

Innovation for financing urban regeneration and infrastructure

**The European model for regenerating cities
Lessons from Copenhagen, Hamburg,
Helsinki, Lyon**

Luise Noring & Bruce Katz

**When digital technologies reveal
the hidden value of urban assets**

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Governance and funding of large urban infrastructure: an opportunity for innovation

Funding infrastructure projects and rebuilding the city above the city at a time of steadily diminishing public resources make for a difficult equation to solve. But solve it we must, as the urban infrastructure erected in the post-war decades requires urgent investment and metropolisation continues to make strides around the world.

Our cities, however, are not limited to choosing between making minimal investments in maintenance, the cost of which will rise with every delay, and launching new projects in response to urgent requirements. Nor are they condemned to debating the merits and drawbacks of privatisation versus nationalisation, which is hardly conducive to action. Our cities are endowed with multiple and diverse assets that are, too often, not considered assets and, consequently, underutilised or even simply ignored. These assets, measured at fair value, may be used to drive ambitious urban regeneration and new infrastructure projects, designed by public authorities and developed in partnership with multiple players in the public and private sectors. Dag Detter makes this point in *The Public Wealth of Nations: How Management of Public Assets Can Boost or Bust Economic Growth* (Palgrave, 2015), namely, that our cities and metropolises are gold mines whose assets only require to be valued and managed. All we need to do is... innovate.

That's right: innovate! Too often, the concept of innovation is confined to the technology sector. It is true that our cities are increasingly connected and our systems increasingly smart. But to limit innovation solely to technology considerations will not enable us to meet demographic, social, economic, and environmental challenges. Innovation is a global concept; accordingly, it applies to funding and governance as well.

It is with this notion in mind that *La Fabrique de la Cité* entered into a multidisciplinary association with Bruce Katz, a Senior Fellow with the Brookings Institution since 1996. In partnership with Luise Noring, a researcher at the Copenhagen Business School, Bruce Katz has conducted a comparative study in four European cities that have all developed urban areas featuring new infrastructure based on innovative models. In Copenhagen, Hamburg, Helsinki, and Lyon, new districts and major infrastructure projects have brought about partial to extensive transformation of the city over the past two decades.

The comparative analysis reveals that these initiatives have owed their success to four main factors. The first factor is institutional innovation: wide-ranging projects such as SPL Confluence in Lyon and HafenCity in Hamburg call for the development of dedicated structures in which cities can create a subtle balance between public and private interests. The second factor, indispensably, is to identify, beforehand, which assets to promote and bring together in dedicated structures. This has proven an easier task in cities where municipal authorities held land rights (primarily Helsinki and Hamburg); accordingly, it was a more complex undertaking wherever landholdings were fragmented and privatised (as in Lyon). The third component is a set of mechanisms designed to guarantee the primacy of long-term projects over short-term considerations, since infrastructure-project timeframes are longer than political ones. Finally, these projects generally brought

about broad-based benefits, for instance: (1) the regeneration project for Copenhagen's port district pursued the stated objective of funding the metro system without resorting to additional taxation; (2) the project in Helsinki included citizen participation; and (3) Lyon made partnership-based innovation a central tenet of its Confluence project.

With these four examples of innovative experimentation, *La Fabrique de la Cité* aims not only to show the differences between these cities, which are to be expected, but also to make the point that these diverse cities making use of diverse approaches share common ground. That is why they can inspire and provide a model for other cities. Their experience, summarised in this comparative study, is truly a guide for action.

But what action can be undertaken by cities that no longer own their brownfield areas, those abandoned sites where the social fabric may be reactivated? Many mature European cities would have difficulty applying these models. According to Isabelle Baraud-Serfaty, the founder of ibicity and a professor at *Sciences Po*, there is a complementary model based on the same key principle of bringing to light underutilised assets that can be adapted to new economic realities. This new economic landscape requires players to capitalise on four breakthroughs made possible by digital technology: (1) the multiplication of supply as every individual can become a producer of data, energy, and free space in his or her vehicle or home; (2) individuals' capacity to act as purveyors of funds; (3) individuals' increasing individualisation, which allows for more far-reaching customisation even as big data enable the industrialisation of customisation; and (4) the shift from ownership to usage.

In cities where usage has displaced infrastructure in importance, there is a growing diversity of players and a concurrent shift in value creation, which gives rise to increasing opportunities to fund projects differently. History is in the process of being made: who will master this increasingly complex project-development process? Digital aggregators, full-service operators with longstanding knowledge of urban settings, public communities, and technology experts are all in the running.

One thing is certain from the work carried out by Bruce Katz, Luise Noring, and Isabelle Baraud-Serfaty: building cities involves tectonic shifts. The time is ripe for innovation to fund the projects and infrastructure that will transform our cities and metropolises.

Cécile Maisonneuve

President, *La Fabrique de la Cité*

The European model for regenerating cities

Luise Noring & Bruce Katz

Lessons from
Copenhagen
Hamburg
Helsinki
Lyon

Introduction

Cities across the world face increasing demands at a time when public resources are under enormous pressure. With urban populations growing, public needs for infrastructure such as water, energy, public transit, affordable housing, and waste management are growing as well. At the same time, many older cities have legacy infrastructure (e.g., roads, energy) and underutilized areas (e.g., former industrial and harbor districts) that need to be repurposed for a radically changed economy. With public finance budgets overstretched and increases in taxes often contentious, government at all levels is challenged to finance these efforts.

This paper explores a model of urban development that both revitalizes cities and finances large-scale infrastructure by increasing the commercial yield of publicly owned land and buildings, sometimes without raising public taxes. The paper draws heavily on a recent case study that we conducted of the Copenhagen City & Port Development Corporation (hereinafter CPH City & Port Development). The paper also builds on *The Public Wealth of Cities* (Brookings Institution Press, 2017), the recent book by Dag Detter and Stefan Fölster that describes the hidden potential of cities to capitalize on unknown or radically undervalued and underleveraged assets.

CPH City & Port Development deploys an innovative institutional vehicle—a publicly owned, privately driven corporation (hereinafter public asset corporation, or PAC)—to achieve the professionalized management of assets more commonly found in the private sector while retaining a large portion of value appreciation for public use. Combining strategic zoning, land transfers, and revenue-generating mechanisms, this public asset corporation has helped spur a remarkable transformation of the city over the past 25 years, from an ailing former manufacturing city to the third-richest city in the world. It has made Copenhagen’s traditional harbor one of the most exciting waterfronts in the world and used the proceeds of land disposition and development to finance the construction of a metro transit system across the city.

This paper compares and contrasts the Copenhagen model with major regeneration efforts and institutional innovations that are underway in Hamburg (HafenCity), Helsinki (Kalasatama), and Lyon (Lyon Confluence). Each of these case studies shows how cities are leveraging public assets in different contexts, under different circumstances, and in different geographies. The proliferation of disparate approaches offers multiple options for mature and developing cities interested in undertaking transformative interventions.

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Major Findings

A comparative analysis of Copenhagen, Hamburg, Helsinki, and Lyon yields the following conclusions:

The four cities use a variety of institutional arrangements to manage key public assets. These arrangements exhibit varying degrees of collaboration across levels of government and the public, private, and civic sectors. CPH City & Port Development, for example, is an independent corporation primarily owned by the city of Copenhagen with a minority share owned by the national government and has representatives from government as well as the private sector on its board of directors. HafenCity Hamburg GmbH (HCH), by contrast, is an independent corporation exclusively owned by the city-state of Hamburg; its board is populated exclusively by representatives from the highest executive level of the government. SPL Lyon Confluence, for its part, is primarily owned by Greater Lyon, with minority shares held by the city of Lyon, the Department of Rhône, the Rhône Alpes Region, and three municipalities; its board is also made up of local elected officials. Helsinki is an outlier among the four case studies: the regeneration of Kalasatama is being driven and managed by highly professional departments of the local government.

The four cities have pursued different means to bring assets under control of a single entity. CPH City & Port Development took ownership only after the national government transferred the assets to the corporation. Both HCH in Hamburg and the city government in Helsinki, by contrast, were compelled either to repurchase assets that had been leased to private entities for port-related operations or wait for the expiration of leases before regaining control. SPL Lyon Confluence reflects a different situation, since ownership of assets in the former industrial area was highly fragmented across multiple entities; repurchasing of those assets has proceeded in seriatim as development takes place. All four cities use various mechanisms to insulate the management of public assets from political interference and focus on long-term public gains rather than short-term political or fiscal considerations. By focusing on the large-scale regeneration of an iconic part of the city, the implementation of the PAC model must be able to survive shifts in political priorities and partisan politics over multiple electoral terms. CPH City & Port Development avoids political meddling by dividing responsibilities clearly between the public owners and private managers as well as adhering to a national legislative mandate to maximize profits for the funding of a citywide transit system. At the other end of the spectrum, Helsinki uses a highly professional government workforce to manage its public assets. The success of the PAC model is highly dependent on its ability to operate with agility and be adaptive to shifting market demands.

All four cities are managing public assets to achieve broad local priorities. All four cities are spurring the large-scale regeneration of former port and industrial areas that are located in the urban core. Each city is also using the management of assets to achieve other objectives. CPH City & Port Development, for example, is using the revenues from the disposition and management of public assets to finance the construction of a citywide state-of-the-art metro system. Copenhagen and other cities impose various environmental and social mandates on developments undertaken within the targeted geographic areas. Helsinki is also distinctive due to the extent of citizen involvement in the redevelopment of its former port area.



Comparative Methodology

Key Enabling Features of Public Asset Corporations

The public asset corporation model combines the efficiency of market discipline and mechanisms with the benefits of public direction and legitimacy. Our Copenhagen research identified a series of key features that enabled CPH City & Port Development to carry out its mission. We use these enabling features to compare the use of the PAC model in Hamburg, Helsinki, and Lyon.

The five key enabling features are:

1.

Bundling of Public Assets

Public ownership in many cities is often fragmented across multiple authorities. The levels of government that direct these entities—and the laws and regulations that govern them—are also complex. The public asset corporation model bundles assets under unified ownership. This makes public ownership more transparent, enabling the city electorate and other key stakeholders—such as developers, financial institutions, and investors—to know what assets (land, buildings, etc.) are owned by the public and the market value and potential of those assets.

2.

Financing Urban Regeneration

The redevelopment of former port and industrial areas requires investments in such disparate activities as environmental remediation, infrastructure retrofit and modernization and energy transition. The PAC model uses a variety of innovative financial mechanisms both to create real estate value through strategic rezoning and to extract value for public investments.

3.

Enabling Access to Finance

The PAC model relies on disparate sources of finance: public revenues generated through taxes, public financing at favorable interest rates, and private-sector financing backed by government credit ratings or explicit guarantees. In addition, individual development projects naturally occur through investments by a broad spectrum of financial institutions, including pension funds, commercial banks, and equity firms.

4.

Driving Collaborative Governance

The PAC model drives collaborative governance in several ways. Ownership of public assets is often shared across several levels or departments of government, and management of the PAC by a board of directors is also shared either across sectors, political parties, or governmental agencies. Finally, responsibilities for the disparate elements of the urban regeneration process are shared across public and private sectors.

5.

Maximizing Public Benefits

The PAC maximizes public benefits in multiple ways. It catalyzes the regeneration of former port and industrial areas within the cores of cities. It uses the value and revenues generated by the smart disposition of assets to finance critical infrastructure and other needs within the targeted geographic area and occasionally beyond. It also subjects the development of individual commercial, residential, and other projects to requirements that advance goals around sustainability, innovation, and inclusion. At the same time, the PAC model allows the public sector to retain a portion of value appreciation from urban regeneration and to redeploy the proceeds for public purpose.

Comparing the Public Asset Corporation Model across Four Cities

In this section of the paper, we apply the five key enabling features described above to the specific design and implementation of the PAC model in Copenhagen, Hamburg, Helsinki, and Lyon.



