

## **Delivering sustainable urban solutions: A new chapter of corporate involvement in urban management<sup>1</sup>**

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### **Abstract**

Cities all over the world dedicate efforts to become more “sustainable”. New solutions are being developed and implemented to achieve these ambitions. Typically, these solutions are shaped in a complex interplay between companies that develop and sell the technologies, city administrations, citizens, universities/knowledge institutes, and other urban stakeholders. This paper explores the relation between corporations, city administrations, and other urban stakeholders. We argue that companies need to develop urban management skills when they want to be successful in the market for “green solutions”. They must learn how to collaborate with citizens, housing corporations, authorities, and other urban stakeholders. They can not just “sell” their sustainable technology solutions to cities: they need to learn how to deal with citizens and the complexities of the urban context, and gain more knowledge and experience in the field of integrated urban development and stakeholder participation. At the same time, urban authorities must learn new ways to engage with companies.

### **1. Introduction**

Cities all over the world dedicate efforts to become more “sustainable”. City administrations have set ambitions to reduce energy consumption and CO2 emissions, to shift from fossil fuels to renewables, and to eliminate waste and pollution.

New solutions are being developed and implemented to achieve these ambitions. Typically, these solutions are shaped in a complex interplay between companies (they develop and sell the technologies), city administrations, citizens, universities/knowledge institutes, and other urban stakeholders.

In this light, this paper explores the newly emerging complex relation between corporations, city administrations, and other urban stakeholders, assuming that the effectiveness of collaboration between cities and corporations is a key success factor for sustainable urban development.

We argue that companies need to develop urban management skills when they want to be successful in this new, emerging market; they must learn how to collaborate with citizens, housing corporations, authorities, and other urban stakeholders. They can not just “sell” their sustainable technology solutions to cities: they need to learn how to deal with citizens and the complexities of the

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urban context, and gain more knowledge and experience in the field of integrated urban development and stakeholder participation.

At the same time, urban authorities must learn new ways to engage with companies. New forms of procurement are needed, allowing for innovation; City administrations must learn to effectively to engage in new complex partnerships that deliver sustainability solutions, to approach firms not just as profit-making entities but recognize (and capitalise on) their sincere commitment to sustainable development; how to balance corporate interests with citizens' needs, and how to scale up pilot projects.

The paper is structured as follows. In section 2, we discuss the involvement of (big) business in city management, from two rather different views: the critical view (seeing companies as aggressive profit maximizers), and the shared value approach (that identifies common ground between corporate strategy and social goals such as sustainable urban development). In section 3, we elaborate the specific lens of this paper: the city-business connection in the development and implementation of urban sustainability solutions. We briefly present two concrete examples of how large companies are engaged in urban management. The first one is the Philips Lighting division, that implemented a new lighting system in a neighbourhood in Tilburg, The Netherlands, in close collaboration with the city administration and the citizens. The second case is TNT, an express delivery firm that collaborates with cities to develop more sustainable express solutions. Each case highlights specific dimensions and aspects of the new corporate involvement in urban management. Finally, in section 4, we draw some conclusions and present critical issues and dilemmas, again contrasting the critical view with the "shared value" approach. Also we suggest some avenues for further research.

This paper is based on a literature study, and on semi-structured interviews with key informants from Philips, TNT, and Amsterdam Smart City, an organisation that initiates and implements sustainable solutions in the greater Amsterdam region, in collaboration with companies and other urban stakeholders<sup>2</sup>.

## **2. Corporate involvement in urban management: two perspectives**

The connection between city government and large corporations –and the role of corporations in the governance of the city- is framed in different ways in the literature. In the critical urban literature, large corporations are depicted as profit maximizing entities, predatory actors, exploiting urban resources (human capital, the environment) rather than contributing, and putting private profit above social well-being; not committed at all to their city context, and relocating elsewhere when the profit promise is higher. From this perspective, the corporate "role in urban management" is to use their power in local policy arenas to steer local policy agenda's promoting corporate interests as much as possible (Harvey, 1989; Swyngedouw, 2002). In various forms of urban boosterism, companies will advocate large-scale urban developments or projects

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(with big business interests), typically making the token argument that these projects have “trickle down effects” such as new jobs for unemployed residents, and other economic spillovers.



