use, reinforcing a sense of social cohesion.

Temporary urban interventions

Temporary interventions, are, as their name entails, cheap, easily setup, short term installations that can be used to activate underutilized public spaces. Because of their low overhead and reversibility, temporary interventions are opportunity for municipalities to test out new ways to make public spaces more dynamic, inclusive and playful. Temporary interventions are also a form of place making and can be designed, funded and constructed by CBOs, NGOs or local businesses. Their experimental and time-based nature means that temporary interventions might not work out as their creators intended and have a low potential for long-term impact.

Dance-O-Mat
Christchurch, New Zealand

The Dance-o-Mat is a low-cost (€6,800)[1], pay-to-play open air dance-hall in Christchurch, New Zealand designed by Gap Filler, an urban regeneration initiative that formed as a response to back-to-back earthquakes that rocked the city in 2010 and 2011. Gap Filler focuses on deploying experimental, short-term, and small-scale projects that utilize participatory design practices and recycled materials in vacant public spaces. Consisting of a custom-built dancefloor and a sound system powered by a decommissioned coin-operated washing machine, the Dance-O-Mat allows anyone with NZD$ 2 and MP3 player or smart phone to jack-in and play the melody of their choice. Originally developed as a temporary measure to bring *joie de vivre* back to the quake decimated city in 2012, the project proved to be extremely popular with locals, clocking in over 600 hours of use in just the first three months. After three more resoundingly successful deployments, in 2013 the Christ Church City Council decided to give the Dance-o-Mat a permeant home right next to the Cathedral near downtown.

1. ("Dance-O-Mat," ND) ("Piano Staircase,");(Bates, 2009)

Pavement to parks programme
San Francisco, California, USA

San Francisco is a city known for its European-style charm, booming tech industry, and outrageously high real estate prices that make it one of the most expensive places to live in the world. About a quarter of all the land in the city is taken up by paved streets and public rights-of way areas, many of which are considerably wide and have sizeable underutilized spaces, especially those near intersections. "Pavement to Parks" is a municipal initiative started in 2010 that aims to unlock underused areas by transforming them into incubators for so-called parklets, or quickly and inexpensively constructed pop-up pedestrian spaces, and Temporary Street Plazas. While parklets tend to be funded by local businesses, residents and CBOs (thus making them privately owned plazas) tend to be sponsored by non-profits. Examples include a 'Simple Pleasures' Café, a micro museum of craft and design, multifunctional event space.

Each project is given a trial run, and because they are made cheap they can be easily taken down or modified. After they are tested best practices are record and published in the San Francisco Parklet Manual, now in its second edition, which serves as a freely available resource to anyone who wants to create their own parklet.

'Piano Stairs': Behavioural Change Initiative
Stockholm, Sweden

The Piano Stairs was a temporary interactive installation in the Odenplan subway stop in Stockholm, Sweden designed by The Fun Theory[2], a Volkswagen funded initiative, to encourage people to "*take the stairs instead of the escalator or elevator and feel better.*" If the name didn't give it away, it is a giant functioning keypad that allows users to make music as they scale up or down the stairwell. The project was an instant hit with commuters. Youtube videos of people showing their piano stair playing skills have garnished over tens of millions of views. Researchers found that during the project's lifecycle, 66 percent more people decided to take the stairs than they otherwise would.

2. ("Piano Staircase,");(Bates, 2009)

Bouncy Landscape: Brazil Pavilion Milan Expo 2015

The Brazil pavilion at the 2015 Millan Design Expo was semi-enclosed public space that allowed users to navigate a vast, elastic landscape composed of a massive network of ropes suspended over a garden. But this design was intended to be more than just a spectacle for visitors. According to designers Studio Arthur Casas and Atelier Marko Brajović, the pavilion combines "*architecture and scenography in order to provide visitors with an experience that would transmit Brazilian values and the aspirations of its agriculture and livestock farming according to the theme 'Feeding the world with solutions'*". More than just a temporary building, the sensorial immersion includes leisure, high technology information, interaction and learning. The entire project is contained within a vast corrugated steel structure that acts as a plaza. Only a limited number of visitors were allowed within the installation at any one time. Aggressive bouncing was strictly forbidden, but users were encouraged to travel together and help each other in teams, emphasizing the strength of networks and unity.

Lessons learned

Temporary interventions are conceptual spaces that disrupt our expectations of what it means to be active and playful within public spaces. Because they can be cheap, time-based, and easily deconstructed there is low risk involved in trying out even the most outlandish ideas. As shown with the Stockholm case, their (initially) fixed project duration makes them great for scientific monitoring. Despite their short-lived nature, good ideas can just as easily transform into permanent staples of the built environment or serve as benchmarks for anyone to construct in their own neighbourhood. Temporary interventions are also valuable spaces of praxis and social cohesion because they encourage local businesses, residents, and CBOs to redesign and take ownership of their own neighbourhoods.

Chapter 3.3
The Appropriated City

As inspirational as the successful cases presented so far may be, redesigning public space does not automatically translate into higher levels of PA within the public-at-large. On the contrary, without careful consideration urban planners can unintentionally exacerbate asymmetries in health outcomes that presently exist between wealthy, predominantly white neighbourhoods and those with higher concentrations of working class, non-white communities, which tend to be less physically active and unhealthy. Worse still, they can inadvertently become a force of socio-spatial exclusion that prices out the poor from the city altogether.

To ensure that disadvantaged communities are able to make use of public space and enjoy the myriad benefits of having physically active lifestyles, cities ought to adopt a more nuanced intervention approach that goes beyond physical alterations. That is to say, municipalities should also consider policies that create social environments that support active lifestyles and community appropriation of existing recreational public spaces. Mass media campaigns and community-driven efforts to promote PA (i.e. national, state, regional, local scales), via the intersectional collaboration of public health agencies, CBOs, public schools, civil society and leaders of the community who can recruit residents into voluntary groups that provide companionship and encouragement, can be extremely effective[1]. This of course also poses a challenge to urban planners, as it is difficult to plan 'unplanability' or predict exactly how the public will use public space.

1. (Kahn et al., 2002)

Pockemon Crew
Lyon, France

In the mid 1990s, Riyad Fghani and five friends were a group of incorrigible but talented youngsters from the suburbs of Lyon, France who had trouble securing a safe, reliable space where they could practice their hip-hop dance routines. They faced denials from every traditional cultural institution, until one day they came upon the expansive courtyard of the Opéra Nouvel, Lyon's main opera house, and decided right then and there that they had found their home.

Every week Fghani and his friends would meet in the courtyard and offered free dance training sessions to anyone who cared to join. After a few years, they felt they were skilled enough to compete in nation breakdance competitions, but were required to have a name first. In 1999, the Pockemon Crew was born. In the years that followed, the dance troupe amassed victory after victory in dance competitions near and far, culminating with being crowned champions of the 2013 Battle of the Year, the most prestigious breakdancing tournament in the world.

