



CHAPTER 4

From Gray to Green Cities: Tilburg, Melbourne, San Jose, and Cape Town

Cor van Montfort and Ank Michels

4.1 INTRODUCTION

In recent decades, many cities have transformed from ‘gray’ into ‘green’ cities. Some are former industrial towns, where air and noise pollution used to be commonplace; others are fast-growing cities where numerous stakeholders compete with one another for the use of space for

We wish to thank Florent Beurret, Xander de Vries, Florence Li, Julia Neuenhaus, Nne Amakar Oguejiofor and Nick Rurangwa Nshimiyen, for their outstanding research for the Outreaching Lab ‘From gray to green’ at Tilburg University in The Netherlands. This chapter is largely based on their research but the authors are fully responsible for any possible mistakes in the text.

C. van Montfort (✉)
Tilburg Center for Regional Law and Governance (TiREG),
Tilburg University, Tilburg, The Netherlands

Vrije Universiteit Amsterdam, Amsterdam, The Netherlands
e-mail: c.j.vanmontfort@tilburguniversity.edu

A. Michels
Utrecht University School of Governance, Utrecht, The Netherlands
e-mail: a.m.b.michels@uu.nl

infrastructure, housing, and green areas. Whatever the circumstances, the result has been a growing awareness of the value of green space in the city; urban nature and green rooftops filter the air, and parks and green corridors offer city residents relatively quiet places of refuge, where they can walk and relax.

In this chapter, we explore the interaction between municipalities and other actors in four cities that have been successful in the transformation from a gray into a green city: Tilburg (The Netherlands), Melbourne (Australia), San Jose (USA), and Cape Town (South Africa). Compelling questions are: what were the drivers for this transformation (why), what has been done to make the city greener (what and by whom), and what are the main factors that contributed to this transformation (factors). We are particularly interested in the role of context and of the characteristics of the partnership.

The selected cities all exhibit some form of partnership between the government and other parties when it comes to establishing and maintaining green spaces. Furthermore, in order to be better able to study the role of context in the transformation towards a greener city, we selected four cities in different parts of the world: Tilburg in the Netherlands, Melbourne in Australia, the Californian city of San Jose in the United States, and Cape Town in South Africa. All are relatively wealthy cities, but differ in other respects, including the impacts of climatological, geographic, and socio-demographic factors.

We take the plans, policies, and initiatives of the municipal governments as a starting point and explore how government interacts with other parties in order to achieve a greener city. The findings presented in this chapter are based on documents (such as policy documents, coalition agreements, and reports by non-governmental organizations) and websites.

We start with a brief discussion of the literature on partnerships and green spaces. In Sect. 4.3 we describe how the transformation into a green city started in each of the cities. In Sect. 4.4, we describe recent developments in plans, policies, and initiatives for a greener city. The final sections present an explorative analysis of the main factors that have contributed to this transformation and a conclusion.

4.2 URBAN GREEN SPACES AND THE ROLE OF PARTNERSHIPS

The planning and maintenance of urban green spaces were traditionally the responsibility of the municipality or local governments (James et al. 2009). However, over the past decades, both the role and responsibility of governments in green space development have changed (Leroy & Arts 2006). Environmental governance is no longer purely government dominated, but also involves civic society, as well as the market (Fors et al. 2015, p. 723). Urban governments are urging for shared responsibilities and facilitating or seeking partnerships with other actors (Leroy and Arts 2006). Within the scope of the triangular relationship between the different stakeholders—state, market, and civil society—presented in the introductory chapter (Fig. 1.1), multiple forms of partnerships can be distinguished (see also: Van Montfort et al. 2014, p. 10).

In the majority of cases, local government is still heavily involved in the creation or regeneration of urban green spaces, although with different partners varying from, for example, social housing trusts (see Dempsey et al. 2016; O'Brien, 2006) to residents (see Drake and Lawson 2015; Marche 2015; Bendt et al. 2013), businesses (see Pincetl 2010; Clement and Kanai 2015), other governmental bodies (see Slater et al. 2016; Shafer et al. 2000; Kabisch 2015) and various NGOs (see Nastran and Regina 2016; Moskell and Allred 2013; Kozová et al. 2018).

Yet, the bulk of all such partnerships are between public and civil society organizations (e.g. O'Brien 2006; Nastran and Regina 2016). What sometimes starts as a bottom-up initiative taken by residents and citizens' organizations, often later develops as a collaboration between civil society, private sector and (local) government in which public organizations become responsible for facilitating or funding the project (e.g. Kabisch 2015; Shafer et al. 2000). Finally, more formal forms of public-private partnerships are also seen. Characteristic for these is that responsibilities between government(s) and private companies or consortiums are formalized in contracts (e.g. Clement and Kanai 2015).