Copenhagen

Introduction to the City

Copenhagen is the capital of Denmark. The municipality has a population of over 600,000 people, and more than 2 million people live in the broader metropolitan area. Copenhagen has developed a well-deserved global reputation as a leading sustainable city. It has pledged to be the first carbon-neutral capital in the world by 2025 and has emerged as an innovator in clean, renewable energy. As a center for mixed-use, mixed-income neighborhoods, it has created a distinctive urban fabric and quality of place that is simultaneously innovative and inclusive. The city is widely known for its cycling culture and infrastructure, with almost half of the residents cycling to work or school.

Denmark is a decentralized system that provides municipalities with enormous powers and the ability to operate with considerable independence from the national government. Local governments in Denmark account for over 60 percent of government spending, the highest level among advanced nations in the OECD. With strong local power comes strong local capacity. The knowledge and decisionmaking capacity of the public sector is robust, with a steady supply of highly educated public servants across technical, environmental, social, and business fields. The supply stems from a public-sector educational system where tuition is free.

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Origins and Geographic Focus

In the mid-to-late 1980s, Copenhagen was experiencing 17.5 percent unemployment, a loss of taxing capacity, and an annual budget deficit of \$750 million. For decades, government policies had subsidized the outmigration of families to the outskirts of Copenhagen, leaving a city overrepresented by pensioners and young people attending public universities, neither of whom contributed greatly to the city's tax revenue. With the traditional manufacturing industry moving out and a stagnated economy in the 1970s and 1980s, the city government had to do something radical to spur economic growth and attract a strong tax base⁴.



The solution pushed by national political leaders and then-mayor Jens Kramer Mikkelsen: a new publicly owned, privately managed corporate entity that could drive the regeneration of large areas in the city's core, maximize the value of underutilized public land, and use the revenues generated by smart zoning and asset management to finance transit and other infrastructure. The aspiration was to combine the efficiency of market discipline and mechanisms with the benefits of public direction, legitimacy, and low-cost finance.

⁴ The loss of traditional industry is exemplified by the 1996 bankruptcy of shipbuilding company Burmeister & Wain.

The intervention proceeded in three discrete phases.

1.

The first phase involved creating a public asset corporation, the Ørestad Development Corporation, in 1992. The corporation was charged with redeveloping Ørestad, an area of about 310 hectares (1.2 square miles) located between the city of Copenhagen and the Copenhagen airport and the bridge connecting Denmark to Sweden, and using the revenues generated by redevelopment to finance the construction of a transit system for portions of Copenhagen city. The land, owned by the national government, had traditionally been reserved for use by the military.

The Ørestad Development Corporation pioneered a close partnership between the national government and the city government of Copenhagen; the corporation was co-owned by Copenhagen Municipality (55 percent) and the National Ministry of Finance (45 percent). While the state of Denmark provided the land, the city government set the zoning, altering the permitted uses from protected heathland to commercial, educational, retail, and ultimately housing purposes.

The catalytic move to spur development of this area was the construction of a metro transit line connecting Copenhagen's city center to the airport. By national law, the Ørestad Development Corporation was explicitly tasked with developing the area to raise capital for the construction of the first two stages of the Copenhagen Metro (the M1 and M2 lines), seen in Figure 1. To sequence the build-out of the metro system before the full development of the land, the Ørestad Development Corporation took out a loan against the value of its land assets to fund the construction.

The full development of Ørestad is expected to take 20 to 30 years, at which point an estimated 25,000 people will live in the area, along with a daytime population of 20,000 students and 60,000 workers. The first office building was constructed in 2001, and the first residential buildings were completed three years later. As of December 2016, the residential population had reached 10,000 and the worker population totaled 17,000.



Figure 1
Copenhagen's M1 and M2 transit lines opened to the public in 2002 and 2007, respectively.
Source: CPH City & Port Development.

Since 2007, various areas of Copenhagen have been transformed under the management of CPH City & Port Development. They include the Ørestad area, South Harbor, North Harbor, and a former industrial area known locally as Paper Island. CPH City & Port Development has deployed the same innovative model of governance, finance, and operations used by both the Ørestad Development Corporation and the Port of Copenhagen. Using the public asset corporation model, CPH City & Port Development has managed about half of all the redevelopment projects undertaken in Copenhagen over the past decade. The sites are shown in green in Figure 3.

2.

The second phase of development involved the re-visioning of the Copenhagen port and the restructuring of its management. Historically, Copenhagen port was run largely as an industrial harbor. The port was managed inefficiently and ran continuous annual deficits. To balance these deficits, the port management would generally sell unused land to developers. In 2000, the Øresund Bridge connecting Copenhagen with Malmö in Sweden was completed, and harbor traffic in the ports of both Copenhagen and Malmö was dramatically reduced. This opened up opportunities for redevelopment of inner harbor areas for residential and commercial purposes. To take advantage of these possibilities, the Port of Copenhagen Ltd. was put in charge of both the land management and urban redevelopment of the commercial harbor. The company operating the port, Copenhagen Malmö Port AB, thus became an entity with a narrow remit. As a result, for the first time in a century, the port realized profits by operating in a more efficient and cost-conscious manner.

3.

The final phase of development involved consolidating the Ørestad Development Corporation and the Port of Copenhagen Ltd. under one entity—CPH City & Port Development. As with the Ørestad Development Corporation, the city of Copenhagen initially owned 55 percent of CPH City & Port Development, with the remaining 45 percent owned by the Danish national government. A transit construction company was split off from the merged company to take full responsibility for building the expansion of the metro system. Jens Kramer Mikkelsen, who by then was heading the Ørestad Development Corporation, took the helm of the new merged corporation (see Figure 2).



Figure 2



Figure 3

Analysis of Key Enabling Features

Bundling of Public Assets

CPH City & Port Development was created by a process of institutional innovation—through the consolidation of preexisting public corporations, valuations of assets, transfers of ownership, delegation of tasks, and devolution of power. Lars Rohde, chairman of the board of governors at the National Bank of Denmark, states that before the bundling of public assets and merging of public companies in Copenhagen, ownership of public assets was highly fragmented. With fragmentation, he noted, local government loses sight of its assets and makes decisions in a piecemeal fashion, which has a negative impact on the city’s ability to raise capital for transformative urban development. Rohde pointed out that, through this fragmentation, large-scale infrastructure investments only benefit individual property owners in a random way, as people living in close proximity to the metro stations obtain an appreciation of their property⁵.

⁵ Lars Rohde, interview with authors, National Bank of Denmark, September 26, 2016.

Financing the Urban Regeneration

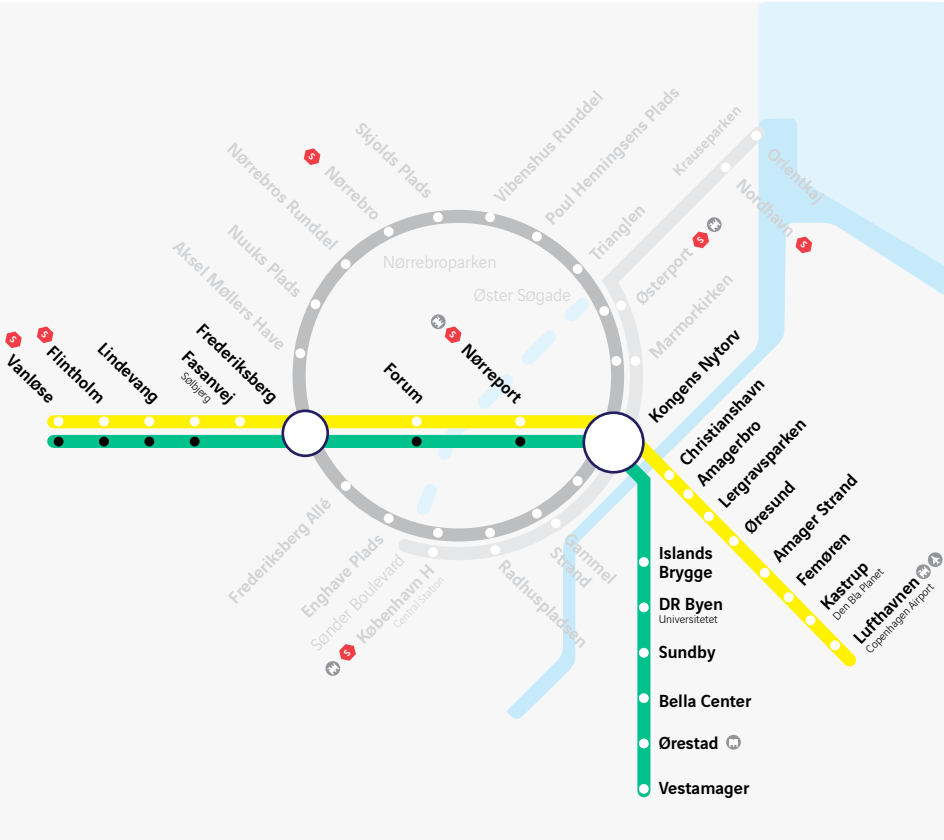


Figure 4
Overview of the Complete Metro System of Copenhagen.
Source: CPH City & Port Development.

CPH City & Port Development was established with the explicit purpose of using the revenues of redevelopment to finance the construction of infrastructure; in this case, the City Circle Line (depicted in gray in Figure 4) to connect the first two metro lines and additional parts of Copenhagen.

The financing of this major transit expansion (as well as metro connections to North Harbor itself) has been accomplished with the sophisticated management of public assets. CPH City & Port Development invests in a broad range of infrastructure, including public transit, roads, and recreational and other public amenities. The funds stem from the sales of the public land and assets owned by CPH City & Port Development. Improvements in infrastructure increase the value of its land and assets and enable the corporation to invest and expand.

Access to Finance

The sequence, simple and effective, generally works as follows:

- 1 National and local governments transfer assets to CPH City & Port Development; two metro lines and additional parts of Copenhagen.
- 2 Local government rezones the land for residential and commercial use;
- 3 The land increases in value;
- 4 CPH City & Port Development borrows funds (generally on favorable terms from the National Bank of Denmark) based on the increased value of the land;
- 5 This capital is either transferred to the metro construction company for broader transit investments and/or used by CPH City & Port Development to pay for local infrastructure that enables the development of the land;
- 6 CPH City & Port Development facilitates development through a variety of mechanisms, including land sales to or lease agreements with developers and, in a limited number of cases, development by the corporation itself; and
- 7 This generates revenue that is used to service debt.

Thus, the process enables a virtuous cycle, with CPH City & Port Development funding value-enhancing infrastructure improvements from the value created by past investments and improvements.

In addition to asset disposition, CPH City & Port Development has benefited from the smart valuation and transfer of nationally owned land to the corporation. Land in the port was freed up for development to pay for large-scale transit construction when the corporation was established. Ownership of the harbor had to be established before this transaction could occur: both the national and local governments had made claim to ownership of the harbor. After three years of court procedures, it was confirmed that the national government owned the port.

In 2007, when CPH City & Port Development took over the redevelopment

of North Harbor, it assumed \$2 billion in debts in exchange for public land and assets of the same value and, simultaneously, it transferred \$2 billion to the metro construction company.

In 2014, the national government revalued the land of North Harbor and estimated it to be worth \$450 million more than the original estimate in 2007. The appreciation went toward paying for construction of the metro in North Harbor, including two additional metro stations. In 2014, the national government also decided to reduce its ownership share in the company from 45 percent to 5 percent, enabling the local government of Copenhagen to assume a larger degree of responsibility for CPH City & Port Development. Thus, since 2014, the municipality has owned 95 percent, with the state of Denmark owning the remaining 5 percent.

Carsten Koch, director of the board of CPH City & Port Development, noted that the key feature that has enabled the corporation to successfully influence the property development market is its access to cheap finance, which is the result of the high credit rating of its owners, the city of Copenhagen and the state of Denmark. “The access to cheap loans and the ability to keep operating despite massive debts is the single most important feature of CPH City & Port Development,” Koch said. “Without that, we would have shared the destiny of other property developers during the recent recession, as we are just as vulnerable to market dynamics as other property developers.” Koch pointed out that, despite being somewhat sheltered by the high credit standing of its owners, CPH City & Port Development is nevertheless subject to international rules of accounting that require it to list both assets and debts at market value. The challenge, of course, is that whenever there is a market recession, such as in 2008–09, the company’s assets lose value while its debts remain the same⁶.