Having achieved worldwide fame, the director of the Opéra Nouvel, the back drop of their infectious dance routines for well over a decade, finally agreed to collaborate on a project. Fghani still remembers the days when he was pleading impressed onlookers who thought their dance practices were staged performances to stop giving them money and his conflicting relationship with Opera staff and law enforcement who saw their appropriation of the courtyard with a less than appreciative position. Although he no longer dances, he remains the principle choreographer of the now 50-member group, which now focuses its efforts on artistic collaborations and goodwill ambassador trips abroad.

In 2017, *La Fabrique de la Cité* wanted to understand if conducting PA in public space catalyses social cohesion. Researchers conducted sociological fieldwork monitored two dancers from the Pockemon Crew as they practiced their routine in three completely different public spaces over the course of a few hours.

The first research location was a large courtyard in front of a tram, train, and metro station. As it was expected, the general public was in a hurry and few people spent any significant amount of time with the dancers besides three homeless people, the one community which more often times than not is excluded from public space. The size of the space and the constant flow of people was much too large for researchers to meaningfully document the reactions of onlookers. The second space was in a closed corner near the front of a large supermarket, which proved to be more intimate and lead to a number of interactions between onlookers and the dancers. The third space, a small ridge within a large square between shopping malls and the town hall, proved to be the most effective. As soon as the dancers began to move a small crowd began to amass, filming them and applauding whenever there was a pause in the routine. Even a few children shed their usually shy demeanour to demonstrate their novice skills.

La Fabrique de la Cité found that public spaces are not universally receptive to community artistry, and it is not a given that conducting PA in public space translates into a greater interaction between strangers. Curiously, though, a local dancer who was unfamiliar with the crew expressed interest in joining. So, in a way, the findings did give credence to Goheen's understanding of public spaces as representational spaces where publics (in this case dancers) can commune and collectively create meaning.

The Youth Charter and Community Campus

Geoff Thompson was just like any other five-time karate world champion, when in 1993 a 14-year-old boy named Benji Stanley was shot dead in his hometown of Manchester. Deeply disturbed by the whole event, Thompson felt that if disadvantage youths like Stanley participated in more constructive, life affirming activities such as sport they wouldn't have to suffer such tragic deaths. He transmuted his sadness and frustration into hope by founding the Youth Charter, a UK-based and UN-sponsored non-profit created with the sole purpose[3] of helping disadvantage youth overcome educational non-attainment, health, inequality, anti-social behaviour, and the negative effects of crime, drugs, gang related activity, and racism by applying the ethics of sporting and artistic excellence.

Although the Youth Charter does not conduct its activities in public space per say, it actually functions as a so-called 'third place', small private-owned spaces that support and enable meaningful social interactions[4]. Considering the noted shift in our public lives from public to private spheres, third spaces like bars, taverns, or sidewalk cafes have taken have on many roles traditionally supported by public space because they mediate interactions between individuals and the rest of society. In his classification of contemporary public spaces, Carmona (2010) found that third places have a few common features[5]:
- Neutral ground where individuals can come and go as they please;
- Highly inclusive, accessible and without formal criteria of membership;
- Low profile and taken for granted;
- Open during and outside of office hours;
- Characterized by a playful mood;
- Psychologically supportive and comfortable;
- Places of conversation, and therefore also of political debate.
Thompson was also involved in the brokerage of London's eventually successful bid for the 2012 Summer Olympics games. Developing on Youth Charter's successful community-based development model, he founded Community Campus, a collection of seven multipurpose sports facilities that offer a wide range of recreational and creative activities for disadvantaged youth in London, from weight conditioning, martial arts and cultural events to life coaching and digital training. Thompson believes the Community Campus model can adapt to fit the needs of working-class communities the world over because every child has the "*fundamental right*" to sport. "*Sport is an order of chivalry, a code of ethics and aesthetics, recruiting its members from all classes and all peoples,*" says Thompson. "*Sport is culture because it enhances life and most importantly, does so for those who usually have the least opportunity to feast on it.*"

4. ("About Youth Charter,")
5. (Oldenburg, 1999)
6. (Carmona, 2010)

Healthy Streets for London
London, UK

Healthy Streets for London is a system of policies and strategies developed by the greater London Authority and spearhead by Sadiq Khan, London's first Muslim mayor, to get Londoners and tourists alike to utilize more active modes of transport (walk, cycle, public transportation etc.) and increase the urban quality of life of the city as a whole. In their effort to make more appealing street environments, the municipality wants to increase public seating, levels of shade and greenery, reduce car congestion and lower the speed limit. They also plan to temporarily closing off streets and offer them as third spaces for cultural events and activities that can entice people to get out of their homes to shop, play and chat in public (e.g. flea markets, concerts, fairs, etc.). At a more urban planning scale, they want to increase the range, reliability and affordability of public transport.

Community-based Interventions

Mass media campaigns and community-driven efforts to promote PA (i.e. national, state, regional, local scales), via the intersectional collaboration of public health agencies, CBOs, public schools, civil society and leaders of the community who can recruit residents into voluntary groups that provide companionship and encouragement, can be extremely effective at increasing levels of PA[7].

For the last 40 years, Stanford University has been engaged in long-term studies to understand the effects of intensive public health campaigns, which involved public service announcements, hours of television programming, weekly newspaper columns, and even a radio soap operas and cook books, in promoting proper diet and exercise in dozens of towns and cities across the San Francisco Bay Area. Compared to control groups, residents whose cities received public health campaigns made measurable behavioural changes to daily routines, particularly in smoking and diet, and had improved blood cholesterol and blood pressure levels[8].

A policy[9] which has been shown to be particularly effective in Latin America, are short, informational, motivational and site-specific (e.g. work places, senior citizen facilities, community areas) messages promoting PA. First pioneered in Curitiba, Brazil, a city long renowned for its cutting-edge urban planning, it includes a community-wide policy and planning strategy to promote PA through multi-scalar public awareness campaigns (neighbourhood, community, city and province), and various PA programs offered free of charge at numerous publicly accessible recreational faculties, including gymnasiums, pools, plazas, and parks. Similar programs have since been instituted in Sao Paulo, Bogota, and even at a national level in Chile.

7. (Kahn et al., 2002)
8. ("History," 2017)
9. (Heath et al., 2012)

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Lessons learned

Activating communities to appropriate public space is a cheap and effective means of supporting sport and play because human beings are social creatures by nature. Given the right amount of encouragement individuals may be more willing to commit to a goal when done in a supportive and communal environment. By allowing communities to generate meaning within the built environment on their own terms, public spaces become multifunctional spaces. As in the case of Pockemon Crew, by allowing groups to appropriate public spaces the built environment becomes more vibrant and animated, contributing to the overall attractiveness of a city. Those CBOs, NGOs and community initiatives that collaborate with the municipality also could act as potential vectors for monitoring health and well-being of the public at large.