In a classic study, Grabher (1993) shows how the large coal and steel conglomerates in the German Ruhr area were able, in the 1960s and 1970s, to deeply influence the regional policy agenda. These industries were clearly declining, but they managed to get substantial state protection and subsidies. Their leaders were part of the regional elite and were able to steer policy agenda's. By putting so much effort at backing the old, declining but powerful corporations, the necessary renewal process of the regional economy was postponed and slowed down. More recent accounts point out that industrial lobbies and old boy's networks still work in a similar way in many cities. Local elites tend to influence local development agendas in favour of their own interests, paying only lip service to sustainable and long-term development of cities and regions (see e.g. McCann, 2011).

From a different angle, Klein (2009) heavily criticizes the dominance of big corporations and their “logos”, pointing at the privatization of public spaces and the omnipresence of corporate advertising; the exploitation of urban youth as marketing device for lifestyle companies such as Nike and Coca Cola; the predatory expansion of large retailers like Walmart, that engage in price wars to eliminate local retailers (and raise prices again after elimination); and many other corporate evils. Graham et al. (2001) observe the discriminatory nature of ICT infrastructure investments by private providers: cherry picking implies that wealthy parts of the city are always the first to be upgraded to the newest infrastructures, thus helping to deepen urban divides. Several studies note the risk of “lock-in” (and subsequent abuse of excessive corporate power) when city administrations outsource critical urban services or infrastructures to large companies (for example in IT or urban transportation). Even if contracts have a fixed term, contractors may become very powerful, especially when they control critical infrastructures and have made specific investments. The accumulation of investments and expertise may in fact lead to a situation where the municipality faces very high switching costs when it wants to have a new contractor, leaving

the incumbent in a very convenient position to extract excessive rents, at the expense of taxpayers.

In a second strand of the literature, the relation between cities and corporations is viewed very differently. The city is framed as the “competitive context” in which firms operate, and the focus is how the interaction takes shape, and can be mutually beneficial. More than a decade ago, Van den Berg et al. (2000) published the study “City and Enterprise - Corporate Social Responsibility in European and US Cities”, exploring how individual business companies and organised private enterprise are meeting challenges and help to solve problems in large and medium-size towns. The authors analysed examples, in Europe and the US, of positive contributions that businesses can make to urban challenges such as poverty, unemployment, crime and social exclusion, and how they can help to improve education, amenities, and the quality of the living environment. The authors argued that, to a large extent, it is in companies’ business interest to invest –in various ways- in their urban environment. But they found that CSR activities are more about rather piecemeal interventions than really about changing the conditions of the community.

Ten years later, Michael Porter (2009) also called attention for the link between the firm and its wider environment –albeit from the corporate perspective rather than directly linking it with urban development. In his “shared value” concept, Porter suggests that companies can greatly benefit from adding a social dimension (i.e. environmental concerns, fight against poverty, unemployment, etc.) to their value proposition: this may clearly distinguish them from competitors, and win the appraisal of clients that are increasingly sensitive to the social impacts of corporations. Each company should “identify the particular set of societal problems that it is best equipped to help resolve and from which it can gain the greatest competitive benefit”. In Porter’s view, strategic CSR should be directed to social causes that present an opportunity to create “shared value”: a meaningful benefit for society that is also valuable for the business. Shared value is thus defined as “policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates” (Porter and Kramer, 2011, p. 66). Creating shared value is not about the peripheral concerns of the company, but it moves directly to its core strategy, as value creation becomes a joint effort of the company and community, being integral to competing and profit. Porter and Kramer (2011) put forward three ways through which companies can create shared value: i) by reconceiving products and markets, ii) by redefining productivity in the value chain and iii) by enabling local cluster development.

Both van den Berg and Porter conceptualize the city/region as part of the firms’ competitive context, the source of critical resources on which the firm depends: human resources, infrastructure, client base, legislation, etc. Both argue that investing in this context makes business sense., and make the point that (city) governments should be open to facilitate and support corporations that are ready to address urban challenges.

The two views on the city-corporation nexus discussed in this section are rather contrasting. The critical literature depicts large corporations as ruthless profit maximizers, exploiting local resources, at the expense of local communities. The empirical record for this point is strong, and there are good reasons to be critical about the true rationale of corporate behaviour, and to provide checks and balances to restrict corporate power and influence. At the same time, an overly critical or negative attitude towards big business may be contested, first of all because corporate knowledge and expertise are critical in developing sustainability solutions, and second because there indeed may well be such a thing as “shared value” in this domain: the implementation of urban sustainability solutions fits with the ambitions of many cities, and is in line with a broad social movement towards more sustainability. It is also a large and growing market for companies, characterized by rapid technological development.