The role of partnerships in establishing and maintaining green spaces is usually seen as a positive one. Partnerships contribute to the creation of green spaces where, without the involvement of other parties, this would not have been possible. As funding becomes tighter, it helps if volunteers or private companies form a partnership with the local authorities to improve facilities. Also, by involving the local community, urban green

spaces can become more tailored to their needs and people value them more. The literature reveals a broad array of improvements stemming from the participation of other parties, from simply cleaning up the park, installing benches, restoring playgrounds, putting up information signs, to (volunteer-run) services such as walking tours or a café (Dempsey et al. 2016; Mathers et al. 2015; Barnes and Sharpe 2009; Kozová et al. 2018; Barker & Kenney 2012; Sipilä and Tyrväinen 2005; Huang 2010; Slater et al. 2016; Lutafali and Khoja 2011).

The literature also shows that bottom-up initiatives, such as community gardens, are clearly associated with high levels of self-reported social cohesion (Marche 2015; Bendt et al. 2013; Rosol 2010). Volunteers valued the time they spent together, viewing this as an important aspect of their involvement (Barnes and Sharpe 2009). This is less so for top-down initiatives. O'Brien (2006) found that some respondents in her study saw more community involvement in the partnership as a means to regain a community spirit. Various projects were designed to regenerate urban green spaces in poor neighborhoods and involved the community to build a greater social cohesion (Dempsey et al. 2016; Slater et al. 2016; Lutafali and Khoja 2011). According to Chanan (2003), this fits into a more general trend for community engagement in deprived areas to be part of a structured intervention by local authority-led partnerships.

Although local authorities sometimes initiate partnerships to improve the overall conditions in impoverished neighborhoods with the aim of building more social cohesion, an adverse effect may also occur, namely, gentrification. The presence of urban green space has a positive effect on estimated property values (Donovan and Butry 2010). Tree canopy cover is found to correlate with median household income; the tree canopy cover in poor neighborhoods is therefore lower in comparison to that of wealthier communities (Pincetl 2010). Hence, as Wolch et al. (2014) state, the challenge is to make the city green 'enough' without necessarily pushing the original residents out of their neighborhoods.

4.3 HOW IT STARTED

4.3.1 *Tilburg*

Tilburg flourished during the age of the Industrial revolution. The city was essentially a patchwork of individual neighborhoods that each were home to a number of wool factories. Tilburg, in 1881, counted as many as

145 woolen mills. The woolen textile industry dominated in Tilburg and gave the city its identity. Tilburg was heavily impacted by the Second World War, during which a large part of its built heritage was destroyed by enemy bombings. The city managed to retain its status as the wool capital of the Netherlands after the war, but in the decades following, the wool industry slowly disappeared, a process that lasted until the 1980s. In addition, upon his inauguration as mayor in 1957, Cees Becht set in motion a process of urban renewal. He sought to future-proof the city by tearing down many of the old wool factories and replacing these with housing projects or roads. The city's built heritage, already in a precarious state, was not spared by mayor Becht, during whose tenure innumerable historical buildings and monuments were destroyed to make way for the city ring and to accommodate the future growth of the city.

In the following decades, urban greening as a policy issue failed to strike a chord in Tilburg, even though smaller local efforts and projects were already under way in an effort to turn Tilburg into a greener city. The Dongevallei is one such project, which involved creating a green valley that crossed straight through a residential neighborhood.

In 2010, Tilburg's first Climate Program was drafted at the request of the municipality of Tilburg (Gemeente Tilburg 2010a) by the Hotspot core team. This initial report provided some of the starting points for Tilburg's transition into a green city. Pinpointing the exact moment of the transition is a difficult task; nevertheless, arguably, the seeds were planted somewhere in the 1990s, when, following the urban renewal projects carried out in the inner city area, for the first time conscious thought was given to making Tilburg a greener city. The true transition began to take shape after 2010, a process that especially accelerated in 2014, when the left wing-center political coalition in the municipality declared its commitment to making the city of Tilburg more attractive, inter alia in terms of aesthetics. One approach was to increase the amount of urban green space, a proposition that was also mentioned in the coalition agreement (2014). The first major green project was initiated soon after: the Spoorpark, which will be elaborated on later.

4.3.2 *Melbourne*

The colonial administration of Melbourne, especially in the time of the famous Governor Charles La Trobe, set aside significant tracts of land in the nineteenth century and turned these into green open spaces. These

areas, mostly in the form of city gardens and parks, generally surrounded the central city area, which therefore formed a green city ring. The lands on which the parks were established were inhabited by the indigenous Kulin Nation Groups before the settlement of Melbourne.

These parks, created in the nineteenth century, still exist today and their appearance is highly influenced by the colonial interest at the time in the potential of trees and plants from around the globe. Most of the parks, including the Fitzroy Gardens and the Royal Park, are now protected heritage sites, listed on the Victorian Heritage Register or even UNESCO.

However, these green spaces have not always been protected. The original nineteenth century green inner-city ring established by the colonial administration endured continuous erosion in the twentieth century due to the expansion of the city. To counter the erosion, the city of Melbourne has, in the last 40 years, tried to implement an urban planning policy based on a twin spatial application of green wedges; rural non-urban spaces at the edges of urban Melbourne, separating radial urban growth corridors. Through the application of this policy, the green wedges were connected to each other and have formed a true green city belt (Gurran and Miller 2008, p. 62).