Large Danish pension funds are important partners of CPH City & Port Development. They share the company’s long-term investment horizon and its emphasis on low-risk investments. The joint venture between CPH City & Port Development and the pension fund ATP is emblematic of how the corporation operates.

Recognizing that the public sector could not afford to keep up with a growing population, ATP was established by the national government in 1964. (Sweden and the Netherlands have similar

⁶ Carsten Koch, interview with Luise Noring, CPH City & Port Development, September 16, 2016.

→ pension structures.) ATP is the fourth-largest pension fund in Europe, with a membership of 5 million and a requirement that all working Danes contribute. To secure future obligations and minimize risk, ATP Real Estate is very conservative in its investments, entering into investment propositions late in the value chain, usually when properties have been developed or, at the very least, when local building plans have been approved.

In 2012, CPH City & Port Development commenced the construction of UN City. ATP recognized the value of owning the UN City building, which had a secure tenant in the city of Copenhagen on a long-term lease. Given the considerable scale of the investment, another Danish pension fund, Pension Denmark, was invited into the partnership. Pension Denmark (45.75 percent), ATP Pension (45.75 percent), and CPH City & Port Development (8.5 percent) now own UN City in a joint venture, Harbor PS, which also owns Copenhagen Gate, another major development project. Harbor PS operates as a separate entity and commercial company with its own board of directors.

Governance Structure

The political features that define Copenhagen and Denmark—collaboration, professionalism, public orientation—are manifested in the structure and composition of the CPH City & Port Development’s board of directors. By national law, the board consists of eight members—two appointed by the national government, four by the city of Copenhagen, and two by employees.

The national government has decided to use its vote to appoint two professional board members. The current appointees are Mads Lebech, the CEO of the Danish Industry Foundation, and Dorte Krak, the CEO of the Copenhagen-based Arp-Hansen Hotel Group. Significantly, the national government retained two seats on the board even after it reduced its ownership stake in the company in 2014. It was acknowledged that the continued representation and support of the national government was vital to CPH City & Port Development’s operations.

A key element of CPH City & Port Development’s success is that the operations of the company are depoliticized and run with minimal interference from national and local governments. This enables the corporation to take advantage of public assets, legislative powers, and the local market economy to finance major infrastructure investments and the sustainable redevelopment of underutilized assets, including the industrial harbor.

As board director Carsten Koch argued in an interview for this study, depoliticization has been achieved in large part by having CPH City & Port Development governed by national law. One critical statutory requirement: the mandate to optimize commercial gains in order to generate profit for the city of Copenhagen and thereby enable the construction of the metro system. A clear mandate for corporate profits to be designated for metro construction creates transparency and eliminates the potential for funds to be directed toward political issues or uses.

The depoliticized nature of CPH City & Port Development’s operations has also enabled its leadership to survive partisan changes in national and local governments. At the same time, local and national governments have demonstrated both the political will to delegate power and to give freedom of ownership of the land and the operations to a separate corporate entity.

Maximizing Public Benefits

The creation of a hybrid corporation was intended to combine the efficiency of market discipline with the benefits of public direction and legitimacy. The Copenhagen model empowers the public and private sectors to do what they both do well and to leverage their core competencies.

As described above, the principal goal has been to use public assets to finance transit infrastructure. As with the Ørestad Development Corporation, CPH City & Port Development was established with the explicit purpose of using the revenues of redevelopment to finance the construction of the City Circle metro line.

But other public goals have been achieved as well. As described below, the public sector sets the basic rules of the development game and projects must conform to ambitious targets that further sustainability and social inclusion objectives.

“ The Copenhagen model empowers the public and private sectors to do what they both do well and to leverage their core competencies. ”





Key Accomplishments

Copenhagen has found that by managing transactions through a publicly owned, privately driven corporation, operations run faster and more efficiently in comparison to how local government traditionally tackled public development projects. This allows the city and state to set ambitious targets to meet the growing demand for resources and infrastructure.

The impact of CPH City & Port Development has been transformative at the city scale as well as the district and project scale. The impact on the city has been felt through a revitalized economy, a strong tax base, and an expanded transit system. Residents obtain an appreciation of their property.

The impact at the district and project scale is best observed in the ongoing transformation of North Harbor (see Figure 5). North Harbor is the corporation's most recent redevelopment project and, together with Ørestad, the largest urban development project in Denmark. The project was showcased as "The Sustainable City of the Future" at the COP 15 UN climate summit, hosted by Copenhagen in 2009, and at the Architecture Biennale in Venice.



The North Harbor area of Copenhagen.
Source: CPH City & Port Development.

There are multiple reasons for these accolades.

— The North Harbor project is essentially building a new city within the city in a dense, sustainable, transit-connected environment. Eventually, the entire North Harbor area will include residential, commercial, and office space with the capacity to accommodate 40,000 inhabitants and 40,000 workers⁸.

— North Harbor is partly built on surplus soil excavated during the construction of the metro. The amount of soil deposited was so substantial that it actually raised the level of the new land by a meter, leaving North Harbor better prepared for climate change and rising sea levels and providing businesses and residents with an assurance of climate resiliency.

— Buildings in North Harbor must conform to Copenhagen's larger ambition of becoming the first capital city to be carbon neutral by 2025. Developers must adhere not only to national and local standards for energy consumption but also ensure that materials are sourced locally, building insulation is adequate, the construction process is conducted properly in terms of reduced accidents and suitable working conditions (lighting, temperature, etc.), and employee satisfaction is high. Local law also requires that at least 25 percent of the housing in new city districts be set aside as social housing for lower-income residents.

— The North Harbor project finances both the redevelopment of North Harbor itself and the continued expansion of the city's metro system. To support this, CPH City & Port Development has created a smart profit-sharing mechanism: the corporation receives part of the property value increase generated by the introduction of a metro station. The mechanism works as follows. CPH City & Port Development includes in all sales agreements a clause requiring the purchaser to pay a supplement to the purchasing price if and when a metro station is established within close proximity to the property. Agreements specifically require the purchasers to pay an additional \$11.41 per square meter for office buildings or \$5.71 per square meter for residential properties annually for a period of 60 years after the establishment of a metro station within a 50-meter radius of the property. In this way, the public realizes a portion of the value that it creates through the introduction of a transit system rather than allow it to be realized exclusively by private owners.

⁸ From Idea To Project," CPH City & Port Development, in Cooperation with Cobe, Sleth, Polyform and Ramboll, August 2012.





Hamburg

Introduction to the City

After Berlin, the Free and Hanseatic City of Hamburg is Germany’s second-largest city, with a population of about 1.8 million people. Comprised of seven boroughs, Hamburg is also the largest non-capital city in Europe. More than 5 million people live in the broader metropolitan area. With the fall of the Berlin Wall, Hamburg regained its position as a global logistics hub, with new territories in Northern and Northeastern Europe one again reachable by train and road from Hamburg’s port⁹. Today, the harbor area is ranked as one of the largest container ports of the world. Thanks to this position, Hamburg is also a commercial hotspot and the largest trading center in Germany. The logistics and trades industries, together with banks and insurance firms, are among the city’s major employers. According to recent EC data, Hamburg offers jobs to more than 320,000 people commuting into the Hamburg city from the metropolitan area, including from parts of the neighboring federal states of Lower Saxony, Schleswig-Holstein, and Mecklenburg-Vorpommern. With its economy and workforce growing steadily since 2003, Hamburg’s most pressing challenge today is how to accommodate its expanding population in terms of infrastructure, housing, and jobs.

As a federal republic, Germany has a highly decentralized system of governance that delegates a high level of autonomy to its 16 federal states (three of which are city-states). As a city-state, Hamburg has the fiscal and legislative powers of both a city (municipality) and a state. The powers of Hamburg are reinforced by the wealth of the city population (Hamburg is home to the largest number of billionaires in Germany) and the wealth of public assets of the city government. Like many Northern European cities, Hamburg is built on a long-standing tradition of strong public sectors that retain vast assets and are run with a high level of professionalism. The public sector is bolstered by a tuition-free educational system (public universities, schools, and kindergartens) that turn out a steady supply of highly educated and specialized employees. As in Copenhagen, the local government of Hamburg is a major employer.

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⁹ Free and Hanseatic City of Hamburg, Ministry of Economics, Transport and Innovation, “Hamburg’s Cluster Policy: Reaching the Top Together,” September 2016
Online: www.hamburg-economy.de



Origins and Geographic Focus

The city of Hamburg has historically owned the port, the city's single most important source of income. At the beginning of the 19th century, the Port of Hamburg was the third-largest port in the world; today, it is ranked among the 15 most important ports in the world. Similar to most industrial port cities, Hamburg turned its back on its waterfront. As the city expanded, however, local government decided to incorporate the waterfront into the Hamburg cityscape.



The city of Hamburg historically leased the land in the port area to different corporations operating in the port, including shipping, logistics, and container operators. These leases were typically long-term leases of 30 years. The lease-takers developed the land themselves and owned the buildings they constructed on the land. Significantly, the lease-takers did not own the land the buildings were sitting on; the land within the port always remained in the ownership of the city-state.

In 1993

In 1993, Hamburg's city government established a subsidiary within Hamburg Harbor and Logistics (HHLA), a wholly city-owned port operating company. This subsidiary, the Corporation for Harbor and Site Development (HSD), was tasked with repurchasing and terminating the long-term leases that the city had executed with port operators in areas north of the river Elbe. Between 1993 and 1996, these acquisitions were done with the purpose of increasing the amount of land available for further urban expansion and redevelopment. However, HSD was asked not to divulge the reason for its acquisitions in order to keep port operators from gaining an upper hand in sales negotiations. Hence, port operators presumed that HSD was repurchasing land for redevelopment of the port itself.

In August 1997

In 1993, Hamburg's Senate and Parliament decided to create a special asset class (SAC), "City and Harbor," and HSD was asked to develop the area as an independent corporation with limited liability operating separately from the port operation company. The goal was to include HafenCity into the city proper by developing a functionally mixed, inner-city district of Hamburg and regain access to the waterfront. Hence, the city-state transferred legal ownership of the public assets of the HafenCity area (i.e., land and buildings) into the SAC in that year.

The close proximity of HafenCity to Hamburg's city center is illustrated in Figure 6.



Figure 6
Aerial photo of the traditional city core of Hamburg, HafenCity, and Billebogen, an area slated for future redevelopment.
Source: HafenCity Hamburg GmbH.

In 2004

Hamburg city government converted HSD into HafenCity Hamburg GmbH (HCH). As a publicly owned and privately managed corporation, HCH embodies—together with the SAC it operates—the essential characteristics of a public asset corporation.

The entire HafenCity development is scheduled to be completed between 2025 and 2030.

When fully built, HafenCity will accommodate

14,000
residents and supports

45,000
jobs mostly in office buildings

It will also be home to

5,000
university students,
major cultural buildings

(such as the Elbphilharmonie concert hall), a vertically organized cruise terminal, retail and restaurant spaces, and a significant amount of public spaces¹⁰.

¹⁰ Hafencity Hamburg, Hafen City Chronology, Overview: The Emergence of a New City District
Online: www.hafencity.com/en



Analysis of Key Enabling Features

Bundling of Public Assets

The main challenge faced by Hamburg’s local government in taking charge of the land and buildings in HafenCity centered on repurchasing the long-term lease agreements that the city had with numerous port operators. Unlike Copenhagen, Hamburg was—and still is—dependent on the operation of its port as a source of economic growth and vitality. Thus, local government had to find a way to regain control over the assets without damaging the operations and activities of the port. The solution was the institutional evolution described above—the establishment of Harbor and Site Development (HSD) in 1993 within Hamburg Harbor and Logistics (HHLA); the repurchase and termination of long-term leases that the city had with numerous port operators during the period from 1993 to 1996; the designation of HafenCity area as a special asset class in 1997, making HSD independent from the port operating company with a mandate to develop HafenCity and manage the SAC; and the conversion of HSD into HafenCity Hamburg GmbH (HCH) in 2004.