Other possibilities come from the world of information and computer technology (ICT), more specifically, the ubiquitous presence of smart phones, the surging popularity of mobile health and fitness (M-health) applications (apps) and Big Data. Researchers and health professionals have begun to look to smart phones and mobile apps as promising, cheap and effective means of analysing and influencing consumer behaviour and encouraging sports and PA. In recent years, within industry and academia alike, "gamification", or the use of a broad spectrum of commercial video game like-elements in nongame contexts, has emerged as a popular strategy for creating digital communities and motivating and sustaining user habits associated with a desired behaviour over time[1]. The components of gamification can be broadly collected into six categories: (1) leader boards, (2) levels, (3) digital rewards (points, badges), (4) real-world prizes, (5) competitions, and (6) social or peer pressure. On the other end, smart phone wielding citizens can be used by planners to gather real-time data about the built environment and guide urban design.

To be sure, the gamification market in 2016 was estimated to worth a whopping €2.4 billion, yet there has been very few in-depth scientific studies to verify whether gamification techniques actually work. Most mobile apps are developed by private enterprises whose goals may not be in sync with municipalities and who may be reticent to share their data to urban planners and researchers for proprietary reasons. Then there is the ever-looming issue of creating safeguards to protect user privacy.

1. (Đukic, Marić, & Radić, 2017);(Lupton, 2012);(Miller & Tolle, 2016);(Houghton, 2010)

BIKO: incentivizing biking app
Bogota Colombia

Biko is a mobile app that aims to improve urban quality of life by "*getting people on their bikes to reduce the number of vehicles on the road.*" the Biko app utilizes on-board GPS and map applications (e.g. Google Maps) to let users create routes for bike trips and track how much calories they have burned and CO_2 they have saved by not using an automobile. For every kilometre you bike you earn one "Biko," a digital currency that can be redeemed at participating retailers. Biko presently has partnerships with companies in 13 cities and four countries, including Bogota, Mexico City, Los Angeles, San Francisco, Portland, Seattle and Vancouver. According to their website, Biko users have collectively reduced their carbon emissions by 2,500 tons.

TRACK

TRACK is an urban planning ICT tool developed by Track Landscapes, a start-up company founded by Thijs Dolders and Markt Reiling[2,3]. TRACK builds on data-driven visualization and research methods they developed for their master thesis in landscape architecture at Wageningen University. Utilizing so-called 'crowd-sourced' data, they are able to visualize and map exactly how residents actively use public spaces. Working with Wageningen University and the AMS Institute, TRACK technology was used to understand the spatial behaviours of runners in the Amsterdam-Noord region in order to design designated running routes. Their overall success has led to additional projects monitoring bicycle and pedestrian activity in Houten, Utrecht, and Rotterdam.

2. ("Projects,")
3. (Dolders & Reiling, 2016)

The Secret Agent: a crowdsourced walkability app
Oslo, Norway

In 2014, Vibeke Rørholt, a 15-year veteran of traffic safety in Oslo, was tasked by the Agency of Urban Environment of Norway to come up with a fun and playful way to motivate Oslo's 44,000 kids to walk and cycle more to school[4]. Olso has an ambitious plan to ban private cars from the city completely as part of a nationwide plan to halve its emissions and ban the sale of fossil fuels by 2025[5]. Rørholt first thought she was going to go about solving this problem the old fashion way by creating a traffic report, but then she realized that it may be more efficient to ask children themselves how safe they feel when they travel on the streets. Inspired by Gamification techniques, she had the idea of crowdsourcing data through a mobile app where users assumed the role of "secret agents" for the municipality, where they could send reports about their routes to school and pinpoint locations that were found to have distressing features or difficult to cross. In the last two years, the municipality has used information collected by the app to rebuild some tricky crosswalks and added more pavement to make sidewalks safer for pedestrians. While the app was designed for use in Olso alone, there are plans to roll it out across the entire country so every community can enjoy the benefits of crowdsourced urbanism.

4. (Larsson, 2016)
5. (Staufenberg, 2016)
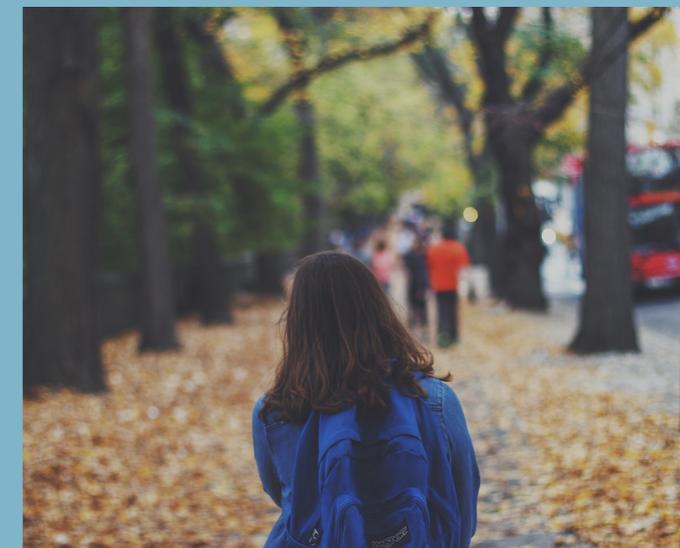
Camparc: ICT toy for Urban play
Eindhoven, Netherlands

Camparc is novel ICT-based pubic space game that encourages, exploration, physical activity and play developed by Hubbub[6], a Netherlands-based design company, for STRP, an art and technology biennale in Eindhoven. Envisioned as the playground of the future, Camparc consists of a life-size transparent ball with a 360-degree panoramic camera attached in the middle that transmits footage via a wireless network connection to a nearby computer, which then projects the footage within a virtual reality headset. The headset visor has a gyroscope that measures head movements, allowing the user to see the world from the perspective of the ball as it is being rolled around and played with in a nearby park, plaza or public square. Previous versions of Camparc didn't include a headset, and instead projected the footage onto a large anamorphic screen for public enjoyment.

6. ("Camparc,") http://whatsthehubbub.nl/projects/camparc/

Urban Mind: Measuring the impacts of cities on mental wellbeing
London, UK

Urban Mind is a mobile app developed to understand how the city and its urban environment effects people's lifestyle choices and mental health outcomes. The app is more like a mobile survey that ask users to note their mental wellbeing, social activity and when and where they are having them, seven times a day over the period of a week. Developed as a collaboration between King's College London, J&L Gibbons, Nomad Projects, A7E, the Van Allen Institute and Sustainable Society Network+, the project hopes that user-generated data can be used to create more nuanced social policy and planning that in sync with the needs of the community at large.