From 1993 until 2002, a neo-liberal governance regime caused urban planning to erode Melbourne's green wedges. However, from 2002 onward, Melbourne has continued to implement its green planning policy and has rapidly grown into one of the greenest cities in the world (Gurran and Miller 2008, p. 61). And in 2012, the Melbourne City Council initiated its Open Space Strategy: the overarching strategy when it comes to green open spaces for the next 15 years. Open spaces are publicly owned land used for nature conservation, passive outdoor enjoyment and recreation. Examples are public parks, waterways, major sporting venues, public gardens etc. (City of Melbourne 2012a, pp. 3–4; b). The main goal of this strategy is to make sure that green open spaces are within walking distance of the community, which poses a significant challenge as the population continues to grow. Green spaces are considered important to promote social connectedness, mental health and wellbeing, physical health and wellbeing, biodiversity, etc. Changing (climate) conditions, which brings a new set of challenges to the management of green spaces, is the second main reason for establishing the Open Space Strategy.

4.3.3 *San José*

San José was originally an agricultural community but has since transformed into a developed urban area. In an effort to accommodate a burgeoning population after World War II, the city expanded rapidly, which resulted in a badly structured suburban community that was lampooned in an article called *How Gray is My Valley* (Brown-Goebeler 1991) that appeared in the 1991 November issue of *Time Magazine*. Since the 1990s, San José has striven to improve its urban planning and to focus on smart growth. The goal was to optimize the existing space, rather than growing outward and expanding physically, in line with the concept of smart growth; hence to avoid urban sprawl by providing walkable urban centers, foster sustainable development and to strengthen natural and cultural resources with the focus on public health, thereby facilitating a sense of community.

Over the past decades, San José has been working on various plans and visions that focus on innovation, sustainability, greening etc. One example is the general Green Vision, which was adopted in 2007, with ten goals related to economic growth and environmental conservation to be achieved by 2022. While most of these goals focus on environmental efforts in general, goal 9 and 10 of the plan include practical efforts to construct more trails and to plant trees to make the city greener. One specific plan that San José is currently focusing on is the Greenprint, which encompasses tangible green aspects and their implications for the community rather than environmental aspects in general. In early 1999, San José started the planning process to work towards this comprehensive urban greening goal. The Greenprint is a long-term strategic framework that focuses on the community's needs and guides the city's Recreation and Neighborhood Service Department in planning and developing parks, trails, and community facilities over the next twenty years with the primary goal of defining their sites and how they will operate. Its mission is '[t]o build healthy communities through people, parks and programs' (City of San José 2011).

The Greenprint was adopted in September 2000 and was updated in 2009, and again in 2018 (the name has been changed into 'Activate SJ'). These updates were made to reflect the progress attained to date and to elaborate on the City Council's current and future goals to provide its citizens and the community with the best possible 'natural, educational,

social, cultural and economic environments in which one can live, work and play' (City of San José 2009).

4.3.4 *Cape Town*

In 1840, the City of Cape Town was officially recognized as a municipality. An industrial revolution soon followed, involving the construction of railways, the mining of gold and diamonds and the emergence of a port that steadily gained in importance on the continent of Africa. Due to the growing port, the town gradually transitioned into a modern naval base possessing various establishments such as fish-smoking, wool processing and boat building establishments. The growth of the port brought with it a demand for fresh produce from farms. This demand for fresh products led to a chain reaction that caused an increase in the value and use of farmland, and the number of dairy farms, poultry farms, vegetable farms and flower farms climbed. During the world wars, overseas manufacturers established branches and factories in the Cape Colony.

In the seventeenth century, the Dutch East India Company decided that the colony should become a refreshment outpost for the VOC ships on their way to Asia (South African History Online). It was this decision that led to Cape Town's development into a leading city for the production of fresh produce and to its emergence as a wine producer. This initiative aided the settlers of Cape Town, possibly unknowingly, in promoting a green environment.

In 2001 the city of Cape Town introduced the Integrated Metropolitan Environmental Policy (City of Cape Town 2017), a city-wide environmental initiative aimed at promoting a green transformation. This plan was revised in 2008 and in 2017 replaced by the Environmental Strategy for the City of Cape Town. This strategy aims to 'enhance, protect and manage Cape Town's natural and cultural resources for long term prosperity, in a way that optimizes economic opportunities and promotes access and social well-being' (p. 11). One of its guiding principles is the promotion and prioritizing of the education and empowerment of all citizens of Cape Town (p. 18), designed, among other things, to 'enable citizens to engage with the City on an ongoing basis on ways to improve implementation of the City's environmental principles.'

In summary, the beginning of a transformation towards greening the city was mostly due to a felt sense of urgency, fueled not only by economic reasons—the need to make the city more attractive for investors—but also

by the desire to fight urban sprawl, or to adapt the city to the ongoing process of climate change. In recent decades, cities have also felt the need to boost the level of livability in terms of health, an attractive environment, and recreation.

4.4 POLICY, PLANS, AND INITIATIVES

4.4.1 *Tilburg*

From the 1990s onwards, a lasting and accelerating trend towards urban greening has emerged. In Tilburg, the city council drafted in 2010 its ‘Nota Groen. Dichter bij Groen’ (Gemeente Tilburg 2010b) memorandum based on input from its citizens, which laid down one of its earlier visions for structuring green areas in the city. More concrete steps were taken after the council’s coalition agreement in 2014. Several parties were involved.