### **3. Cities, sustainable innovation, and urban management**

In this section, we focus on a specific emerging field of interplay between cities and big corporations, namely the city-business connection in realising urban sustainable development.

Cities throughout the world have formulated ambitious goals and targets for energy saving, CO<sub>2</sub> emission reductions, promoting the use of renewable energies, waste reduction & recycling, promoting clean water and air, maintaining biodiversity, etc. These urban ambitions can be seen as part of a wider societal “green” movement, fuelled by a big wave of technological innovations (mainly in ICTs and environmental technologies). Many new solutions have become available, holding the promise to run the city more efficiently, to save costs, to improve the quality of life of citizens, and to meet the above-mentioned ambitions regarding sustainability and tackling climate change. The list of new “smart” solutions is long: cheap ways to locally generate solar energy or other forms of durables; smart grids to enable two-way traffic on electricity grids and selling locally produced energy surpluses; new energy storage systems, electric car schemes; smart logistics systems, sensing, tracking & tracing systems that help detect holes in sewage and waste systems, and more in general quality control of urban infrastructures; new types of lighting systems that save energy and increase safety, etc.

For a large and growing number of companies, the development and implementation of these types of technologies has become a core business. Large multinationals like IBM, Cisco, Siemens and Philips have set up “smart city” programmes, often in close collaboration with city administrations. IBM engages in deep partnerships with a limited number of cities, to set up pilot sites and test solutions (to be rolled out afterwards); Siemens introduced City Account Management, a dedicated team of 60/70 people focusing entirely on cities as key markets, and it set up 3 centres of competence where it accumulates knowledge on urban development and management. These large players claim that they can offer solutions for a number of today’s most pressing urban issues. The big companies lead the pack, but there are many smaller and emerging players as well.

Typically, sustainable urban innovations cannot be “sold” as a one-off product or service to a single department or unit. They are complex product/service packages, delivered by consortia of suppliers that unite in specific organisational setups with specific business models, and often there are many stakeholders involved, with potentially different interests. Let’s take the case of rolling out a smart energy grid. A number of stakeholders may be involved in such a project: housing corporations, energy companies, IT companies, banks, the municipal department of public works, and last but not least, the citizens. In many cities across Europe, one can observe new consortiums and business models being developed, that replace old ones<sup>3</sup>; City administrations and companies alike have to assume new, unknown roles in the context of such complex projects, with new types of contracts, business models, and organisational settings.

Private companies, big and small, have the technological knowledge and competences, and create technologies and solutions. But they can’t do it alone: to arrive at effective solutions they have to team up with complementary partners in consortiums, with the urban authorities, with knowledge institutes, and with citizens (the end users). To do so successfully, companies need to develop “urban management skills”. Likewise, city administrations must learn how to position themselves vis-à-vis corporate innovators. A number of questions pop up: how to engage in what types of partnerships and under what conditions, what type of contracts are needed, how to control outcomes and manage risks, balancing corporate interests and citizens’ needs. Managing and implementing urban sustainable innovations is by definition a collaborative effort of corporate innovators and urban managers, and very little is known how to do it in a good way. New policy arenas are opening, in which powerful corporations have substantial business interests to get “their” solutions implemented.

### **Two examples**

This section, as an illustration, contains two recent examples of corporate involvement in the development and delivery of sustainable urban solutions. The first is Philips, that develops innovative and energy saving urban lighting solutions; the second case is TNT, an express company that develops more sustainable ways of express delivery.

#### *Case 1. Philips: new lighting solutions*

Philips is a big player in lighting; the company develops new lighting solutions and platforms for cities and neighbourhoods. Rather than a “vendor” of a product, Philips positions itself as co-developer of urban solutions, in collaboration with stakeholders and clients (the city government, and citizens/firms in the city). An example may illustrate the point. In a residential neighbourhood in the Dutch City of Tilburg, Philips installed a “light-on-demand system”, in close collaboration with the municipality and the inhabitants. The municipality wanted to save on energy costs and reduce CO2 emissions, and the residents want more safety and better lighting in their streets. Lighting is

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<sup>3</sup> Vested interests may suffer, or take part but try to slow down the process, as pointed out by Kolk and Van den Buusse (2012)

responsible for about 14% of total global energy consumption, so saving on lighting (by using more energy efficient solutions) can bring substantial financial and environmental returns. With the light-on-demand system (using LED lights), both ends were met. Sensors on lampposts notice when someone is approaching, and the light becomes stronger. When the person moves further, the light dims again. Inhabitants were closely involved in the design and implementation of the system; Philips and the municipality took note of their concerns, and closely monitored the results.