Lessons learned

ICT-based planning tools and M-health apps are powerful digital platforms that can build digital communities of practice and motivate users to commit to PA. Computers systems and the web can be used in a number of ways to gather evidence and information about the built environment, improve the way that people engage and are involved in co-creation, as well as employ creative ways of engaging people in activity. Smart phones themselves are sophisticated computer systems with dozens of tools on board (have camera, gyroscopes, GPS internet access, microphones, etc.) that can collect data about users and the built environment and feed it back to urban planners and policymakers to guide design. More than anything, ICTs are the latest frontier of urban infrastructure, and render the possibilities to make the built-environment more playful and responsive to urban dwellers' needs endless.

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Conclusion

It is clear that cities around the world are reimagining public spaces in ways like never before to create more opportunities for sports, play, mobility and social cohesion and that there is no one single way to achieve those ends. For urban designers, planners and policymakers to create truly inclusive and equitable interventions in public space they must first consider the spatial conditions and cultural norms in which their communities are situated, and then the funding, resources and skills of the stakeholders involved. These benchmark cases represent ardent attempts by municipalities from around the world to address the urban challenges of health and social cohesion, but it remains difficult to accurately assess how and to what extent interventions are achieving those goals. And for that we need monitoring.

Assessment tools

To date, many municipalities still lack holistic evaluation models for assessing urban planning decisions in relation to broader public policy goals. If projects are assessed at all, it is usually in terms of whether the outcome was on time and within the budget. Longitudinal impact studies that assess policy in terms of health, socioeconomic impact and cost savings are much more common within the field of public health. In order to appropriately valorise future urban planning interventions, this knowledge gap must be filled. In the second AMS-*La Fabrique de la Cité* design workshop, our researchers worked with municipal officials and business partners to answer this very question. Here, we present three widely used and publically available design and monitoring toolboxes.

Gehl Institute

Working with Jan Gehl, one of the world's leading urban designers and researchers, Copenhagen was the first city in the world to conduct long-term research about how people moved and spent their time in public space to inform urban planning. Since 1968, the partnership between the municipality and the eponymous Gehl Institute have developed a number of useful planning tools[1]. Developed in 1996, The Bicycle Account is a status report on bike use within the city that measures the number of cyclists at various locations, bicycle infrastructure, number of kilometers cycled, travel time, etc. It also goes into more detail on specific issues and trends, such as safety perceptions, accident statistics, congestion on cycle paths, ownership and use of cargo bikes, and community motivation for cycling. Thanks to this tool, Copenhagen presently holds the crown for most bike friendly city of the world.

In their report[2] Towards More Physical Activity in Cities (2017), the Gehl Institute partnered with WHO to enhance their Health Economic Assessment Tool (HEAT), a freely available online tool that can be used to assess the value, in terms of reduced mortality of mobility interventions. Despite some technical limitations, it is considered to be the gold standard for transportation planning. Gehl researchers stressed: the importance of obtaining real-time walking and cycling data; gathering more knowledge and developing bespoke tools for specific population groups (age, income, socioeconomic) so that intended interventions have more equitable outcomes; collecting and unifying data from various public, private and community actors within one database; the use of pilot projects to test new solutions, and the generous use of surveys to keep planning informed on the need of citizens.

1. (Gehl & Gemzoe, 1996)
2. (WHO, Gehl, & EU, 2017)

ARUP Health and Mobility Framework and Design protocol

In 2015, research partner ARUP was part of a consortium[3] (UCL, BRE, Perkins + Will) which developed Health + Mobility, a design protocol for gathering urban data to guide urban planning decisions.

Health + Mobility begins with a conceptual framework to categorise the determinates of health: Environment, Lifestyle & Behaviour, and genetic predisposition to disease. It then outlines the potential direct and indirect health 'impact areas' of the built environment and lifestyle choices on health and the long-term health consequences.
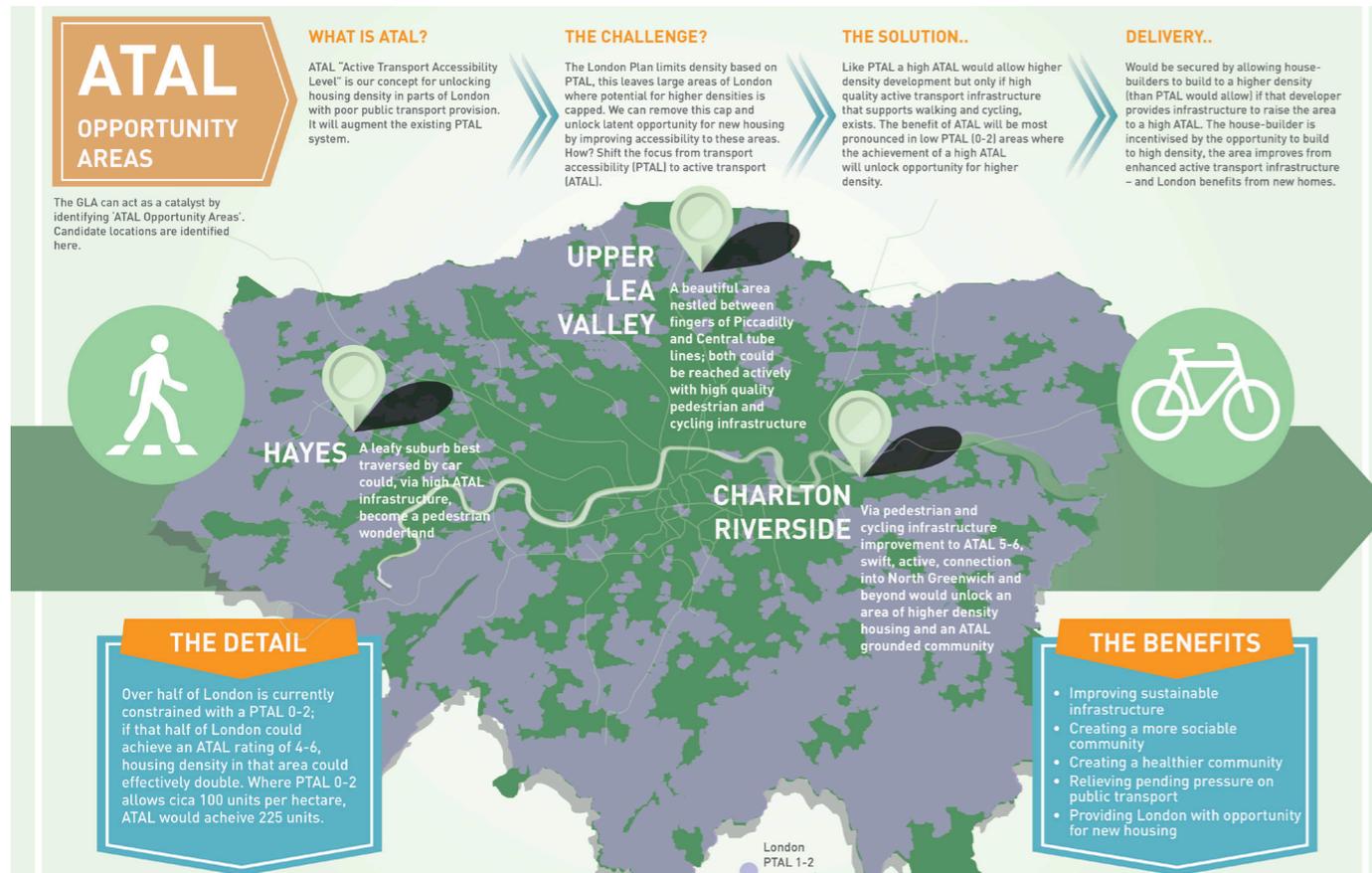
Evidence-Based Design (EBD)