The city council, most notably the Socialist Party and the Dutch green party, GroenLinks (Green Left), set the process in motion by ordering investigations into the structure and locations of green space in Tilburg, and later by drawing up reports on the way urban green space in Tilburg ought to look in the future. The council has played a continuous role; in fact, were it not for the council, a transition may never have been initiated, let alone sustained.

Moreover, the role of Tilburg’s citizens has been equally important, as, especially in recent years, they gave added impetus to Tilburg’s green transition. For example, one of the larger projects, the Spoorpark project was essentially initiated by a group of local citizens who wanted to do something with the empty area behind their apartment building. Today, right next to the train rails, a large city park is being created. Initially, the zoning plan had specified only very generally that the land was to be developed as a green open space for recreation. However, the coalition agreement of 2014–2018 included a declaration that involving local citizens in that the city’s development plans was a priority for the city council (Gemeente Tilburg 2014). Not long afterward, the local government set up a team to develop more concrete ideas for the park and to take into account the wishes of the residents. The team consisted of multiple stakeholders, including neighborhood councils, the local beach volleyball association, and Midpoint, an alliance whose members include (local) entrepreneurs, the government and educational institutions. In addition, the city of

Tilburg created a website where citizens could submit their ideas and input on the new city park. In a later phase, this citizen input became much more important. 82 different plans for the Spoorpark were put forward by (groups of) citizens and implemented in Spoorpark. Among these were initiatives from the local boy and girl scout troops, and ideas for a city camping area and beach volleyball court. The project initially progressed only due to the efforts of the citizens. The result of the inclusive process is a city park in which the preferences of the residents have been implemented but which is also congruent with the initial use of the area allocated by the Tilburg city council. While the project was originally driven forward by the people, during the later stages, as the project expanded, this proved no longer feasible. From that point onwards, professional organizations, i.e., construction companies and landscape architects were contacted to take the project to the next level. The local government paid € 8.2 million for the construction of the park and contributes € 200.000 per year towards its maintenance. The government also tries to attract local volunteers, provincial subsidies and private money from local companies for maintenance and the further development of the park (Jongerius 2019).

In addition to this, many small-scale green initiatives from citizens are financially supported by the municipality. For example, over 500 *geveltuintjes*, or façade gardens, have been planted in the city after the municipality earmarked resources for this in 2015 (Gemeente Tilburg 2015). These are small garden strips at the front of houses lacking a front yard. Another initiative is seeking to make 1000 gardens in Tilburg more water friendly, with more green as an integral part of this.

Finally, the civil organization CAST (Centre for Architecture and Urban Planning) has been an important linking factor between the municipality and citizens. By organizing plenary sessions with citizens on a regular basis to discuss the future of the Green City of Tilburg, CAST has unquestionably accelerated the transition by engaging with the citizens and encouraging active thinking about the need for green.

4.4.2 *Melbourne*

As in the past, Melbourne's local government is still responsible for most of the projects which help sustain Melbourne's transformation into an even greener city. On the website of the Melbourne municipality, many of

the plans can be found that the city council has introduced to make Melbourne one of the greenest cities in the world.

Currently, there are multiple ongoing projects initiated by the City Council. The most important in terms of urban green is the aforementioned 2012 Open Space Strategy. As the name suggests, this is more of a long-term policy strategy, an overarching project, than an individual project in the traditional sense of the word. The Open Space Strategy aims to provide direction on:

1. ‘the unprecedented demand for open space as Melbourne’s population continues to grow;
2. climate change—a decade of drought, water restrictions and extreme weather and the predicted impacts of climate change provide additional challenges in the management of parks and reserves and the role they can play in climate change adaptation;
3. ensuring open spaces can provide for and adapt to differing needs and uses, providing people with the opportunity to connect with nature’ (City of Melbourne 2012a).

The Open Space Strategy (City of Melbourne 2012a) is intended as an overarching strategy for city planning for the coming 15 years. The strategy was formulated after an intensive consultation of and feedback from the community, agencies and stakeholders (City of Melbourne 2012b).

The overall direction of the Open Space Strategy is to expand the already existing green open spaces and to connect them to each other, but also to create new green open spaces. This would promote one of the initial goals of the strategy, namely assuring that green open spaces are within walking distance for most of the community. Ensuring that more people have access to green open spaces is expected to increase the health and wellbeing of the community, for example, by encouraging people to go jogging, walking or cycling. For the implementation of the strategy, a detailed plan has been drafted for every neighborhood in Melbourne to expand their green open spaces, connect the existing green spaces and create new green spaces (City of Melbourne 2012a, pp. 8–28).