A few additional details are worth noting:

— As described above, all the public assets of HafenCity are held under a special asset class that facilitates the bundling and leveraging of public assets. The SAC is a legal entity but is not a corporation; as such, the SAC does not undertake any activities or operations. HCH is the operational corporation in charge of managing the SAC and overseeing the urban redevelopment of HafenCity. The motivation behind letting HCH manage the SAC assets (but not transferring the assets to HCH) was to keep the assets separate from the company. The city government also wanted to insulate the project, which is expected to take several decades, from the budgetary consequences of changing political administrations.

— There were land areas within HafenCity that the city did not own. These areas were purchased by the city or the SAC after the establishment of HafenCity in order for the city to own and operate (almost) 100 percent of the land in the district. These areas were typically owned by the national railway company requiring negotiations about land values without building rights.

There has been a clear division between the financing tasks of HCH and financing via the city budget. On the one hand, public universities, public schools, public museums (e.g., the Maritime Museum), subway, the Elbphilharmonie concert hall, and changes to roads outside of the HafenCity area are financed via the city-state’s budget. On the other hand, as part of a political deal to take land out of the harbor, the SAC was required to finance the infrastructure of the new Altenwerder container terminal in the port area. The financing (about DM 450 million) was done at the end of the 1990s and in the first years of the 21st century, but due to low rates of return on harbor-related infrastructure, relatively high interest rates at that time, and a slow start of the HafenCity project due to the collapse of the technology bubble, the project accumulated debt. In 2013, the amount transferred by SAC to the port authority for building the new container terminal was repaid from the city’s budget (given the city’s improved fiscal situation following the 2008–09 financial crisis).



Financing the Urban Regeneration

As required by federal law, the Hamburg city government issued a state guarantee for the SAC in 1997. There is no additional guarantee for individual loans taken out against the value of the SAC. HCH solicits loans in the commercial financial market based on the value of the public assets held in the SAC and the loan guarantee issued by the city-state. Loans are used to make investments mainly in infrastructure such as energy, sewers, roads, and bridges and in basic public amenities such as public recreational areas, which in turn increase the value of the assets in HafenCity. The sequence is as follows:

The procedure is similar to the sequence for raising capital for initial investments employed in Copenhagen. However, HCH is not required to finance construction of the metro; instead, in Hamburg, construction of the metro is financed by tax revenue. The focus of HCH’s investments has been limited to HafenCity proper since 2013, when the SAC was relieved of the investment of the Altenwerder container terminal. The SAC is expected to “break even” and not make any profit.



The sequence, simple and effective, generally works as follows:

- 1 HCH uses the legal guarantee provided for SAC by the city-state to obtain loans in the private capital market;
- 2 HCH invests the capital in infrastructure and basic amenities in HafenCity;
- 3 These investments increase the value of the public assets;
- 4 The individual plots are sold to private developers and builders;
- 5 The revenue is used to pay investments and operational costs of HCH and to repay loans and interest; and
- 6 The assets are later transferred step-by-step to city-state and municipal authorities free of charge (SAC received the public land in the HafenCity area free of charge).

Access to Finance

As described above, HCH obtains financing in the private market. The costs of financing are affected by several factors.

First, the loans that the SAC obtains are guaranteed by law for the SAC by the Hamburg government, the owner of both the SAC and HCH. Since Hamburg is wealthy, with an even higher per capita GDP than Copenhagen, it enjoys a high credit rating enabling loans for the SAC at a favorable rate equal to the city’s loans.

A second condition to obtaining finance is the ability of HCH to receive approval by the Hamburg Parliament to apply for loans within the general budgetary limits of the city’s approved budget. HCH informs the Ministry of Urban Development and Housing via budget planning what they intend to do in upcoming years. The budget of the HafenCity project is part of the Ministry of Urban Development and Housing’s budget, but it consists of only few line items and does not provide the details of a formal investment budget. Thus, the budget approval is based on a significant amount of trust and represents the government’s recognition of HCH’s need for independence and flexibility in managing a large-scale urban development project. The SAC operates with a budget of 20–30 years; since HCH estimates costs and revenues per year, the long-term budget plan is adjusted annually. In the budget, every physical element, including buildings, land, and infrastructure, has its own line item. The budgets of HCH and the SAC are audited by a certified auditor, but they can also be reviewed by the state court of audit, which also reviews physical investments and their appropriateness.

The process for approving budgets is a fast-track process that allows for public control as well as significant flexibility in strategic and financial management. To date, the Hamburg Parliament has never refused HCH a budgetary requirement, including loans and deficits.

Governance Structure

The supervisory board of HCH, which also oversees the SAC, consists entirely of members of the highest executive level of the city-state government, including the first mayor and high-ranking ministers of five government departments. Each board member sits during the entire legislative period. If they are not reelected, their successors take over their positions on the board. This structure has enabled the political leadership of the city-state to provide extensive support for the development of HafenCity by, for example, supporting the extension of the metro into HafenCity as well as building Elbphilharmonie concert hall and HafenCity University (HCU Hamburg).

Supervisory board members are engaged in strategic questions, especially those involving legislative or budgetary issues. HCH submits land option agreements and sales matters for approval to the Commission for Land Sales, and zoning questions and building permits in the HafenCity area are handled by the Ministry of Urban Development and Housing rather than by borough authorities, where the usual urban development process occurs. The supervisory board ensures a comprehensive strategic outlook for the development and allows for close cooperation between HCH management and the leadership of the city-state. The board enables decisions to be fast-tracked within the city administration and helps resolve differences between departments and HCH management (e.g., innovation strategies can be implemented more forcefully than the city administration normally would allow for).

Finally, a permanent advisory board, consisting of members appointed by the first mayor from the private sector, NGOs, universities, and local community stakeholders, advises HCH management. The advisory board does not have decisionmaking powers but provides another level of stability. While supervisory board members may change over time, advisory board members remain constant and provide consistency and an important network for the long-term vision of HafenCity.

Maximizing Public Benefits

The redevelopment of HafenCity is intended to achieve multiple social and environmental goals. In an interview for this study, CEO Jürgen Bruns-Berentelg said that HCH is “*not considering the processes of HafenCity development as a finance mechanism primarily. We consider it as a socio-technical system creating ‘a common public good inside the private good’ as far as private investment is concerned.*” In this particular case, the “common goods” are innovation, new markets for social diversity, and high standards of sustainability that the “private goods” (e.g., privately developed properties) contain. “*Although selling the land asset, we de-commodify the new asset, at least partially, at the same time, specifically the buildings and their uses,*” Bruns-Berentelg said.¹¹

When a developer wants to buy a plot in HafenCity, it is not sufficient to be price competitive, as HCH’s emphasis is as much on the creative and qualitative aspects of new developments. The developer must formulate a proposal and present it to HCH. CEO Bruns-Berentelg explained that the evaluation criteria for winning a tender are structured as follows:

70%

of the decision is based on the proposal concept.

The concept, in turn, is split into 50 percent “pure” concept, 5 percent sustainability competencies (due to a high basic sustainability standard), and 15 percent realization capacity (totaling 70 percent). With regards to sustainability, the platinum standard of HCH—which is higher than LEED Platinum—is mandatory. Thus, the 5 percent sustainability competencies must extend beyond a high baseline.

30%

of the decision to choose a particular proposal is related to the price and concerns selling the building rights on a plot.

The price of the building rights varies between ground floor, residential, offices, affordable housing, subsidized housing for people with disabilities, community service area, etc. It is noteworthy that 33 percent of HafenCity is designated as social housing. However, this was not always the case. In 2000, there was no social housing mandate in HafenCity. By 2010, 20 percent of HafenCity was designated social housing. Since 2011, 33 percent of HafenCity is required for social housing. In major buildings several models coexist, including rental apartments, cooperatives, leases, and normal privately owned apartments. One building may also serve multiple purposes (including student housing, kindergartens, community areas, and recreational areas), which is part of the urban diversification strategy of HafenCity.

The sites are sold in HafenCity only after an exclusive option period of 18 to 24 months used to execute the architectural competitions and obtaining a building permit. This exclusive option of a developer can be canceled by HCH in case of insufficient performance (time-wise or in terms of quality). Thus, the quality of the project development is guaranteed and the option period is the cooperation period between HCH and the developer.

¹¹ Jürgen Bruns-Berentelg, interview by Luise Noring, Hafencity Hamburg GmbH, April 27, 2017.

¹² Hafencity Hamburg, “Sustainable Construction in hafencity” Online: www.hafencity.com



Key Accomplishments

Balancing urban vibrancy and the global competitiveness of the port

HafenCity is one of the most ambitious urban regeneration projects in the world. The population of Hamburg's city center is expected to double by the time HafenCity is finished. All of this is happening at a time when market dynamics are revaluing the cores of cities. Projects like the new Elbphilharmonie concert hall, which opened in January 2017 and was designed by the esteemed architectural firm Herzog & de Meuron, are transforming Hamburg into a tourist destination known for its distinguished and iconic architecture.

At the same time, HafenCity is being built on land that is adjacent to a still-operational harbor. The coexistence of HafenCity and the port is not without challenges. An interview with Ingo Fehr of the Hamburg Port Authority confirms that the port struggles with limits on noise and air pollution and the introduction of environmental maximum values that follow from the close proximity to the city proper.¹³

Significantly, the Hamburg Port Authority is also wholly municipally owned and shares the city's vision for urban expansion to the boundaries of HafenCity (but not beyond) and a more sustainable future. The different public entities collaborate, and technical and legal compromises are now well standardized. Collaboration is, of course, hugely facilitated by the fact that both HCH and the Hamburg Port Authority are owned by the city-state of Hamburg.

Emphasis on innovation and market creation

HafenCity is aggressively pursuing mixed-use and mixed-income development that serves the needs of multiple demographic and socioeconomic groups. HafenCity is providing affordable housing options to groups as diverse as students, young families, refugees, and older individuals while facilitating the building of public kindergartens, schools, universities, and communal areas and recreational areas. The transition to mixed-use development is a sharp departure from the traditional practice of German cities, which after World War II tended to compartmentalize development and keep office buildings separate from residential zones. HCH wants to incentivize the transition from traditional market concepts to more diverse concepts that create new norms and rules for urban regeneration in prosperous cities.

"Our newest approach—for example, in the mobility sector—will reach a drastic reduction of parking spaces (anyway, below ground),

a 30% car sharing ratio
for all residential parking spaces

40% fit-out rate
with electrical loading stations for electrical cars."

"We are creating a niche at a large scale by pushing market limits rather than responding to the product markets."

Jürgen Bruns-Berentelg, CEO of HCH

¹³ Ingo Fehr, interview by Luise Noring, Hamburg Port Authority, April 28, 2017.

¹⁴ Jürgen Bruns-Berentelg, interview by Luise Noring, Hafencity Hamburg GmbH, April 27, 2017.





Helsinki

Introduction to the City

Economic activity in Finland is concentrated in the Helsinki metropolitan area. The Helsinki-Uusimaa region is home to around 1.6 million residents, more than a quarter of Finland’s total population, but generates almost 42 percent of national gross value added.

Even though the Greater Helsinki area has experienced population growth for decades, Helsinki’s city core experienced depopulation starting in the 1960s. The population decline of the city core was driven by middle-class prosperity, the rise of automobile use, and a desire to live in single-family homes in the suburbs rather than in city apartments. This meant that population growth occurred almost entirely in suburban areas and through urban sprawl—a development pattern similar to Copenhagen’s over the same period of time. However, because the city of Helsinki owns 65 percent of the land within its borders, it was able to take charge of reversing the depopulation of the city core. The city also owns the land in the deindustrialized harbors that are the subject of the analysis in this paper.

As the biggest single landowner in Helsinki, the city municipality prefers to lease land to property developers rather than selling land, thereby retaining ownership of the land within city borders. With the favorable option of renegotiating lease agreements every 10 years, the city does not lose out on potential price increases, which also makes leasing an economically sound option.