First popularized by Ulrich (1984) in his landmark study which found that hospital design has a significant impact on patient stress, patient and staff safety, staff effectiveness and quality of care, evidence-based design (EBD) is defined[4] as "*a process for the contentious, explicit, and judicious use of current best evidence from research and practice in making critical decisions, together with an informed client, about the design of each individual and unique project.*"

When designing for specific groups and sites, it is important to create a triangulation between best design practices, user background, a systematic review of literature within relevant fields and expert interviews. The Center for Health Design has separated EBD into 8 distinct steps[5]:

- **Define evidence-based goals and objectives.**
- **Find sources for relevant evidence.**
- **Critically interpret relevant evidence.**
- **Create and innovate evidence-based design concepts.**
- **Develop a hypothesis.**
- **Collect baseline performance measures.**
- **Monitor implementation of design and construction.**
- **Measure post-occupancy performance results.**

With a long history of use within the field of healthcare, today EBD is seeing a renaissance within the fields of landscape design, architecture and urban planning.

3. (TAIT et al., 2016)
4. (Hamilton & Watkins, 2009)
5. ("About,")

Amsterdam
A city on the move

In this chapter, we will bring focus to the city of Amsterdam, where the municipality is implementing each of the urban design interventions thus far discussed and where the AMS Institute, *La Fabrique de la Cité* and private sector partners are engaging in research activities to monitor and valorise their efficacy. Amsterdam's reputation precedes itself. Along with being the political, economic and cultural capital of the Netherlands, this "Venice of the North" is considered one of most liveable cities in the world. The Netherlands also consistently ranks as one of the healthiest countries, with amongst the highest levels of physical activity and lowest levels of obesity in the EU. That being said, neither the Netherlands nor Amsterdam are utopias by any means. While 64 percent of Amsterdam's population are considered sufficiently active, PA levels are not consistent across age and socioeconomic groups. Almost half of primary school children are not physically active for more than an hour a day as recommended by healthcare professionals. This trend of inactivity and poorer health outcomes also extends to lower income and immigrant communities.

The Moving City

Typologies:
Permanent, Appropriation, ICT

In 2016, the municipality of Amsterdam published[1] its Bewegende Stad (Moving City) programme, an ambitious urban redevelopment initiative to design even more convenient, inclusive and equitable urban environments that encourage exercise, play and well-being in the coming decades. The Moving City is based on four integrated building blocks:

1. The Moving City provides cyclists and pedestrians with a clear path
2. Sports can be found just around the corner
3. The Moving City is a playground
4. There is no sitting still in the Moving City

The municipality wants as many citizens as possible to achieve a minimum of 30 minutes (one hour for children) of PA a day. Taking inspiration from the Active Design Guidelines, they believe that the key to getting people moving outdoors and using more active means of transport (walking, bicycling, etc.) is designing neighbourhoods that are energetic, aesthetically pleasing, high density, safely navigable, and contain a good mix of public services and local businesses.

The municipality has already published a tentative list of almost 50 permanent design interventions and public policies that encourage community appropriation of public space. For example, to support active modes of transport the city will increase car parking fees and build up bicycle and foot paths. To intensify the levels of exercise

and sport activity they want to increase availability and diversity of publically accessible sports parks and playgrounds, which will be designed and allocated based on consultations with local residents. The city is working with policymakers, architects, urban planners, civil society and the public-at-large to create bespoke planning and policy solutions fine-tuned to the needs of each and every neighbourhood. For starters, there are categorically different needs for neighbourhoods inside the A10 motorway, the "old" part of the city, and the newer suburbs on the outside. The extremely high housing density found in the urban core is positively associated with PA for adults, but not for children, while in the suburbs on the periphery have much higher levels of greenery and open public space that do not necessarily support exercise and sport.

Michelle Müller, a principle investigator within The Moving City programme, said that her team has developed a Beweegatlas (Activity Atlas), a digital tool that uses collected data on physical activity, mobility and physical infrastructure to visualizes where and how exactly people move throughout the whole city at various scales to help urban planners determine which kinds interventions and polices would be appropriate for each district. The municipality is also reaching out to

I Amsterdam parkour park (1)

Typologies:
Permanent, Community-based

Walking along the banks of Sloterpas Lake in Amsterdam's Nieuw West district, you will eventually come across a collection of massive red and white sans serif letters belonging to the iconic 'I amsterdam' sign which have been upcycled in what has been dubbed the largest free running and parkour track in the Netherlands[2]. Designed by Owner Studios and managed by Amsterdam's free-running community, these cartoonish huge letters are strewn about and surrounded by various blocks, rods, bars, and shock-absorbent surfaces, making it the perfect spot for the public to convene and master their urban ninja skills. The parkour track is part of The Moving City initiative's desire to increase the the visibility of Sloterpark, Amsterdam's largest park, in hopes of making it one of the most important recreational areas for Amsterdammers and tourists alike.

Kompan outdoor fitness park Banne Noord (2)

Typologies:
ICT, **Temporary**

Nestled in the forested environs of Amsterdam Noord, Banne Noord is a traditionally working-class neighbourhood which in recent years has come under the attention of the municipality because of its higher concertation of social problems and the general decay in urban quality of life relative to the rest of the city. As such, it is part of the first wave of neighbourhoods to be sustainably and equitably revitalized under the Active Design Guidelines banner[3]. AMS researchers were curious about what effect a planned temporary outdoor fitness park would have on community PA.

For two weeks in July 2017, the square of Parlevinkerplien was a testbed for a pop-up outdoor fitness park designed by Kompan, a Denmark-based design firm considered to be the largest supplier of playground equipment in the world, open free of charge to residents 12 or older. To get the word out to the public, the municipality published articles in various newspapers and Je Kunt Meer[4], an online community development platform. For novice users with little to no experience exercising, personal training workshops were offered one hour a day on Mondays, Wednesdays, and Fridays. The fitness park came with three distinct workout stations, each with a distinct QR code that allowed users to monitor their progress via a custom mobile app.