Currently, the City of Melbourne also has multiple smaller projects for greening the city. One of these is the *Rooftop Project*. The Rooftop Project invites building owners, both individuals and businesses, to apply for the transformation of their roofs into green, cool or sun roofs. Melbourne’s rooftops together span some 800 hectares—more than the total number

of hectares of green space in the city. The Rooftop Project aims to make a more efficient use of this area. Instead of using the roofs for storing air conditioners and heating equipment, they could help to cool the city, for example by being transformed into green, cool or sun roofs. The City of Melbourne, as the initiator, made a map of all the roofs in Melbourne, giving recommendations for each roof on whether and how this could be transformed into a green roof. However, the success of this project depends on the willingness of the residents to realize this.

A second major project for greening the city is the *Green Your Laneway program*, in which laneways are turned into leafy, green and usable spaces for everyone to enjoy. Melbourne is funding four laneways out of the 800 nominated options. Residents whose laneways were not selected may still apply and work together with the municipality. Here again, the municipality is the initiator, but residents are invited to contribute.

4.4.3 *San José*

The Greenprint (now: ‘Activate SJ’, City of San José 2018) is a strategic plan that aims to make the city of San José greener and improve its community facilities to enhance livability. Various San José city departments and community organizations have contributed to the transformation to a green city and the development and elaboration of the Greenprint. This interdepartmental planning procedure involves representatives from the San José City Council; Parks and Recreation Commission; Parks, Recreation and Neighborhood Services Department (PRNS); Conventions, Arts and Entertainment (CAE); and General Services (GS) (City of San José 2001, p. 1). The Parks and Recreation Commission, which is currently managing the second update of the Greenprint document, was supported by a Community Advisory Task Force consisting of 60 members who were actively engaged throughout the process.

As the Greenprint aims to integrate public input and the community’s feedback, a community needs assessment was conducted in 2001 to involve the population that is ultimately supposed to profit from the improvements at first hand. This assessment included, amongst others, telephone surveys of the city’s population, the strategic identification of focus groups and different neighborhood workshops aimed at these. In addition, a Steering committee, consisting of different groups and organizations representing the community and some businesses, has regular meetings in which findings, process and challenges are discussed. The

Steering committee serves to guide the Greenprint and is responsible for reviewing the accomplishments. It elaborates on the plan's current goals as well as future goals of the city. It is also responsible for reaching out to the community and organizes and schedules the intercept events, and therefore plays a main role in involving other parties and sustaining the transformation. Members of the Steering committee include e.g. members of the Senior Citizens and the CommUniverCity, both private organizations, as well as public organizations such as the Parks and Recreation Commission, the San José State University, the Santa Clara County Public Health Department and, finally, the San José Parks Foundation, which is a community-based nonprofit organization.

As part of the project, citizens' initiatives are also encouraged. San José's citizens are invited to get involved personally, e.g. as part of a community group and are given the opportunity to suggest possible improvements or suggestions for potential partners online. They can also adopt a trail or a park to support its maintenance or become voluntarily involved in keeping green spaces clean (San José Parks, Recreation and Neighborhood Services). San José is not unique in this initiative; there are many other examples of Adopt-A-Park or Trail Programs, especially in Canada and the United States. In addition, San José launched a design competition in 2017 to redesign one of its parks, which is another example of how the government tries to foster the communities' participation in the transformation.

4.4.4 *Cape Town*

Although the process of turning Cape Town into a green city commenced as a government initiative, the Integrated Metropolitan Environmental Policy, article 1.2.2 states that the civil society is expected to aid in this project through actively supporting, monitoring and making sure that the policies are being implemented (City of Cape Town 2017). Corporations, non-governmental organizations and civilians are expected to play a role in enhancing and improving the greening of Cape Town, although there are no mandates or regulations in place explicitly requiring them to do so. Nonetheless, private parties, including non-governmental organizations, community groups, trusts and even United Nations-endorsed entities, have taken it upon themselves to advocate a greener society and to promote a greater green awareness. The relationship between the public and private parties in Cape Town is not one where the municipality dictates

what the organizations should do but rather an unrestrictive relationship that allows the organizations to implement and carry out programs and projects that aid in the promotion of greening the city of Cape Town.

An important step being taken by both the private and the public sector to sustain this transformation is the education of young children and youths about the environment and ecosystem. Schools work hand in hand with various organizations, both governmental and non-governmental, to ensure that students are educated about how to plant trees, how to maintain them and the importance of doing so. A major actor is the Environmental Management Department of the city, who is actively working to sustain the green transformation through managing over 16 nature reserves in the city. Furthermore, the Department is involved in the development of the environmental education programs, the planning and implementation of conservation schemes and in developing skills on how to be effective in promoting and maintaining the green transition. An important step in sustaining the transformation is ensuring that the actors involved and in particular the governmental actors, comply with the laws and regulations relating to the greening of the city.

Furthermore, a factor contributing to the endurance of the transformation is the Cape Town Environmental Education Trust (CTEET). The aim of this trust is to support and push forward conservation initiatives within the city of Cape Town. The CTEET's goal is to promote the conservation of Cape Town's unique and bio diversified natural heritage through means such as education, trainings and conservation initiatives. The funding mainly comes from private companies, but in managing and promoting conservation they work together with both public (the city of Cape Town) and private parties (such as Eco-Schools, an international organization).