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Origins and Geographic Focus



Since 1962, Helsinki has been working on plans to move industrial harbor activities out of the city core to Vuosaari, in the northeast of Helsinki. The actual move, however, did not take place until 2008. Even though the city owns the land in the harbors, it waited several decades for long-term leases on the land to expire rather than buying out lease-takers and building owners. In certain cases, property owners were offered compensation, including new state-of-the-art premises in the new Vuosaari industrial harbor.



The process of moving harbor activities to Vuosaari freed up three former industrial harbors located within the city of Helsinki—Kalasatama, Kruunuvuorenranta, and Länsisatama—for large-scale urban redevelopment (see Figure 7).

Figure 7
Overview of waterfront urban regeneration projects.
Source: City of Helsinki.

This case study examines Kalasatama, one of the three former harbors, as an illustrative example of how Helsinki is redeveloping in order to meet its growing demands for housing and to provide a new source of economic growth. An area of about 175 hectares (0.68 square miles), Kalasatama is adjacent to one of the most densely populated areas in Helsinki. Historically, a fence encircled and separated Kalasatama from neighboring areas; the fence was removed in 2008, giving residents the ability to access the harbor for the first time. The integration of the area into the broader urban fabric helps explain the broad support for the development. Construction began in 2009, the year after industrial activities were moved out of the harbors, and is scheduled for completion in the 2030s.

¹⁵ City of Helsinki Executive Office, "Residential and Business District on the Waterfront," Online: <http://en.uuttahelsinki.fi/Kalasatama>

The area is expected to house

25,000
residents and supports
10,000
jobs in
400,000
square meters of
buildings

Kalasatama is connected to the city center by metro, allowing commuters to get to the city center in about six minutes.¹⁵





Analysis of Key Enabling Features

Bundling of Public Assets

The ability of Helsinki city government to bundle its public assets has been facilitated by two conditions. First, the city owns 65 percent of all land within city borders. This makes the city government the largest and most influential landowner in Helsinki. Because of this, the city is able to make decisions concerning urban development unilaterally. Second, as in other Northern European cities, the public sector is highly professionalized, well organized, and efficient. As in Denmark and Germany, Finland offers tuition-free higher education. With a large share of the population holding a university degree, the public sector has a deep pool of human capital to draw on. Tuomas Hakala, the project manager of Kalasatama, identified an additional advantage of letting the public sector drive urban regeneration: *“By putting the local public sector in charge of the urban redevelopment, we insulate ourselves from the ebbs and tides of the economy. We are not so affected by recessions. During recessions, we build the social housing less expensively, because market prices for construction are lower. And in periods of growth, we focus on building residential housing and commercial spaces.”*¹⁶

¹⁶ Tuomas Hakala, Interview by Nantke Garrelts, Helsinki City Planning Department, May 18, 2017.

Even though Helsinki, like Hamburg, owned the land in the harbor that it leased to port operators, instead of repurchasing the land as Hamburg did, Helsinki’s government decided to wait almost three decades for the leases to expire before embarking on a program of urban redevelopment. Until the leases expired, the city was not free to do what it wanted with the land it owned. Until recently, public ownership of the city’s assets was dispersed across the different departments of the city government. For example, the department responsible for schools owned all school buildings and the land the buildings sat on, the sports and culture departments owned all sports facilities, theaters, and so on. This was changed recently, when ownership of land and buildings was aggregated and placed under the auspices of the Helsinki city government’s Real Estate Department, which was given responsibility for the pricing and tendering of land. This consolidation and restructuring represented an attempt to enhance efficiency and facilitate decisionmaking by reducing the number of stakeholders involved in the process of leveraging public assets.

Further consolidation took place in June 2017. The two separate political entities that supervise the Real Estate Department and the City Planning Department—the City Planning Commission and the City Council—were merged to eliminate duplication of roles and responsibilities. The merged committee will conduct its work through three subject-matter subcommittees, one of which, the Land Use and Structure Committee, will be responsible for overseeing the Real Estate and City Planning departments.

Financing the Urban Regeneration

The Helsinki municipality uses public funding stemming predominately from tax revenues to develop the deindustrialized harbors. The city does not maintain a ledger showing what is invested and what is generated in revenue, including a balance of profits stemming from the redevelopment. Whenever the city needs capital for investments, it simply budgets those investments. Whatever revenue the redevelopment generates feeds back into the general municipal budget. In this way, the source of finance is local government public spending.

The costs of development of the land allotments and of the construction of public infrastructure in Kalasatama—including recreational areas, streets, water and sewer systems, etc.—are expected to reach over \$313 million by 2026. Of this amount, \$100 million has already been approved and accounted in the 2017–19 municipal budget¹⁷; the remaining costs will be incorporated in future budgets. Public investments in Kalasatama are expected to peak in 2025. The main contributing factor to this increase in public spending is the dismantling of the Hanasaari B Power Plant, which is scheduled to be decommissioned in 2024. Once decommissioned, the plant will require an extensive clean-up of land formerly used for coal storage, including environmental remediation of soil and groundwater. The significant cost of the clean-up—a major factor in why Kalasatama is the most expensive redevelopment of the three harbors—will be borne entirely by the municipality.

¹⁷ Helsinki Municipality, “Budget. Stadsdirektörens Budgetförsla,” 2017

The process works as follows:

- 1 The City Executive Office of Helsinki budgets costs for the urban redevelopment of the three harbors, including investments in infrastructure and basic amenities;
- 2 The City Executive Office presents the budgeted costs to the city board for approval;
- 3 Investment budgets run for two years at a time and the funds stem entirely from public spending;
- 4 Any proceeds generated from the redevelopment feeds back into public spending; and
- 5 The Real Estate Department retains ownership of the land and renegotiates lease agreements every 10 years to make sure that the city realizes any appreciation in value.



Access to Finance



Figure 8
The Eight Towers in Kalasatama, including surrounding public areas.
Source: City of Helsinki.

As described above, the city invests whatever is required in order to complete the redevelopment in accordance with the city’s strategy for urban development. The revenues generated through the redevelopment and lease agreements in Kalasatama are captured by the City Executive Office and subsequently flow into the city budget. However, five years ago the national government imposed a public spending limit on Helsinki of \$450 million per year. While this has reduced the pace at which the city can redevelop the harbors, the city has been resourceful in finding new ways of advancing its urban regeneration projects despite the cap. One example is the Eight Towers project, which consists of

seven high-rises for housing 2,000 people and one high-rise with 75,000 square meters of retail space (see Figure 8). The city administration included in the tender a stipulation that the private developer improve the surrounding public areas by developing the streets, planting trees, retrofitting the metro station on a bridge, and constructing a park. In this way, public spending for this construction is being minimized.

In rare instances, the Helsinki municipality finances the redevelopment through loans sourced from the Central Bank of Finland. The city borrows money under favorable conditions by using as collateral the vast and valuable lands it owns. However, taking out loans does not circumvent the public spending limit imposed by national government.

Governance Structure

Three different municipal departments oversee the redevelopment of Helsinki’s three former harbors: the City Executive Office controls the budget for the redevelopment, the City Planning Department undertakes the planning and zoning, and the Real Estate Department owns the land. The collaboration between the three departments is close and long-standing. The City Planning Department and the Real Estate Department collaborate under the auspices of the City Executive Office. The City Executive Office is the principal authority in charge of the redevelopment, including executing fiscal responsibilities such as planning investments and estimating costs. While the Real Estate Department owns the land in the harbors and

Table 1. Overview of Stakeholders and their roles and responsibilities in the redevelopment of kalasatama.

is responsible for pricing the plots and conducting the public tendering process, the City Planning Department secures the overall strategies, awards planning permissions, and approves zoning changes. Representatives of these three departments meet on a biweekly basis. Employees are invited to collaborate depending on their skills and expertise and the need for those skills and expertise at any given time. In this way, there is a rotation of employees in accordance with the sequencing of the development projects. This creates organizational agility and flexibility. The different roles and responsibilities of each department involved in the urban redevelopment of the three deindustrialized harbors are described in Table 1.

Table 1

Stakeholder	Task	Collaboration
City Executive Office	Administers budgets for redevelopment projects Controls budget	Meets biweekly Decides on tendering, zoning, architectural competitions, building permits, etc., for individual land allotments
City Planning Department	Develops plans and approves zoning Collaborates with architects on the development of residential housing, commercial spaces, and public areas Collaborates with construction firms on infrastructure and public amenities	
Real Estate Department	Owns the land of Helsinki city and the harbors Contributes to initial zoning Sets the price of land allotments (in collaboration with private consultancies) Manages sales and leases of land allotments	

→ The public administration of the municipality works relatively free of political interference, mostly as a result of the great faith political leaders have in the professional abilities of local administrators. As Tuomas Hakala, the project manager of Kalasatama, stated, *“Traditionally, we have a strong public administration, and the politicians acknowledge and respect the competencies of the public administration.”*¹⁸

However, the fact that the City Planning and Real Estate departments are subject to political decisionmaking and approval does tend to prolong the planning process. Even though the City Planning Commission, the city council, and the city board have seldom objected to or rejected plans proposed by the City Planning and Real Estate departments, the process is laborious and time-consuming. *“Things could go bit faster,”* Tuomas Hakala said. *“But we are used to this and try to anticipate these delays by working with a long-term timeframe. The same procedure applies to budget negotiations and approvals: Each time the department proposes a project, such as a bridge or road, we have to go through this procedure.”* He concluded, *“If we could use the yield from the urban development to reinvest into the area, then we could probably speed up the process of urban regeneration by not having to find ‘new funds’ in the municipal budget every time we want to go through with a new project.”*¹⁹

“ **If we could use the yield from the urban development to reinvest into the area, then we could probably speed up the process of urban regeneration by not having to find ‘new funds’ in the municipal budget every time we want to go through with a new project.** ”

¹⁸ Tuomas Hakala, interview by Nantke Garrelts, Helsinki City Planning Department, May 18, 2017.

¹⁹ Ibid.

Maximizing Public Benefits

The primary goals of the Kalasatama project are to expand the city core and create a space for a diverse group of citizens. The project accomplishes these objectives in various ways. The proceeds of the redevelopment of the three deindustrialized harbors flow back into the city budget, enabling “profits” to fund various public goods and services. However, Helsinki differs from the other case studies in this study in that it does not keep a ledger showing how much is invested and how much is earned through the redevelopment of the harbors.

The project also engages citizens extensively to inform and direct the redevelopment of Kalasatama. To that end, the project engages over 200 stakeholders in design, planning, execution, and maintenance. These stakeholders include small start-ups, corporations, municipality actors, and local residents, all of whom either live in, work in, or are otherwise engaged in the redevelopment of Kalasatama²⁰. The city’s engagement with this diverse and complex group of stakeholders follows its strategy of citizen-driven urban development of the harbors. The city also uses big data to better understand how stakeholders use and interact with the district’s amenities. Together these streams of information instruct the continuing development of Kalasatama²¹.

²⁰ Smart Kalasatama: Smart city district of Helsinki
Online: www.fiksukalasatama.fi

²¹ Magda Abu-Fadil, « Helsinki: A Very Smart City », The Huffington Post, 13 juin 2016,
Online: www.huffingtonpost.com



Key Accomplishments

Citizen engagement and citizen-driven urban redevelopment

The redevelopment of Kalasatama is part of a broader strategy by Helsinki to place citizens at the center of city policy and practice. Like Copenhagen, Helsinki experienced double-digit unemployment and large-scale depopulation in the 1960s and 1970s, which provided the city with a strong incentive to redevelop Kalasatama to ameliorate these problems. With unemployment still relatively high (10 percent, as of April 2017), Helsinki has become the first city in the world to experiment with basic citizen salaries in order to tackle the social consequences of what is viewed as the structural long-term unemployment of a large group of its citizens. Helsinki is also experimenting with other noneconomic ways to mobilize and engage citizens. It is in this light that the citizen-driven urban redevelopment of Helsinki's harbors should be viewed.