AMS researchers were present[5] throughout the trial to monitor the day to day events and conducted interviews with users and passers by one week before, during, and after the intervention. According to preliminary results, users came in waves, with a few hours of intense activity dominated by particular age groups, such as older women and school children, scattered between long lulls without use. Overall, the public had a mixed response to the intervention.

Many male users showed enthusiasm and stated that if the fitness park were to become permeant they would most likely return and invite some friends. Others felt the park was more suitable for children and didn't feel uncomfortable working out alone or in public. Many users didn't even know how to use the equipment. Some felt when the space was dominated by particular groups they themselves felt excluded. Very few if any interviewees had installed the Kompan app or used the QR codes. Many interviewees stated they would be more motivated to use the space with more organization and guidance. This supports the notion that for recreational public spaces to work effectively, they must be accompanied by inclusive and supportive social environments.

3. (KANSEN EN VERBINDINGENKAART BANNE NOORD, 2016)
4. ("twee weken gratis fitness in de banne,")
5. (Yu, 2017)

Walkability

Typologies:
ICT, Permanent

The municipality of Amsterdam has conducted a number of studies concerning sidewalk planning and pedestrian movements over the years, but thus far the knowledge remains fragmented, and the city still lacks integrated guidelines for designing sidewalks and walkways. Furthermore, there is a real lack of data about how many people are actually using the streets at any one time and what amount of space do pedestrians require to walk comfortably. A student researcher at AMS Institute recently developed a methodology[6] for visualizing and analysing walkability within Amsterdam for members of Traffic and Public Space department (in Dutch 'Verkeer en Openbare Ruimte' - V&OR). Using nothing more than industry standard Geographical Information Systems (GIS) programs and datasets made available by the Municipality of Amsterdam, they were able to create a functional simulation of Amsterdam's pedestrian sidewalk network and measure the total available space, public infrastructure quality and pedestrian demand for sidewalks.

6. (Briones-Ubeda, 2017)

Health, Society and communities of practice (COP) (3, 4)

Typologies:
ICT, Permanent

A group of Health and Society (HSO), Wageningen University and Research graduate students[7,8,9] , recently completed a transdisciplinary researcher project in collaboration with AMS Institute and the municipality's "Moving City" programme, where they were tasked with conducting public health research in Slotermeer, Bijlmer, Breedveld and Dapperbuurt, some of the poorest and least physically active neighborhoods of Amsterdam, and advise the municipality on how it could design/retrofit public spaces within those areas that promote PA , sport and well-being. Eight groups of students worked on four research categories (two groups per category):

• **Public spaces as playgrounds for children (Group A; Slotermeer, Bijlmer)**
• **Public spaces that give cyclists and pedestrians as much space as possible (group B; Bijlmer)**
• **Public spaces that create sports opportunities (Group C; Dapperbuurt, Breedveld)**
• **Public Spaces that support the Elderly (Group D)**

This project was led by Annemarie Wagemakers, an associate professor of HSO at Wageningen University, whose research focuses on understanding the effect of lifestyle, social and physical environments on health outcomes, particularly the elderly and socially vulnerable groups. Researchers utilized socio-ecological models, championed by Wagemakers in her own research practice, as a theoretical framework for understanding how social and environmental factors effect individual decision making.

In a practical sense, this means rigorous site research, in-depth interviews with a diverse range of residents to gauge stakeholder goals (i.e. stakeholder analyses) and the use of various auditing tools (Walking Route Audit Tool for Seniors (WRATS), Active Neighborhood Checklist (ANC), Physical Activity Resource Instrument (PARA), Systemic pedestrian cycling environment scan (SPACES)). Here, we will present an abbreviated list of recommend policy and planning interventions:

Group A
- Increase the presence of police officers, street lights, CCTV cameras
- Make partnerships with civil society, community-based organizations (CBOs) that foster a supportive social environment around PA
- Invest more in upkeep, as a number of green spaces and playground equipment were found to be poorly maintained. Many interviewees complaining about the constant presence of dog feces, bags of trash and damaged playground equipment

Group C
- In regards to Breeveld Square, involve citizens of all age groups, ethnic, and socioeconomic backgrounds within planning and design decisions through focus groups and participatory design workshops
- Renovating dilapidated open green spaces
- Placing easy to understand signage to make playground equipment more understandable.

7. (Bos et al., 2017)
8. (Blijleven et al., 2017)
9. (Brunekreeft, Harmsen, Verkroost, Rinaldi, & de Winkel, 2017)

Project ALLEGRO

Typologies: ICT, Permanent

As more and more cities encourage active transport, accurate simulation models and tools will become crucial to urban planners and policymakers alike to assess future public space interventions. The problem is that the movements of pedestrians and cyclists are exceedingly more complex to create computer model of than, say, automobiles, as human movement has significantly more degrees of freedom of choice of what direction to go in. The AMS Institute, TU Delft and PI Mobility[10] are presently involved in a five-year research project led by Serge Hoogdoorn called UnrAvelLing sLow modE TravelinG and tRaffic – with InnOvative Data, or ALLEGRO, to create a computational model capable of analysing and visualizing pedestrian and cycling behaviour (active transport) within the city.

ALLEGRO focuses on three main research themes: (1) understanding the operations, scheduling and travel behaviours of pedestrians and cyclists; (2) the creation of a living lab and ICT toolbox for data collection, processing, modelling, and simulation; and (3) the application of the developed theories and models. It is hoped that by the end of the project in 2020 that the AMS Institute will create ground breaking innovations in big data collection and experimentation, analysis and fusion techniques, including social media data analytics, augmented reality, and remote/ crowdsensing.

10. (AMS, 2016)

This publication reflects on the first steps of a long-term research partnership between the AMS Institute and *La Fabrique de la Cité* to discover how the design of public spaces can contribute to the well-being of urban dwellers. We spent this past year intermeshing our expansive partner networks, from the city of Amsterdam, Plaine Commune, university researchers and urban planners to community-based organizations, entrepreneurs and students, to understand how their cutting-edge research and practices are promoting PA and social cohesion within public space.

What types of urban design interventions promote Physical Activity (PA), well-being, and social cohesion within public space?

Based on our urban innovation workshops and fieldwork, researchers found that municipalities can successfully promote PA and social cohesion within public space through four types of design interventions within the built environment: (1) traditional permanent interventions; (2) temporary interventions; (3) no design/community empowerment; and (4) ICT-based. In this publication, we illustrated this through a benchmark of dozens of cases from around the world. While each Intervention type has their own strengths and weaknesses, depending on the urban scale, project budget and skills of the stakeholders, they also have the advantage of being is easily adapted to fit the needs of any city.

How can municipal authorities monitor, quantify, and benchmark these interventions?