In addition to the above, a Cape Town Green Map was created in 2010 as part of the Green Map Movement, a community of over four thousand local green living sites around the world. The Cape Town Green Map is a social movement in the green sector. Since 2010, there has been a tangible increase in green consciousness. The Green Map initiative in Cape Town was launched as part of the Green Goal 2010 program, the environmental program created as a way to green the World Cup, which was hosted that year by South Africa. This program was modelled on Germany's 2006 program and took into account the impact that an enormous event such as the World cup would have on the environment. The Green Map community shares green sites such as biodiversity hotspots, green spaces,

markets, eateries, responsible tourism, green accommodation, eco products and services, green attractions and many more (www.capetowngreen-map.co.za).

4.5 AN EXPLORATIVE ANALYSIS OF THE MAIN FACTORS

In all cases, there is a growing awareness of the importance of green space for the future of the city and the wellbeing of its citizens which has led to the development and implementation of a host of urban greening projects. In this section, we explore a few of the main factors that contributed to this transformation. In doing so, we make a distinction between context factors and factors related to the form of the partnership. We start with the context factors.

Sense of Urgency: Population Growth, Economy or Climate

The transformation towards a greener city is in the most cases triggered by a felt sense of urgency, for example, in response to explosive population growth. In San José, extreme population growth gave rise to an unrestricted and unstructured outward expansion of the city (urban sprawl), which ultimately forced the city to reconsider its urban planning and to focus on improving the quality of the existing space. In recent decades, cities have also felt the need to make the city more livable in terms of health. In Cape Town, because of the fast-growing population, the city sought to create a healthy and sustainable environment for both the advantaged and disadvantaged groups in its society. Also, the need for measures to adapt to changing (climatic) conditions can create a sense of urgency, such as bouts of severe draught in Melbourne or extreme rainfall in Tilburg.

Political Constellation

Specific context factors also impacted on the transformation process. In Tilburg and Melbourne, the political climate played a major role. In Melbourne, the greening of city was hampered at the beginning of the century by the neo-liberal governance regime, while in Tilburg, momentum for green initiatives was generated by the coalition of mostly center and left wing parties that gained power in 2014 and who made the implementation of a green policy a top priority.

Historical Legacy

A third, important factor is historical legacy. The early development of green space in the nineteenth century in Melbourne gave Melbourne a head start when it came to transitioning into one of the greenest cities of the world.

Corporate Strategy: Economic Development, Tourism and Reputation Management

A fourth factor, finally, relates to tourism and reputation management. By enhancing the livability of a city, in terms of an attractive environment and recreational facilities, cities become more appealing to investors and citizens. In that context, Melbourne has a reputation to uphold as the front-runner in urban green planning. In 2017, Melbourne was named the most livable city in the world for the 7th year in a row. For Cape Town, tourism is an important economic sector. Tourists are attracted by the beauty and biodiversity of the environment of Cape Town, an advantage Cape Town is intent on maintaining.

While these context factors may be considered the main drivers that set off the transformation towards a greener city, how have the governments of these four cities interacted with other parties and how has that influenced the transformation into a greener city? We found that in each case, the cities we reviewed chose a different path. In Melbourne, it was the municipal government that took the lead from the very start. From 1929 onwards, top-down management and strategic planning have worked to turn Melbourne into a livable green city. This does not mean that citizens and organizations are not involved. However, the municipality is the initiator; residents and other parties are invited to contribute. In Tilburg, the municipal government collaborated closely with the citizens. For example, the realization of the Spoorpark plans was a relatively easy and smooth process, thanks to the reciprocal relationship between the local government and the residents and their organizations: on the one hand, the residents actively initiated and developed ideas and on the other, the municipality showing itself to be open and recipient to the ideas. In a latter phase, professional organizations were involved to further advance the projects. San José combined strategic planning with a strong involvement of the community, businesses and public organizations, with the Steering Committee providing an institutional basis for the partnership between the municipal government, local business, community groups, and the

Table 4.1 Factors contributing to a green transformation of the city

<i>City</i>	<i>Context</i>	<i>Characteristics of partnership</i>
Tilburg	<ul style="list-style-type: none"> • Sense of urgency: Climate • Political constellation 	Co-creation with civil society
Melbourne	<ul style="list-style-type: none"> • Sense of urgency: Climate • Political constellation • Historical legacy • Corporate strategy: Reputation 	Top-down planning; citizens and others are invited to contribute
San José	<ul style="list-style-type: none"> • Sense of urgency: Growing population 	Strategic planning combined with a strong involvement of civil society and business
Cape Town	<ul style="list-style-type: none"> • Sense of urgency: Growing population • Corporate strategy: Tourism 	Modest role for government; extensive networks of public and private organizations

public. Cape Town, finally, opted for again a different route. The relationship between the municipality and the public and private parties is much less top-down compared to the other cities. The municipality of Cape Town does not dictate what the organizations should do but rather supports and allows the organizations to implement and carry out programs and projects that aid in the promotion of green space in the city of Cape Town. The city encourages participation from all citizens, corporations and NGOs and suggests ways to promote the green transition within the society. Table 4.1 provides a summary of the main factors.