A Philips sales manager that we interviewed noted that it is not always easy to deliver innovative solutions like the one described above, because in many municipalities, public procurement, is conservative, risk-averse, time consuming; and all too often, pilot projects are not being scaled up. In his view, to avoid risks, cities prefer “proven” technologies, rather than try out new solutions, even if the latter holds promises of substantial cost and energy savings. And even if a city opts for an innovative approach, technologies change fast, and solutions become outdated very soon. Often, better and cheaper technologies are available by the time of implementation, but contracts are typically inflexible, with very detailed specs, and do not allow for change. Philips would like to see more modern ways of procurement, allowing for more technological flexibility and leaving room for the creativity of the company/consortium to use the best technologies available by the time of implementation. However, many municipalities lack the knowledge and experience to engage in more modern and flexible procurement methods.

Second, there is the problem of scaling. Many municipalities are ready to engage in small pilot projects in a single street of neighbourhood, but when a good solution is found, they often don't scale it up. According to our interviewee, “every alderman seems to want his own pilot project. Municipalities should become more active to learn from each other's experiences good practices rather than everyone having a new pilot”. Moreover, cities are being criticised for a lack of implementation power and speed. “Municipalities have high ambitions when it comes to sustainability and becoming smart, but what lacks is a concrete roadmap to get things done, and a culture of innovation. Often, progress and innovation depends on a single strong person (mayor, alderman, or pro-active civil officer) in a city”.

### *Case 2. TNT Express*

TNT is a logistics company, with express delivery as its core business. The company wants to be a leader in sustainable business. For TNT, cities/municipalities are not direct clients like in the previous example. Nevertheless, in its operations TNT faces a number of urban issues, because the vast majority of its pickups and deliveries are in metropolitan areas. A growing number of TNT's clients (including Apple) critically watch the “sustainability performance” of TNT, urging the firm to use low-carbon and energy efficient urban distribution methods. At the same time, from a sustainability and liveability perspective, city administrations put all sorts of restrictions on lorry access, and restrict shopping street deliveries to particular time slots, with major implications for express companies like TNT. A TNT manager notes that city

governments tend to “solve” environmental problems by imposing rules, regulations and restrictions, rather than engaging in smart partnerships with more potential for innovative solutions. TNT and the city have a common challenge, but it is not easy to find the match. Therefore the company considers it a big challenge to immerse itself in urban management issues relevant for its core business. In various cities, the firm set up “smart” partnerships with (urban) actors, with often contradictory interests, to develop sustainable delivery solutions that reduce emissions and save money and time. The company already achieved substantial results. In Brussels, bicycles are used instead of cars for express services. The firm teamed up with a project for youth in the city, and now employs formerly unemployed youth to drive the bicycles. In the City of London, TNT built consolidation centres at the edges of the city, thus reducing the number of inner city movements. Along the way, TNT gained substantial knowledge and experience on urban management. A manager stresses the importance of a more integrated approach towards urban innovations: “City administrations work too much from silo’s, but to achieve results, technical, legal and economic aspects need to be tackled simultaneously”. In his view, city administrations should more actively capitalize on the commitment, knowledge, and ideas of companies. One rather mundane example, relevant for TNT, is the width of cycling lanes. If cities would make these lanes a bit broader, they can be used by TNTs “express bikes”. Thus, for a sustainable city, it would make sense to involve a firm like TNT in the design process of new cycling lanes.

#### **4. Synthesis and conclusions**

Under influence of changing social values –a greater concern for the environment-, an ongoing trend of urbanisation, and a surge of technological progress, the “city” is becoming a central concern for a growing number of large, leading tech companies. Big firms like Siemens, Philips, Cisco and IBM explicitly target cities as key markets to deliver their sustainable solutions (smart grids, decentral energy generation systems, sustainable transport solutions, lighting, to name just a few areas). They opened up dedicated profit centres, set up departments or special city programmes, engage in debates about the future of cities, and actively explore new ways to immerse themselves in urban decision making processes.

Thus, greening cities has become big business. How to interpret this tendency? From a critical perspective, one may point at the emergence of policy arena’s, in which corporations seek new ways to influence local policy making for their own benefit. To “sell” their products and services, they need to position themselves subtly in new types of network constellations (with housing corporations, local governments etc.), and align with (or pay lip service to) the green ambitions of city administrations. And in fact, in many cities (including Amsterdam and Rotterdam), corporations have obtained strategic positions in hybrid institutions (such as economic advisory boards, or “smart city” project organisations) where they have gained substantial formal and informal influence on urban sustainability strategies.