Cities can use open-source, field-tested monitoring toolboxes from the likes of the Gehl Institute and Arup, which are presently being used by cities like London and Copenhagen, to assess urban planning projects in terms of public health outcomes, costing savings and socioeconomic

impact. As shown with the case of Amsterdam, cities are exploring how to use monitoring techniques to fine-tune urban design interventions and achieve broader public policy goals. But, as always, there is no such thing as a one-size-fits-all urban design solution. For urban designers, planners and policymakers to create truly inclusive and equitable public spaces that support PA, they must first consider the geospatial conditions and cultural norms of the target community, funding, and the skills and resources of the stakeholders involved.

In the years to come, we will continue to leverage our combined knowledge base and expanding network of partners to research the pressing urban challenges of public space.

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List of Images

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Colophon

Paris Workshop

Speakers

Welcoming words from Arjan van Timmeren (AMS Institute) & Cecile Maisonneuve (La Fabrique de la Cité)

Introduction - Public spaces and sport: an issue for health and social inclusion Ebru Isguzarer-Onder (AMS Institute) & Chloë Voisin-Bormuth (La Fabrique de la Cité)

Sport and Uses in Public Spaces, Conditions for A Successful Cohabitation, Jean-Pierre Charbonneau (Charbonneau Consultants)
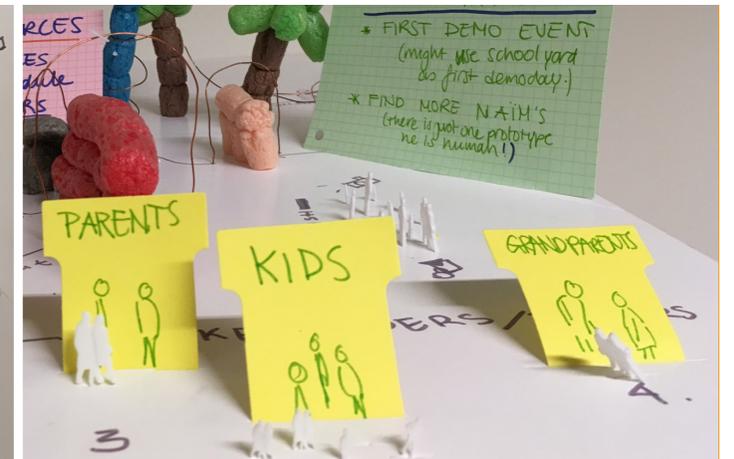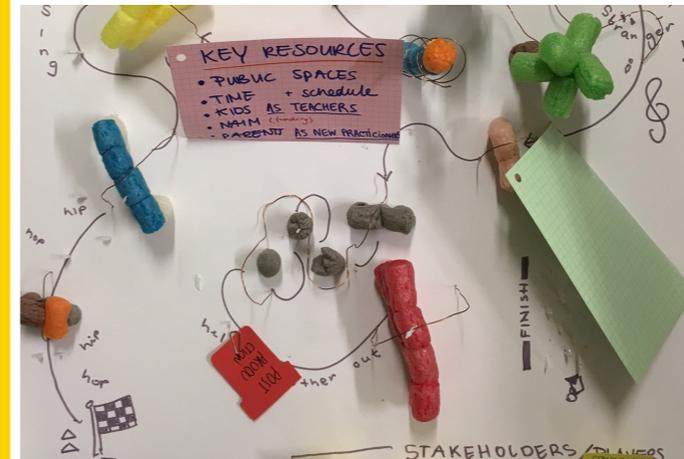
What is a Sports City, William Gasparini (University of Strasbourg)

The Youth Charter and the Community Campus, Geoff Thompson

The Moving City, Michele Müller (Municipality of Amsterdam)

Insights on the Future of Public Spaces, Hannah Wright (Arup)

Thanks to Plaine Commune, VINCI Immobilier & the city of Amsterdam.

Paris Workshop

The outcomes of the group workshops

Group 1: Integration of sport in public space design with Frédéric d'Incau
Prototype: Inside Out

The idea behind "Inside Out" is the intention to build a dialogue between professionals from different fields based on current and possible future trends in the uses surrounding sports, with the aim of better integrating sports in urban planning and construction developments. To achieve this, this group believes it is crucial to put in place an action cycle: to study current uses, both qualitatively and quantitatively, to collect sufficient data on the local context, with the help of academics, and to gather all this information into a large database that would then be provided to inhabitants and athletes. These actors would then examine the project and make it their own, by perhaps adding elements. The next step of the cycle would require the participation of construction professionals: they are those who work with all the actors mentioned above to determine what is feasible and what is not. This cycle can ensure that the wishes of the local inhabitants are heard while also making sure that they understand from the start the feasibility of their ideas and projects, so that together, they can co-construct public space design for sports.

Group 2: Temporary installations and citizen initiatives for sport with Nicolas Le Berre
Sub-group A: Draw Me Closer
Sub-group B: La maîtrise d'activité urbaine

The main challenge this group decided to tackle is that of institutionalizing the temporary. As one possible response to this difficulty, this group sought to develop tools for city governments to understand the potential of temporary projects and stop considering them as incompatible with their role as safeguard of security and community norms. La maîtrise d'activité urbaine – Governing Urban Activity consists in a methodology for municipalities to govern various temporary urban activities in a local community to minimize conflicts of uses between actors and to fully exploit all spaces so that none are underused. First of all, a public consultation gathering members of the city government and citizens must be organized to determine which spaces can be put to use for temporary urban activities. Then, a call for projects is set up. In the end, the municipality decides whether the project can take place or not. In doing so, it can identify different timescales so that, in one spot, a project may take place in the morning and another in the afternoon. For instance, retractable football posts is an interesting idea. This creates a win-win situation for all parties, whereby citizens and municipalities shoulder together the responsibility of these projects, which can be a real added value to the city as a whole.

Group 3: Revealing the potential of public spaces through sport with Annabelle Puget
Prototype of sub-group A: Change your mind

 The 'Change your mind' project aims at reconnecting people of all ages with the public spaces in their cities. This will be achieved through learning platforms based on practicing parkour. As part of the project vision, children will receive parkour training and become the main peers in disseminating the learning outcomes to their families and friends. Through its embodied dimensions and movement, parkour is believed to enhance creative thinking and spatial awareness. As such, it distinguishes as a simple yet effective activity that could yield alternative possibilities for the use and design of public spaces, as well as for stimulating more social interaction. In order to reach a critical mass of game changers for the future of public spaces, 'Change your mind' will also rely on an online platform, where users can share experiences and design their own thematic 'parktours' in the city, adjusted to various skill levels. The 'parktours' are primarily meant as a group learning activity, to be organized with family, friends or other parkour enthusiasts.