Thus, in all four cities, the municipal government had an important role in initiating the policy towards the greening of the city. Their role in supporting green policies is still important. However, their approach to interaction with citizens, the community, and business organizations differs and, as a consequence, the opportunities available to these parties to initiate, develop, and implement plans for more green in the city also differ.

4.6 CONCLUSION

To conclude, both the role of the government and the involvement of other parties are important if cities are to achieve a green transformation. However, municipal governments each interact differently with residents, social organizations, and business, which leaves us with one question: what is the added value of the involvement of citizens, civil society organizations, and businesses in the greening of the city?

Part of the answer to this question is that partnerships, in particular with citizens, local entrepreneurs, and civil society organizations, contribute to establishing green spaces at sites and in ways that would not have been possible without the involvement of these parties. For example, the project Spoorpark in Tilburg would never have evolved as it has now without the involvement of the neighborhood residents. Likewise, the strategic plan for greening the city, the Greenprint, in San José served as a framework for a further development of more concrete plans and only attained its ultimate form with the involvement of the population, groups and organizations representing the community and local businesses.

And second, although hard evidence is lacking, the findings suggest that partnerships with citizens and civil society organizations in particular serve to reinforce these parties' feelings of responsibility for their own environment. This might boost the green consciousness of the residents of the city, possibly generating more support for green initiatives in the city and a greater willingness to participate in or take the initiative for future projects.

REFERENCES

- Barker, E. J., & Kenney, W. A. (2012). Urban forest management in small Ontario municipalities. *The Forestry Chronicle*, 88(2), 118–123.
- Barnes, M. L., & Sharpe, E. K. (2009). Looking beyond traditional volunteer management: A case study of an alternative approach to volunteer engagement in parks and recreation. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 20(2), 169–187.
- Bendt, P., Barthel, S., & Colding, J. (2013). Civic greening and environmental learning in public-access community gardens in Berlin. *Landscape and Urban Planning*, 109(1), 18–30.
- Brown-Goebeler, S. (1991). How gray is my valley. *Time*. <http://content.time.com/time/magazine/article/0,9171,974295,00.html>. Accessed 1 July 2019.
- Chanan, G. (2003). *Searching for solid foundations: community involvement and urban policy*. London: Office of the Deputy Prime Minister.
- City of Cape Town. (2017). *Integrated Metropolitan Environmental Policy (IMEP)*. <http://resource.capetown.gov.za/documentcentre/Documents/Bylaws%20and%20policies/Environmental%20Strategy.pdf>. Accessed 26 Sept 2019.
- City of Melbourne. (2012a). *Open space strategy*. Planning for future growth. <https://www.melbourne.vic.gov.au/SiteCollectionDocuments/open-space-strategy.pdf>. Accessed 26 Sept 2019.

- City of Melbourne. (2012b). *Open space strategy*. Technical Report. [https://www.melbourne.vic.gov.au/about-council/committees-meetings/meeting-archive/meetingagendaitemattachments/579/9974/5.3%20open%20space%20strategy%20\(pages%2041%20to%20332\).pdf](https://www.melbourne.vic.gov.au/about-council/committees-meetings/meeting-archive/meetingagendaitemattachments/579/9974/5.3%20open%20space%20strategy%20(pages%2041%20to%20332).pdf). Accessed 26 Sept 2019.
- City of San José. (2001). *Greenprint strategic plan*. <http://www.sanjoseca.gov/DocumentCenter/Home/View/64>. Accessed 26 Sept 2019.
- City of San José. (2009). *Parks, recreation and neighborhood services*. Draft strategic plan update. <https://www.sanjoseca.gov/DocumentCenter/Home/View/28>. Accessed 26 Sept 2019.
- City of San José. (2011). *Parks, recreation and neighborhood services*. Our greenprint vision. <http://www.sanjoseca.gov/DocumentCenter/Home/View/21>. Accessed 26 Sept 2019.
- City of San José. (2018). *Parks, recreation and neighborhood services*. Greenprint update (now Activate SJ). <http://www.sanjoseca.gov/index.aspx?nid=560>. Accessed 26 Sept 2019.
- Clement, D., & Kanai, M. (2015). The Detroit future city: How pervasive neoliberal urbanism exacerbates racialized spatial injustice. *American Behavioral Scientist*, 59(3), 369–385.
- Dempsey, N., Burton, M., & Duncan, R. (2016). Evaluating the effectiveness of a cross-sector partnership for greenspace management: The case of Southey Owlerton, Sheffield, UK. *Urban Forestry & Urban Greening*, 15(1), 155–164.
- Donovan, G. H., & Butry, D. T. (2010). Trees in the city: Valuing street trees in Portland, Oregon. *Landscape and Urban Planning*, 94(2), 77–83.
- Drake, L., & Lawson, L. J. (2015). Results of a US and Canada community garden survey: Shared challenges in garden management amid diverse geographical and organizational contexts. *Agriculture and Human Values*, 32(2), 241–254.
- Fors, H., Molin, J. F., Murphy, M. A., & van den Bosch, C. K. (2015). User participation in urban green spaces – For the people or the parks? *Urban Forestry & Urban Greening*, 14(3), 722–734.
- Gemeente Tilburg. (2010a). Eerste klimaatprogramma Tilburg. *Naar een klimaatneutrale en klimaatbestendige stad*. Periode 2009–2012. <http://docplayer.nl/5598449-Eerste-klimaatprogramma-tilburg-naar-een-klimaatneutrale-en-klimaatbestendige-stad.html>. Accessed 26 Sept 2019.
- Gemeente Tilburg. (2010b). *Nota Groen 'Dichter bij Groen'*. http://www.moerenburg.info/files/nota-groen-april-2010_klein.pdf. Accessed 26 Sept 2019.
- Gemeente Tilburg. (2014). *Coalitieakkoord 2014–2018* voor de Gemeente Tilburg. <https://www.tilburg.nl/fileadmin/files/stad-bestuur/bestuur/coalitieakkoord-gemeente-tilburg-2014-2018.pdf>. Accessed 26 Sept 2019.
- Gemeente Tilburg. (2015). *Stimulering van geveltuintjes en regels geveltuintjes en beplanten boomspiegels*. <https://zoek.officielebekendmakingen.nl/gmb-2015-19076.pdf>. Accessed 26 Sept 2019.