Pilot projects are being developed everywhere, in which companies are testing new solutions in collaboration with other urban stakeholders. Pilot projects can



be seen as test environments for cities and companies, where they can learn together how to make the city greener, starting on a small scale, and seeing what works and what does not. From a critical perspective again, these projects are not neutral or harmless but should be read as corporate efforts to lock cities into their technology, or at least to build an early lead with great commercial potential. A policy implication is that governments must make sure not to become locked in by giving a single company privileged treatment; If the piloted system gets implemented, it creates strong lock-in, making new tenders to be clearly biased towards the incumbents technology solution. On the other hand, companies will not engage in any pilot if any return on investment is ruled out beforehand. City governments have to walk the slippery path of promoting innovation while avoiding lock in.

From a shared value perspective, one arrives at slightly different conclusions. Here, the corporate perspective is central, and the starting point is that in the field of sustainable solutions, cities and large firms need each other to create “shared value”. Put simply, companies make a profit, selling knowledge and technologies to cities, and at the same time they contribute, through their core business, to (urban) societal goals of energy efficiency and sustainability. The question is how to “make it happen”: how can companies work with cities for the benefit of both.

For companies, the urban market is fundamentally different from consumer markets or industrial markets, and this has strategic implications. Typically, there is not a single client (a city administration is a multi-faced body), many stakeholders are involved, political and policy processes play a key role, and policy ambitions (CO<sub>2</sub> emissions, energy efficiency) enter in the equation. Technological change is fast, pilot projects abound, and new business models come and go. Companies are struggling to find their position, and indicate to have difficulties to work with city administrations in various respects. The corporate managers that we interviewed would like to see a more “integrated” form of urban management, abandoning the silo approach, in favour of more holistic concepts. From their perspective, too often, municipal departments work alongside each other, defending their policy domains rather than collaborating to attain smart solutions. New urban sustainable solutions often don’t match with a single urban department, but are transversal. Express delivery company TNT runs into this during its efforts to make urban express distribution more sustainable. Typically, it has to deal with a variety of officers from various urban departments (urban planning, transportation, environmental department), and sometimes with different administrative city districts. Our corporate interviewees typically dub these bureaucratic hurdles as a “lack of vision and leadership”. But as a matter of fact, it is interesting to see a call for more integrated and holistic approaches, this time not coming from critical citizens or scientists, but from the corporate world.

Another corporate message to urban management is to modernise procurement practices and bring them in line with the rapid pace of technological developments. Often, municipalities are risk-averse. Rather than buying new technology, they procure what they know and understand, and are reluctant to

engage in new types of deals. Also, procurement procedures take a lot of time and are inflexible. New types of “framework” procurement are needed, allowing for more technological flexibility and evoking creative and innovative behaviour from the firms. There are examples around, but many city administrations lack the knowledge and competences to procure adequately. Investing in these competences may have high social returns.

We conclude that the critical view and the “shared value” concept both shed light on the issue how to shape future collaboration platforms between city and business. The critical perspective helps to recognize clearly where corporate and social interests diverge, and provides warning against real dangers such as lock in and companies paying lip service to environmental issues while ruthlessly pursuing narrow corporate interests. The shared value perspective highlights the corporate interest and potential in contributing to social values such as sustainability, and suggests avenues to align corporate core business with social goals. Our interviews show that firms have a growing business rationale for being more green and sustainable, and that they are struggling to engage in partnerships with cities and urban stakeholders to obtain results in this respect.

What seems to lack in many cities is an appropriate “platform” where municipality and companies meet and systematically explore opportunities for shared value. Our interviewees from companies indicate the difficulty to find their way into the city bureaucracy, to understand how decisions are made. Also, they indicate that they are often seen as just another company that wants to sell a project or product, even if there are clear win-win situations for both sides. Recently, several cities have set up “smart city” organisations as triple-helix or quadruple helix platforms where sustainable urban solutions are being developed and rolled out. So far, there are no systematic analyses of these new hybrids, offering new avenues for further comparative research, for example on newly emerging business models and contracts, how large corporations are influencing decision makers in cities to get their projects started, emerging new types of lock-in, civic participation in the development and roll-out of sustainable infrastructures, etc.

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