The imperative of inclusive growth

The main objective for the urban regeneration of Helsinki's harbors is inclusive growth rather than profit optimization.

This is illustrated in part by citizens taking a central role in the redevelopment process. In alignment with the city's inclusive growth strategy, the city also requires mixed housing throughout the three deindustrialized harbors:

25% social

40% price-regulated

35% privately owned or privately leased





Lyon

Introduction to the City

Lyon is the third-largest city in France, with just over half a million residents, and the country’s second-largest metropolitan region, with a population of 1.34 million. Over last several decades, the city’s economy has shifted away from industrial manufacturing specializing in automobiles, chemicals, and pharmaceuticals. Today, Lyon is redefining itself as a center for high-tech industries such as finance, biomedical, and gaming as well as cultural industries such as food, contemporary art, and architecture.

Similar to the urban redevelopment of North Harbor in Copenhagen and HafenCity in Hamburg, and to a lesser extent Kalasatama in Helsinki, Lyon Confluence aims to spur urban growth through the revitalization of a 150-hectare (0.58-square mile) former industrial area at the confluence of the Saône and Rhône rivers and reconnect it to the city center of Lyon. As Gérard Collomb, the French interior minister who was until recently the president of the Lyon Metropolitan Council and mayor of Lyon, said, “*When we decided to build La Confluence, the idea was to double our city center and have a continuation with the old center city and the new one.*”²²

Itself a product of extensive governmental restructuring, the Greater Lyon authority is instrumental in driving the redevelopment of Confluence Lyon. Since the 1980s, France has engaged in a process of territorial reform both to consolidate and decentralize units of local government to improve overall efficiency and economic performance of its regions²³. This led to the introduction of a second-tier government, the metropolitan authorities. The first direct elections for representatives for the metropolitan authorities took place in March 1986²⁴. However, the biggest move came recently, in late 2014, when President François Hollande’s “*le big bang des régions*” redrew France’s governance map to empower the metropolitan authorities to lead on planning, economic development, education, transport, and more²⁵. This backdrop is important in order to understand how the urban redevelopment of the industrialized harbor of Lyon Confluence is essentially enabled by the establishment of the Greater Lyon authority.

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²² Layla Maghribi and John Deferios, “France’s Vision of a Utopian Future Comes to Life in Lyon”, CNN, July 9, 2015 Online: www.cnn.com

²³ The Réforme des Collectivités Territoriales (RCT) was enacted in 2010. The first metropolitan region created was the agglomeration of Nice. While the passage of the RCT created for

the opportunity for more integrated agglomerations, the 2014 Modernization of Territorial Public Action and The Affirmation Of Metropolises (MAPTAM) formally fixed the institutional features of metropolitan entities and led to the creation of the Métropole de Lyon. The Réforme des Collectivités Territoriales (RCT) was enacted in 2010. The first metropolitan region created was the agglomeration of Nice. While the passage of the RCT

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²⁴ Jean-Marie Miossec, *Géohistoire de la régionalisation en France*, Paris, Presses universitaires de France, 2009, ISBN 978-2-13-056665-6.

²⁵ Kenan Fikri et Mark Muro, « Rightsizing the Region: France Redraws its Map », Brookings, 9 décembre 2014 Online: www.brookings.edu



Origins and Geographic Focus

Greater Lyon is the governing body in charge of the redevelopment of Lyon Confluence. In 2015, Greater Lyon was established as a metropolitan authority formalizing the regional collaboration and coordination across the 58 municipalities of Greater Lyon²⁶.



The initial plan for the redevelopment of the Confluence area stems from the campaign promise of former Lyon Mayor Raymond Barre. During the 1995 election, Mayor Barre vowed to make Lyon the trading and cultural center of Southeastern Europe²⁷. Following his victory, Barre's administration worked with officials from Greater Lyon to launch "Mission Confluence," a special planning process that culminated in a 30-year plan for Lyon Confluence.

Launched in 1998, the plan defined a broad range of economic, environmental, cultural, and social goals. For Greater Lyon, the Confluence project is a way to bring jobs, housing, services, institutions, and recreational opportunities "that mark a real capital" in the globalized economy, and put the city on the map of global cities²⁸. The photo in Figure 9 depicts the geographical area of the Lyon Confluence.

Industrial transitions and deindustrialization led to vacant land in the 1990s, trends that accelerated with the financial crisis of 2008. This freed up space in the Confluence for urban redevelopment and spurred revitalization plans. Historically, ownership of the land in the district has been fragmented, with the public sector controlling a few large institutions (such as two prisons) and tracts of public space. Most parcels of industrial property were in private hands. Therefore, one of the biggest challenges for redevelopment of the Confluence was acquiring and bundling assets, including land and properties.

The first major phase of the Lyon Confluence project was launched in 2003, when the government of Greater Lyon executed a public development agreement and appointed a private company with public purpose and capital, the SEM Lyon Confluence (later SPLA/SPL Lyon Confluence), to redevelop the area. SEM stands for Society Economy Mix, a legal corporate entity that consisted of 50 percent public and 50 percent private ownership and funding. The SEM model, as a private company with significant public investment and oversight, has existed in France since the end of the 19th century, so it was a familiar tool to use for redevelopment.

Since its establishment in 2003, the legal structure of SEM Lyon Confluence has changed twice. In 2008, it became a local public development company (SPLA); then in 2012, it became a local public company (SPL). The 2008 change to an SPLA was a significant one, because the company shifted from 50 percent to 100 percent public funding. The 2012 change to an SPL entailed becoming a general-purpose company, meaning it had the power to engage in a broader range of redevelopment purposes, including energy development and distribution, which have become an emerging focus of the district²⁹.

²⁹ Benoit Bardet, Telephone interview with Alaina Harkness and Caroline Conroy, April 11, 2017. The shift was made to conform to changing European Commission rules about competitive tender in the urban planning and development fields and to ensure continuity of management of the Confluence development. When cities retained a public company with 100 percent public capital, this "in-house society," with 100 percent public ownership, would be exempted from competitive bidding.

³⁰ French-American Foundation, "Sustainable Cities: Summary of Findings"

³¹ French-American Foundation, "Sustainable Cities: Summary of Findings."

Figure 9
Aerial view of Lyon Confluence with Saône and Rhône rivers.
Source: City of Lyon.

Today, the first phase of the redevelopment (2003–15) is nearly complete. Land use in the district is about 50 percent commercial and 50 percent residential. Confluence will retain some of its former activities, in contrast to Copenhagen, Hamburg and Helsinki, which have moved industrial activities out of the city proper. There are currently 12,000 people living in the Confluence area, a number expected to grow to 17,000 during the second phase (2015–35). The physical transformation of the area includes new public spaces, infrastructure, housing, and retail. The second phase also includes the construction of two bridges to improve the connection between the Confluence and the rest of the city³⁰.

When completed, the Confluence district will have 1 million square meters of new buildings. There will be a wide range of housing: 45 percent luxury homes, 30 percent standard and mid-priced rental, and 25 percent social housing. New offices will be built, increasing the number of jobs from 7,000 to 14,000 by 2020, and to 27,000 by 2035.

The Confluence will also feature pedestrian walkways along the marina, local parks, new squares, a shopping center, museum, sport facilities, a renovated and expanded Municipal Archives, new schools, new university buildings, and youth, community, and cultural centers³¹.

²⁶ The French Law MAPTAM No. 2014–58 of 27 January 2014 created, on January 1 2015, a local authority with special status: The «Metropole De Lyon»

²⁷ Benoit Bardet, Telephone interview with Alaina Harkness and Caroline Conroy, April 11, 2017

²⁸ Lyon Confluence, "A Step-By-Step Approach" Online: www.lyon-confluence.fr





Analysis of Key Enabling Features

Bundling of Public Assets

In 2008, the public asset corporation of Lyon transitioned to 100 percent public ownership and funding. Thus, SPL Lyon Confluence is today a publicly owned, privately managed corporation in alignment with the model presented in this paper. The SPL manages the entire redevelopment of Lyon Confluence and serves an array of functions for the area, including conducting planning studies, assembling and selling land allotments, organizing construction and consultation, and carrying out marketing and communications.

Landownership in the Confluence is extraordinarily fragmented, dispersed across numerous private owners. The SPL is tasked with identifying ownership, acquiring the land, and preparing the land for sale. Bundling the assets under the auspices of a single institutional entity reduces fragmentation of ownership and enables the implementation of a coherent master plan.

Financing the Urban Regeneration

Today, SPL Lyon Confluence is wholly publicly owned and funded. The initial public investment in SEM Lyon Confluence that took place in 2003 was just \$2 million.

The major source of financing in the Confluence comes from the bundling and sale of land allotments. SPL Lyon Confluence purchases land from its industrial owners, who are either closing down their businesses or moving outside of the city proper. SPL Lyon Confluence then develops the land with public infrastructure and basic amenities. Subsequently, the SPL puts to tender publicly owned allotments that will find new uses for urban redevelopment.

Greater Lyon’s investment and development plan for 2015–20, the Multiannual Investment Program (PPI), encompasses approximately 1,175 investment projects at a total budget of \$4.14 billion. Three objectives of the PPI must be fulfilled in order to access the public funds: strengthen the economic dynamism of Greater Lyon; create a more socially and economically balanced area; and improve the quality of life for residents. Investments outlined in the PPI program heavily favor projects within the geography of Lyon Confluence (51 percent), although projects extending beyond the Confluence are also eligible for this funding.

Access to Finance

Today, the public investments in infrastructure and basic amenities in order to prepare the land for redevelopment are financed primarily by Greater Lyon. However, other local governmental entities also contribute to the investment funds, including the city of Lyon, the County Council, regional councils, and Metro Transport. These public investments consist of a mix of tax revenues and proceeds from the sale of land in the Confluence.

SPL Lyon Confluence is able to charge above-market prices for land in the Confluence. In order to keep Lyon Confluence a competitive offering, the profits from sales to developers are reinvested in public spaces, utilities, schools, roads, and other infrastructure in Lyon Confluence.



The process works as follows:

- 1 SPL Lyon Confluence develops a master plan for the Confluence area that is approved by the Greater Lyon authority;
- 2 In close collaboration with the Greater Lyon authority, SPL estimates both short- and long-term budgets;
- 3 Greater Lyon authority and (to a lesser degree) other public stakeholders fund the repurchasing and redevelopment of the area;
- 4 SPL repurchases land from industrial owners in the Confluence (after gaining approval from Greater Lyon authority for individual deals);
- 5 SPL rezones the land for mixed-use purposes; and
- 6 SPL sells the land and uses the proceeds to reinvest in the repurchasing and redevelopment of other parts of the Confluence.



The investment requirements of SPL Lyon Confluence for the next 10 years of expenditures are estimated at \$355 million, of which \$59 million has already been spent. Greater Lyon has agreed to put up \$71 million, which leaves the SPL responsible for generating some \$225 million through land sales to private developers. As long as the development is moving forward, all the proceeds are reinvested in Lyon Confluence.

Governance Structure

Greater Lyon owns 90 percent of SPL Lyon Confluence and the city of Lyon owns 5 percent, with the remaining 5 percent owned by the Department of Rhône, the Rhône Alpes Region, and three municipalities of la Mulatière, d'Oullins, and de Sainte-Foy-les-Lyon. Greater Lyon is led by a president, vice presidents, members of the standing committee, and the Council of Greater Lyon, a 165-member deliberative assembly that regulates the affairs of Greater Lyon. The metropolitan authority acts as a single planning authority for Greater Lyon and is responsible for plans involving economic development, innovation, transport, higher education, and research. Finally, Greater Lyon may delegate certain powers to the city by convention³². With ownership distributed among several regional public entities, there is extensive collaboration both vertically across levels of government and horizontally between local municipalities.

As in Hamburg's HafenCity, the SPL Lyon Confluence's board, administrative council, and general assembly are made up of a set of "fixed" positions occupied by politically elected representatives of the public entities that own the SPL. This governance structure of the SPL is established in national law, so the SPL is free from any political negotiation about board seats³³. This ensures that decisionmaking for the Confluence is insulated from politics while reflecting the public interest. The administrative council appoints the general manager of the SPL Confluence from the private sector.