- Gurran, N., & Miller, D. (2008). *Urban green belts in the twenty-first century* (1st ed.). London: Routledge.
- Huang, S. L. (2010). The impact of public participation on the effectiveness of, and users' attachment to, urban neighbourhood parks. *Landscape Research*, 35(5), 551–562.
- James, P., Tzoulas, K., Adams, M. D., Barber, A., Box, J., Breuste, J., et al. (2009). Towards an integrated understanding of green space in the European built environment. *Urban Forestry & Urban Greening*, 8(2), 65–75.
- Jongerius, S. (2019, March 18). Spoorpark: Tilburg loopt nog eens 7 ton mis. *Brabants Dagblad*.
- Kabisch, N. (2015). Ecosystem service implementation and governance challenges in urban green space planning—The case of Berlin, Germany. *Land Use Policy*, 42, 557–567.
- Kozová, M., Dobšinská, Z., Paudišová, E., Tomčíková, I., & Rakytová, I. (2018). Network and participatory governance in urban forestry: An assessment of examples from selected Slovakian cities. *Forest Policy and Economics*, 89, 31–41.
- Leroy, P., & Arts, B. (2006). Institutional dynamics in environmental governance. In B. Arts & P. Leroy (Eds.), *Institutional dynamics in environmental governance* (pp. 1–9). Dordrecht: Springer.
- Lutafali, S., & Khoja, F. (2011). Economic and ecological partnerships revitalizing urban slums: A case study of Cairo. *International Journal of Ecology & Development*, 18(11), 29–45.
- Marche, G. (2015). What can urban gardening really do about gentrification? A case-study of three San Francisco community gardens. *European Journal of American Studies*, 10(3), 1–13.
- Mathers, A., Dempsey, N., & Molin, J. F. (2015). Place-keeping in action: Evaluating the capacity of green space partnerships in England. *Landscape and Urban Planning*, 139, 126–136.
- Moskell, C., & Allred, S. B. (2013). Residents' beliefs about responsibility for the stewardship of park trees and street trees in new York City. *Landscape and Urban Planning*, 120, 85–95.
- Nastran, M., & Regina, H. (2016). Advancing urban ecosystem in Ljubljana. *Environment Science & Policy*, 62, 123–126.
- O'Brien, E. (2006). Social housing and green space: A case study in inner London. *Forestry*, 79(5), 535–551.
- Pincetl, S. (2010). Implementing municipal tree planting: Los Angeles million-tree initiative. *Environmental Management*, 45(2), 227–238.
- Rosol, M. (2010). Public participation in post-Fordist urban green space governance: The case of community gardens in Berlin. *International Journal of Urban and Regional Research*, 34(3), 548–563.
- San José Parks, Recreation & Neighborhood Services. <http://sanjoseca.gov/index.aspx?NID=589>. Accessed 27 Sep 2019.

- Shafer, C. S., Lee, B. K., & Turner, S. (2000). A tale of three greenway trails: User perceptions related to quality of life. *Landscape and Urban Planning*, 49(3), 163–178.
- Sipilä, M., & Tyrväinen, L. (2005). Evaluation of collaborative urban forest planning in Helsinki, Finland. *Urban Forestry & Urban Greening*, 4(1), 1–12.
- Slater, S., Pugach, O., Lin, W., & Bontu, A. (2016). If you build it will they come? Does involving community groups in playground renovations Affect Park utilization and physical activity? *Environment and Behavior*, 48(1), 246–265.
- South African History Online. *The Dutch settlement*. <https://www.sahistory.org.za>. Accessed 25 Oct 2019.
- Van Montfort, C., Michels, A., & Frankowski, A. (2014). *Governance models and partnerships in the urban water sector: A framework for analysis and evaluation*. Accessible through: <http://dspace.library.uu.nl/handle/1874/303566>
- Wolch, J. R., Byrne, J., & Newell, J. P. (2014). Urban green space, public health, and environmental justice: The challenge of making cities ‘just green enough’. *Landscape and Urban Planning*, 125, 234–244.