Prototype of sub-group B: The Social Park
The Social Park is a public park dedicated to sports and physical activities where people from all social backgrounds, from all ages and from all levels of fitness can come together to practice a physical activity and move towards a healthier body. Managed by an association of local citizens, it provides designated spaces for different kinds of sports and activities, including a rock climbing wall, an amphitheater with a floor in smooth marble ideal for breakdancing, a small lake for swimming, slacklines stretched between trees and a multi-sports field and a beach volleyball court. However, according to the will and resources of the association, these spaces may change so a large variety of sports and physical activities may be proposed. For rainy days, there is also a covered area where one can relax. In addition, several walking, running and cycle paths are set up throughout the park to allow for different

rhythms of physical activities to take place. Furthermore, a clubhouse hosting the managers' association, a restaurant, refreshment bar as well as toilet and shower facilities, is also set up for people's maximum comfort. The philosophy behind the Social Park is really to allow for people to come together, to interact, to exchange on good practices and to discover new sports and to have fun.

Group 4: Digital innovation to promote sport in public spaces with Mathias Salanon
Prototype of sub-group A: Equip Smart
Prototype of sub-group B: You[r] Move
The YOU[R]MOVE project aims to repurpose underused spaces in the city for physical activities. After a preliminary mapping of suitable spaces, spotlights are installed near these future playgrounds or sports fields (on streetlights, traffic lights, etc.). Terminals then allow city dwellers to select the light design to be projected on the floor or walls and thus the use they want for this specific space. From a tennis court to a children's hopscotch, to a racing circuit for inline skaters, the variations are numerous and allow to yield new possibilities for the use of space thanks to light projections. All urban dwellers can also take part in YOU[R]MOVE and imagine new designs which will then be available on the terminals, encouraging an enhanced appropriation of urban spaces. The low cost of installation and maintenance of the system makes it possible to scale its use anywhere in the city, allowing temporary uses and contributing to energize the whole city on demand.

Amsterdam Workshop

Speakers

The Moving City – Future of Public Spaces
Nelleke Penninx, (Planner and Policy Advisor, City of Amsterdam)

Physical activity promotion in public spaces: a social ecological perspective and participation of stakeholders. Annemarie Wagemakers (Associate Professor Health and Society, Wageningen University & Research)

Track: Data-based design. Thijs Dolders & Mart Reiling (Start-up Track Landscapes, data based social design)

Kompan. Jaap de Wit (Kompan, Sports and playfield equipment)

Field visits

Banne Noord
Breedveld

Workshop participants

Janice ARGYLE-THOMPSON (Administrator, The Youth Charter), Sally ARMOUR (Landscape architect at Arup),Bally BAGAYOKO (3rd Deputy Mayor of Saint-Denis in charge of Sport, Major Events, Training and Employment), Iulian BARBA LATA (Post-doctoral Researcher, Wageningen University), Maud BEAU (UFO), Julien BELLER (Architect and founder of the 6b), Naïm BORNAZ (Parkour expert), Alessandro BOZZON (Assistant Professor, TU Delft), Bas BREMAN (Program Developer at the AMS Institute), Marleen BUIZER (lecturer at Wageningen UR), Jean-Pierre CHARBONNEAU (Urban planner and consultant at Charbonneau Consultants), Frédéric d'INCAU (design thinker), Alice DANG (Research Assistant, *La Fabrique de la Cité*), Céline DAVIET (Director of the Office of the President at Plaine Commune), Jaap DE WIT (Kompan), Thijs DOLDERS and Mart REILING (Track Landscapes), Fanny DONNAREL (Project Leader Impact and Legacy, Paris 2024), Riyad FGHANI (Artistic Director, POCKEMON CREW), Marina GAGET (Projects Director, Une Fabrique de la Ville), Salome GALJAARD (senior designer at Arup), William GASPARINI (Professor, University of Strasbourg), Léa GEERTS (design thinker), Alexandre GRASSIGNY (Project Manager at *La Fabrique de la Cité*), Olivier GRÉHANT (Plaine Commune), Paolo GUIDI (Paris Town Hall), Femke HACCOÛ (Urban Innovation Officer at City of Amsterdam), Laura HAKVOORT (City of Amsterdam), Ebru ISGUZARER-ONDER (Program Developer at the AMS Institute), Paul JANSEN (Cities Market Leader, Innovation Area Development Partnership at Arup), Tom KUIPERS (Program Developer at the AMS Institute), Armelle LANGLOIS (Deputy Director of Sustainable Building, VINCI Construction France), Nicolas LE BERRE (Co-founder and director, New CITYzens), Antoine LE BLANC (Professor, University of Littoral – Côte d'Opale), Cécile MAISONNEUVE (President, *La Fabrique de la Cité*), David MANGIN (Agence Seura), Anne MEIJER (City of Amsterdam), Mehand MEZIANI (Architect and urban planner at Atelier Parisien d'Urbanisme), Michèle MÜLLER (Urban Planner, City of Amsterdam), Lily MUNSON (Project Manager for Jean-Louis MISSIKA, Deputy Mayor in charge of Urban Planning, Architecture, Innovation and Projects of the Greater Paris), Maud OBELS (Plaine Commune), Leontien PETERS (Bernard van Leer Foundation), Claire PEUVERGNE (Director at Institut Régional de Développement du Sport), Michaëlle POLICARD (Co-founder at Collectif DECLIC), Joannette POLO (Innovation and Technology Advisor, Embassy of the Netherlands in France), Mathilde POUJADE (Urban Planner, Une Fabrique de la Ville), Achilleas PSYLLIDIS (Post-doctoral Researcher, TU Delft), Annabelle PUGET (design thinker),Alain RENK (CEO, UFO), Thomas RIFFAUD (PhD Candidate, University of Littoral – Côte d'Opale), Sophie RIGARD (Counsellor for Bernard JOMIER, Deputy Mayor of Paris in charge of Health, Disability and Relations with the Hospitals of Paris), Frédéric ROUSSEAU (Deputy Director for Program Management, VINCI Concessions), Mathias SALANON (design thinker), Margaux SALMON-GENEL (Urban Planner – Smart City, NUMA), Catherine SAVART (Project Director at Innovation and Markets, Veolia 2ei), Kees SLINGERLAND (AMS Institute), Joséphine THOMAZO (Deputy Head of Programs, VINCI Immobilier), Geoff THOMPSON (Founder and Executive Chairman, The Youth Charter), Marcel VAN HEST (Alliander), Arjan VAN TIMMEREN (Scientific Director of the AMS Institute), Bas VAN ROSSUM (expert Amsterdam Noord - Banne Noord, City of Amsterdam), Boris VASSAUX (Counsellor for Jean-François MARTINS, Deputy Mayor in charge of Sport and Tourism), Yann-Fanch VAULEON (APUR - Atelier parisien d'urbanisme), Laurent VIGNEAU (Director of mobility and territorial development at Artelia), Ingrid VISKIL (expert Amsterdam Noord - Banne Noord, City of Amsterdam), Chloë VOISIN-BORMUTH (Head of Studies and Research, *La Fabrique de la Cité*), Annemarie WAGEMAKERS (Associate Professor at Wageningen UR), Hannah WRIGHT (Urban planner and consultant at Arup).