The administrative council is comprised of the two majority shareholders in the SPL: Greater Lyon authority and the Lyon city government. It includes the mayor of Grand Lyon; five elected officials of the Greater Lyon Metropolitan Council and five municipal councilors from the city of Lyon. The broader general assembly for the SPL Confluence includes members of the administrative council, plus one representative from each of the five other shareholders. SPL Lyon Confluence plays an important role as a central broker of external partnerships that advance the Confluence redevelopment. However, these private actors are not formally part of SPL Lyon Confluence's governance. The SPL particularly works with companies from the railway, energy, river management, and pollution reduction sectors³⁴.

³⁴ Lyon Confluence case study article, P9



³² Grand Lyon, « Les instances territoriales de la métropole de Lyon »
Online: www.grandlyon.com
« Organisation politique »
Online: www.grandlyon.com
« Le conseil de la Métropole de Lyon »
Online: www.grandlyon.com
« Les commissions thématiques de la métropole de Lyon »
Online: www.grandlyon.com

³³ Online: www.legifrance.gouv.fr

Maximizing Public Benefits



Urban strategic planning—rather than project-by-project, transactional planning—became compulsory in France in 2000. Having this national mandate has enabled the long-term and ambitious Confluence project. The master plans encompass a consistent effort to develop a socially mixed-used area that will spur economic development.

In addition, the long-term focus of the Confluence has been reinforced by the consistency of the leadership of the public asset corporation. The leadership of SPL Confluence has been intact, with only one major leadership change since the project began in 1999. Gerard Collomb's leadership during the first phase of the project, first as mayor of Lyon and later as president of the Lyon Metropolitan Council, provided a consistent vision and visibility for the Confluence, even as the governance environment shifted with the transition to the Greater Lyon metropolitan government in 2015.



Key Accomplishments

Focus on environmental sustainability

The goals of the Confluence consistently focus on maintaining high quality of life and raising the bar on a range of objectives, including quality of architecture, environmental standards, social mix, and public spaces. Lyon Confluence aims to be the first “fully sustainable” and carbon-neutral neighborhood in France, producing as much energy as it consumes by 2030. With its emphasis on high standards of architectural integrity, the Confluence has attracted a number of well-established architects and designers for projects in the district.

Lyon Confluence has been designated a French EcoQuartier by the national Ministry of Housing and Territorial Equity. The French government defines an EcoQuartier as “an urban development project that respects the principles of sustainable development while taking the specificities of its locality into consideration. It must promote responsible management of natural resources, be integrated into the rest of the urban area, contribute to economic development, offer a range of housing options in order to promote mixed-income communities, and involve citizens in any related planning processes.”³⁵ This designation underpins the effort to become an area renowned for environmental sustainability.

The Confluence is a part of the European Union’s CONCERTO program, which establishes targets for energy efficiency in buildings and use of renewable energy technologies and helps guide the tendering criteria for developers, architects, engineers, and other partners in the revitalization project. In the second phase of the Confluence’s redevelopment, zero-energy and energy-plus buildings will be built and existing residences will be retrofit.

The Plot P development is a prime example of a project that sought to create a model of energy-plus building that included active energy monitoring, community management systems, and a fleet of self-service electronic cars. Plot P was launched in 2011 in partnership with NEDO, a Japanese environment and energy management governmental agency that drew upon support from Toshiba Solutions. The project was designed by France’s Bouygues Group and consists of three mixed-use buildings³⁶.

³⁵ French-American Foundation, “Sustainable Cities: Summary of Findings.”

³⁶ SPLA Lyon Confluence, Press File, October 2012.

³⁷ French-American Foundation, “Sustainable Cities: Summary of Findings.”

Social sustainability

Lyon Confluence aims at providing a socially diverse neighborhood, similar to Copenhagen, Hamburg, and Helsinki. According to the French-American Foundation, “Promoting the establishment of a mixed-income community and encouraging mixed-use development have also been integral parts of the project.” Thus, the government requires 25 percent of residential units to be designated as affordable social housing. The goal is to attract a range of residents, both in terms of age and economic status. Lyon Confluence also focuses on walkability and accessibility for its residents, which reinforces the goal of environmental and social sustainability by encouraging residents to walk and helps foster a strong community life³⁷.

In reality, however, real estate prices and the social composition tilt toward a high-earning segment. This is a similar tendency recognized in Copenhagen and Hamburg. (Only Helsinki, which has a particularly well-pronounced city strategy for citizenship, has managed to secure inclusive growth from the very outset of the urban redevelopment.) As such, the neighborhood of Lyon Confluence has the second-highest standard of living, the third-lowest poverty rate (10.6 percent, in 2013), the second-highest median annual income (€29,410), and the third-highest level of educational attainment (40.7 percent of residents have a three-year bachelor’s degree or higher) in the city. As recently as 2013, the area encompassing the Confluence was notable for having more jobs than residents. Approximately 70 percent of the jobs in Confluence are in the service sector. The commitment to have 25 percent of residential units designated as affordable social housing is critical if the Confluence is going to achieve its mixed-income goals.

Comparative Analysis



Copenhagen

There are three main characteristics that distinguish CPH City & Port Development Corporation from the three other cases studied in this paper.

1.

First, CPH City & Port Development has been able to conduct large-scale, transformative urban redevelopment across Copenhagen without spending taxpayer money. The CPH City & Port Development Corporation—created in 2007 as a merger of Ørestad Development Corporation and the Port of Copenhagen—is driving the regeneration of the capital city of Denmark. It has overseen half of all redevelopment projects in the city over the past decade.

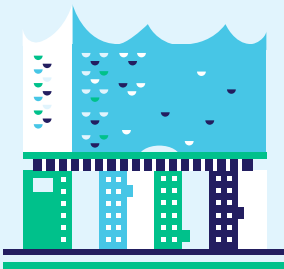
2.

Second, CPH City & Port Development has not just conducted massive urban development but has also generated sufficient revenue to finance the construction of a citywide state-of-the-art metro system. To this extent, CPH City & Port Development has realized the intent of national law, which mandates that the corporation maximize profits in order to serve a broader public purpose, namely the development of the transit system.

3.

Third, co-owned by the city of Copenhagen and the Danish national state, the corporation reflects the remarkable collaboration between disparate levels of government. Mads Lebech, CEO of the Danish Industry Foundation and a member of CPH City & Port Development’s board, explains the importance of the corporation’s governmental partnership: “*The national government owned the Port of Copenhagen, but they could not develop it without local government that regulates building permissions, land zoning, and conducts urban development. Together they could do a lot. Alone they could do nothing!*”³⁸

³⁸ Mads Lebech, interview with Luise Noring, Danish Industry Foundation, October 6, 2016.



Hamburg

Both HafenCity Hamburg GmbH and CPH City & Port Development drive some of the most ambitious regeneration projects in the world today. But they differ in significant ways.

1.

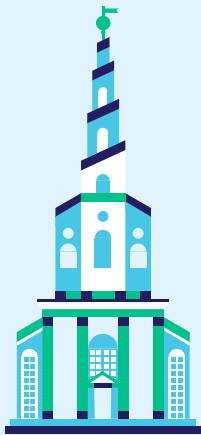
First, like CPH City & Port Development, HCH is not part of the municipal or borough administration. At the same time, however, the members of HCH’s board of directors are politically elected representatives of the local government, while the members of CPH City & Port Development’s board come from more diverse sectors. This subjects HafenCity to more municipal oversight and governmental direction, reflected in the mandate to build a multifunctional urban area in HafenCity that includes 30 percent subsidized housing, public schools, and recreational areas. By contrast, CPH City & Port Development has the mandate by national law to maximize profits in order to finance construction of the citywide metro. Therefore, CPH City & Port Development has greater freedom of operations than HCH.

2.

Second, the city of Hamburg has tried to limit undue political influence in distinctive ways. The Hamburg municipality, for example, handed over the entire funding for the metro construction to the SAC, the asset portfolio managed by HCH. In that way, the municipality has secured and sheltered the funding for the metro construction by removing it from future political decisionmaking.

3.

Third, HCH borrows in the private finance market and from commercial banks. Like CPH City & Port Development, HCH enjoys favorable credit rates, as the city-state of Hamburg guarantees the loans. Yet HCH does not have an overarching mandate to, for instance, finance cross-city metro construction or the relocation and expansion of the industrial harbor. The exceptions are the construction of the Altenwerder container terminal, which was loan-financed by HCH, and construction of the metro within the boundaries of HafenCity proper. HCH also finances all other infrastructure in HafenCity.



Helsinki

Comparing the redevelopment of Kalasatama with Copenhagen City & Port Development yields four central observations.

1.

First, Helsinki is strikingly different from both Copenhagen and Hamburg, since the management of its urban redevelopment has been kept in-house as an integrated part of city government and administration. This is only possible, as the city’s Real Estate Department owns the assets, and as there is an institutional norm of collaborating across departments, committees, and councils within the city government and administration.

2.

Second, the overriding purpose of Helsinki municipality in the urban redevelopment of the harbors is to serve the public. In order to ensure this, the municipality collaborates closely with over 200 stakeholders in Kalasatama. These stakeholders have a real voice informing and directing the urban development of Kalasatama. Due to this close dialogue and collaboration with its citizens, Kalasatama has become a cutting-edge testing ground for new technologies to evaluate citizens’ behavior, consumption, and preferences.

3.

Third, the role of citizens is transparent and visible, but finances are not. There is no ledger that shows how much the redevelopment costs versus how much it generates in revenue. The public administration spanning the aforementioned three departments estimate the budgetary requirements and the City Executive Office requests the budgets from the city council. The decision to appropriate funding is long and bureaucratic. However, in recognition of this, city government is undergoing extensive restructuring, including eliminating entities in order to avoid duplication of roles and responsibilities.

Finally, like Hamburg, and unlike Copenhagen, Helsinki municipality prefers to lease rather than sell its land in order to retain control over the city and its development. The city usually enters 60- to 80-year lease agreements. Every 10 years, the lease agreements are renegotiated and the lease rentals are adjusted accordingly. This periodic upsurge in lease rentals is financed by increases in rents paid by the residents and companies occupying the buildings. However, these price increases are regulated by the municipality in order to avoid radical price jumps. In the rare instances that the municipality does sell, it will not do so until after building permissions are awarded. In that way, the municipality ensures that the land is deployed as the city envisages. In other instances, the municipality will wait to sell land until after the building is complete. In these instances, developers own the buildings and lease the land from the municipality.



Lyon

Comparing SPL Lyon Confluence with Copenhagen City & Port Development Corporation yields three central observations.

1.

First, the redevelopment of Lyon Confluence is funded with public spending consisting of tax revenues and the revenues generated from land sales that flow back into the redevelopment of the Confluence. The majority of the public investment stems from the Greater Lyon authority; however, other local governmental entities also contribute to the investment funds. SPL Lyon Confluence takes out loans, when such capital is needed (the €40 million of loans taken out during the first phase, from 2013 to 2018, have been paid back in full); the three other public asset corporations examined in this paper do rely, to varying degrees, on private financing. In contrast, Copenhagen does not spend public money, such as taxes, to fund its redevelopment; it is wholly financed by the redevelopment itself. In addition, Lyon does not, like Copenhagen, use the proceeds of the redevelopment to fund investments beyond the boundaries of the Confluence.

2.

Second, the redevelopment of Lyon Confluence is closely tied up with the Greater Lyon authority and its policy to drive economic development in the city and region. SPL Lyon Confluence is the direct result of the extensive restructuring of French regions and municipalities that has been underway for several decades. SPL Lyon Confluence was established by the metropolitan government of Greater Lyon, and it receives its funding, strategic objectives, and oversight from Greater Lyon.

3.

Third, SPL Lyon Confluence is to a large extent a vehicle to drive economic policies and help Lyon gain a competitive advantage within industries that draw the contours of the 21st-century economy. This goes hand in hand with the focus on environmental sustainability and citizens’ well-being and livability. Lyon wants to become the first carbon-neutral city in France by 2035. The 2012 institutional change to an SPL drives this incentive, as it changed the purpose of the company to include energy development and distribution. This complements both the drive toward carbon neutrality, as the focus of the SPL is on renewable energy development and distribution, and it enables new market opportunities to be pursued by the SPL. Lyon wants to excel in creating a city that can attract talent for driving innovation that can lead to economic growth. Though Lyon Confluence has targets for social housing and inclusive growth, the area is predominately home to an economically resilient and highly educated population.

Conclusion

As cities experience rapid urbanization, they are met with the challenges of increasing demands for resources, amenities, infrastructure, housing, and jobs in a safe, vibrant, interconnected cityscape. Centralized policymaking and implementation and shrinking public finance, particularly in nations and states hostile to cities, simply cannot keep up with the rapidly evolving urban landscape.

CPH City & Port Development represents an alternative approach to the traditional public or private dichotomy. It is an approach that combines the capacity of both state and city governments with the agility and effectiveness of private solutions to leverage public assets and optimize market opportunities. The Copenhagen story tells cities to focus on the fundamentals—the public assets they have, the hidden value of those assets, and smart institutional innovation and cross-sectoral collaboration to unlock value—in addition to the specific details of particular projects.

As this paper shows, European cities like Hamburg, Helsinki, and Lyon are experimenting with variants of the Copenhagen model to drive large-scale regeneration in their city cores. Each of these efforts has been enormously successful and is helping their individual cities achieve multiple economic, environmental, and social goals. For the most part, however, these efforts have been undertaken “under the radar,” with more attention given to what they have accomplished rather than the institutional means of how the redevelopment efforts were designed, financed, and delivered.

We believe that the time has come for a serious effort to accelerate the adaptation and adoption of these models in countries across Europe and beyond.

We call for the creation of nationally driven Urban Regeneration Task Forces to tailor the lessons from these disparate models to the distinct needs and circumstances of cities requiring substantial reinvestment and redevelopment. Membership of the task forces would consist of representatives from the leading institutions driving regeneration as well as from municipalities, national governments, and the private and civic sectors.

About the authors

Luise Noring is an Assistant Professor at the Copenhagen Business School.

Bruce Katz, a Senior Fellow with the Brookings Institution since 1996, is the co-author of *The New Localism: How Cities Can Thrive in the Age of Populism*.

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About La Fabrique de la Cité

La Fabrique de la Cité is a think tank dedicated to urban innovations and prospective. In an interdisciplinary approach, urban stakeholders, both French and international, gather to reflect on good practices of urban development and to suggest new ways to build and rebuild cities. Mobility, urban planning and construction, energy, the digital revolution, and new usages are the five axes that structure our work. Created by the VINCI group, its sponsor, in 2010, La Fabrique de la Cité is an endowment fund, and is thus vested with a public interest mission. Its work is available on its website, Twitter and Medium.

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When digital technologies reveal the hidden value of urban assets

Isabelle Baraud-Serfaty,
consultant and urban economy expert

This document is a written account of Isabelle Baraud-Serfaty's contribution during La Fabrique de la Cité's International Seminar, held in Lyon from 5 to 7 July 2017.

In their report on the European model of city regeneration, Bruce Katz and Luise Noring led a discussion on the value of urban project production and put forward the formalisation of a model that can be summarized in three keywords: activation/hidden value/public assets. The purpose of this note is to examine this model by showing how it can take the form of a complementary model that retains the same key principle – hidden value activation – but in accordance with new modalities.

A model cannot be applied unless the conditions for its implementation are met. In the case of Bruce Katz and Luise Noring's model, five main conditions must be met. There must first be public investments to activate value, particularly investments in the form of transport infrastructure, such as the Copenhagen Metro. Then the project must be located in a zone with changeable destinations for value creation; it must be a large-scale project, to redeem the investments made; it must also be located in an area with a growing population where there is demand. Finally, the property must be public to enable the government to benefit from the created value and to fund infrastructures.

These five characteristics are often found in mature European cities, which is consistent with the idea of a European model.

However, even in European cities, the model has many limitations. The first constraint is financial. It restricts the capacity of the state and communities to invest in public infrastructure and real estate acquisition. The second limitation is due to the fact that the context of urban project production has changed. Projects consist less and less of developments on beet fields, and more and more of the transformation of brownfields, or even vibrant areas, which, from a strictly financial point of view, has a high cost.

Since Bruce Katz and Luise Noring's model cannot always be applied, the hypothesis that we are putting forward is that there is a complementary model based on the same key principle – the revelation of underused assets – but adapted to the new functioning of the economy. It is wise to note that the projects examined were mainly implemented at the beginning of the 2000s – nearly 20 years ago. A radical transformation has taken place since then: the digital revolution. If it must be dated, 2007 seems an interesting date. In fact, it is both the start of the financial crisis and in France, the Grenelle environmental initiative, as well as an even more decisive moment, the birth of the iPhone. This conjunction is consistent with the idea that the digital revolution is a total revolution, which certainly has a technological basis, but also arises from the change in mentalities as well as increasing financial and environmental constraints. It has led to a radical change in the way in which we work, live, learn, finance, etc. More specifically, as Rachel Botsman, the “high priestess” of the sharing economy says:

“ New technologies enable us to unlock the ‘idling capacity’ [...] of underutilized assets. Idling capacity is everywhere, though it’s not always easy to see: empty seats in cars; unused holiday homes or spare bedrooms; underutilized Wi-Fi; unoccupied office spaces; latent skills and capital; and of course, underused commercial goods. [...] It is a massive untapped resource of ‘wealth’ and the benefits are huge. ”

As such, we really come back to the idea of hidden or underestimated value, as in Bruce Katz and Luise Noring's model, but the value lies elsewhere.

If we pick up their reasoning again, the question is how to figure out what can enable the activation of this new hidden value. It seems to us that the answer resides in the capacity to make use of the four breakthroughs that enabled the digital revolution. The first breakthrough is the emergence of the mass, that is, the capacity of each individual to become a producer of data, energy, free spaces in their car or home, funding. The second breakthrough is the individualisation of the individual, or the generalisation of tailoring: the specificities of each individual can now be understood more closely through big data. This large-scale industrialisation of tailoring focuses both on the individualisation of the product and/or service and its real-time adjustment. Finally, the switch from ownership to use becomes more marked.

The complementary value activation model derives from the fact that the city is under the grip of the digital revolution. This radically changes the economy of the city, with two major shifts.

It is thus the capacity to activate these four levers which is going to create value. The example of Zen Park, in the field of parking, is a good illustration: this company allows for the use of temporarily unused parking spaces in public and private car parks, thereby limiting the number of parking spaces required. Zen Park is what we call a platform or an aggregator. Another example of an aggregator is Google, which, with its Flow mobility offering, is capable of integrating all forms of mobility and taking advantage of the fact that the total number of individual cars shared becomes a new transport infrastructure. Thus, increasingly, it is aggregators that allow value to be created.

1. The first shift is the transition of the city from infrastructures to uses.

Historically, since the 19th century, the key to providing urban services has been water, energy and transport infrastructures.

From now on, what becomes key is the capacity to get users on board -- the four breakthroughs of the digital revolution all translate into the primacy of the user. As such, in general, we are seeing a service shift in urban utilities. The best example is certainly mobility. Already, the transition from transport to mobility reflected the idea of focusing on demand rather than supply.

In particular, the example of Maas in Helsinki illustrates the idea of assembling all forms of mobility (including through the activation of the mass at a given time) and providing them in the form of a subscription.

From now on, what becomes key is the capacity to get users on board

Mobility is therefore the most obvious example, but a close examination reveals that real estate is also beginning to experience this change. If we refer back to the analogy of mobility as a service, "housing as a service" would also have two arcs: an evolutive arc in housing, which allows an individual to go from time A to time B, benefiting at all times from housing adapted to their needs. The business of "producing housing as a service" would consist less of producing square metres than in offering the individual an aggregation over time of tasks that they handled directly until now: searching for housing, selling an old residence, negotiating with banks, estate agents, notaries, etc. In the same way, in mobility, what changes is not the route taken, but the service for the integration of all the modes

used. The second arc corresponds more to an expansion of the "housing" offer through the constitution of a "service package" that would consist of allowing the resident to have an integration of functions: Internet connection, heating subscription, the possibility of moving around using a transport pass subscription. We could even go further by integrating a right of entry for sports, school or cultural equipment into the housing service. Once again, these functions are not new, but the idea is that there is novelty in their aggregation by an operator, who can offer them through a subscription, with an offering that evolves over time.

2. The second shift is the recomposition of public and private roles.

Take the example of real estate.

Traditionally, the role of actors was very sequential: first, the community, then the developer, then the promoter and then the resident. Then, for reasons that have nothing to do with the digital revolution but more with real estate and financial constraints, promoters and investors got ahead of the process by buying real estate or participating in the design of urban projects, for instance, as part of pre-production partnerships.

At the same time, and we forget this quite often,

pre-production actors have moved to post-production, for instance by controlling the ex prices of housing units. Today, with the digital revolution, we are witnessing a new change. First, there are new steps appearing in relation to technological changes, such as smart lighting or 3D-printing in the building industry. Then, there are new steps related to the service shift, such as the business of the aggregator, which we have already mentioned, or neighbourhood manager, because the problem of management occupies an increasingly important place. New entrants appear through these new steps, which can be positioned pre- or post-production.

The main issue is that the urban factory process is fragmenting and expanding and the question is: who is going to be the actor to control the process of producing projects that have become much more complex?

In conclusion, the presentation this morning encourages us to think about the way to finance the city when value moves.

So, the key actor changes:

it is now the aggregator, who can be public or private, but who, most importantly, can neither be the community nor a big group, but must be a new digital entrant.

A match is potentially brewing between four claimants: the famous aggregators, who, by controlling post-production, can control the whole chain; the masters of a link; the operator-turnkey contractors who can become new turnkey contractors, as we see in the Réinventer Paris type of consultations. And finally, communities, which we hope have not had their last word.

Initially, in the period of beet fields, value was related to production: the developer and the promoter sold their production at a higher price than the cost price. With the new context of project production, and the fact that European law is favourable to ownership, value is moved in pre-production to landholding. This is where Bruce Katz and Luise Noring's model comes in. However, when this model is not applicable, the solution may be to look for value that moved in post-production by playing in particular on the assets held by the mass.

Among the different questions and remarks in the hall, we will take note of Dominique Boullier's, which rises against the idea of a hidden value. Referring to the work of André Orléan on the opinion economy, he thinks that value only appears because platforms create the conditions of the marketplace. So, it is an extremely fragile value.

The complementary model that we have presented has several limitations. Firstly, in terms of applicability: the capacity to activate value through post-production control varies according to sectors and territories. Then, in terms of financial stakes, in particular for local communities. Because even if the major technical networks are no longer enough to produce urban services, they remain necessary. Because the mass is not self-sufficient: no carpooling without roads, no smart grid without a network! This brings us to the question of funding and infrastructure, that is, physical support that enables the deployment of a service offering. In the classic model of the city of networks, infrastructure was funded by its use in the economy of scale logic consisting of making a maximum of users support fixed costs. In the city of platforms model, it is not that infrastructure (tram cars, rails,

water pipes, etc.) is not required, but it is not necessary to own or control it because it can be easily mobilised, either because it is distributed or because it is available for free – such as roads. So, the service offering remains dependent on infrastructure, but does not remunerate it. The scalable and non-regulated offering risks competing with the non-scalable but regulated offering.

Our presentation is largely based on the study that we conducted with Nicolas Rio (Acadie) and Clément Fourchy (Espelia) on new urban economic models (ADEME and AMF funding with the support of the PUCA). It can be viewed on the site www.modeleseconomiquesurbains.com. Our article in the *Revue Esprit* (*Financer la ville à l'heure de la révolution numérique*, June 2017) presents a summary of this study.

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