CENTRAL CORRIDOR PROJECT POLICY PAPER

Capitalizing on De-Industrialization to Sustainably Address the Demands of Growth & Modernization

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This paper is the result of research conducted in 2011 as an Urban and Regional Policy Fellow for the German Marshall Fund of the United States (GMFUS). The views expressed here are my own and do not reflect those of the GMFUS or of my employer, the City of San Francisco's Planning Department.

Executive Summary

The central research question of this report is to understand how cities can capitalize on the de-industrialization of their urban core to sustainably address the demands of growth and modernization.[1] This research is relevant to my work in de-industrializing parts of San Francisco – particularly those well served by transit and adjacent to the downtown. Key findings from this research include that San Francisco should emulate the following best practices found in Europe:

- In terms of **governance**,
  - Lyon's regional government that addresses regional land use and economic issues at the appropriate scale, and
  - Torino's collaborative planning efforts that fostered buy-in and collaboration across a wide range of stakeholders,

- In terms of **housing**,
  - Torino's balance of supply and demand that creates affordability without requiring subsidies or other programs, and
  - Amsterdam's alternative land- and housing-ownership models that reduce some of the profit motive from this essential public good,

- In terms of **economic development**, Lyon's linkage of economic development and land use principles that benefits both realms,

- In terms of **connectivity**,
  - Torino's undergrounding of a railroad line, thereby removing physical and psychological barriers between neighborhoods and enhancing economic and social cohesion, and
  - Copenhagen's thorough bicycle network that entices residents to utilize this free, non-polluting source of transportation,

- In terms of **complete communities**,
  - Lyon and Copenhagen's prominence of architectural and landscape design to dramatically reduce energy consumption and greenhouse gas emissions,
  - Amsterdam and Lyon's use of iconic architecture to revitalize redeveloping neighborhoods,
  - Amsterdam's support of building additions that economically support their existing historic buildings and thereby their cultural heritage, and
  - Torino's public benefits policies that create ample new urban open space to benefit the physical and mental wellbeing of their people.

1 I am exceedingly grateful to the German Marshall Fund of the United States for extending me the privilege of urban field work in four wonderful European cities, and returning me to San Francisco with a better understanding of the possibilities for my city. In the field of urban planning, best practices spread slowly (compared to such fields as technology). While people have similar needs around the world, the complexity and richness of cities necessitates that such best practices must be experienced in their milieu, and not just heard about. Only then can one truly understand the brilliance, poignancy, frustration, and other inherent emotions that inform policy options and choices.

Background

POLICY CHALLENGE

My research focused on understanding how cities can capitalize on the de-industrialization of their urban core to sustainably address the demands of growth and modernization. Specifically, I aimed to learn how European cities determine how to redevelop these areas, what implementation strategies were utilized, and their relative success, in terms of their ability to maintain and enhance the quality-of-life of their citizens.[2]

The purpose of this research was to find inspirational ideas and practical lessons for my work for the Planning Department of the City of San Francisco. Specifically, I was looking for ideas and lessons pertinent to our Central Corridor Project, which will result in new land use controls for a 98-acre historically industrial area in the city's South of Market (SoMa) neighborhood.[3] Because of its adjacency to downtown and development potential, this area has been identified as key to addressing the city's substantial growth and modernization pressures.[4]

CASE STUDIES

In general, European cities provide an excellent venue to research my policy question. European cities have similarly walkable land use patterns and relatively high-density rates, especially compared to most car-oriented and low-density North American cities. Additionally, growth in European cities is often directed towards the core, as opposed to the periphery – a necessity in San Francisco, since our city has water on three sides and mountains on the other.

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2 Here and throughout this paper, the term "quality-of-life" is used as a term of art describing the capacity of individuals to live a fulfilling existence. One's physical and social environment is only one, albeit important, facet of what facilitates a high quality-of-life.

3 These 98 acres represent a subset of the overall 317-acre Plan Area, which extends into the traditional downtown and other non-industrial areas.

4 In terms of growth, the San Francisco Bay Area's regional planning agency is projecting that the region will add two million residents and a million jobs in the next 30 years. Best practices in the planning profession dictate that such growth should be concentrated in dense, walkable, and transit-oriented communities that can offer a high quality-of-life while minimizing the emission of greenhouse gases, and without causing the displacement of lower income communities. The Central Corridor provides an excellent opportunity to fulfill all of these planning goals, given its proximity to downtown, its dense urban fabric, its excellent transit access (including a new $1.5 billion "Central Subway" line set to open in 2018). Also, the industrial nature of a large part of this study area minimizes the threat of residential displacement.

In terms of modernizaton, macroeconomic forces have engendered the de-industrialization of San Francisco in recent decades, shifting employment into the service and knowledge economies. In the Central Corridor, many of these modern uses exist, including the center of San Francisco's thriving high tech and digital media industries. However, the Central Corridor still contains a large industrial area whose current zoning controls prohibit new office or housing development. While it is still necessary for the city to contain some amount of industrial uses, such uses are better located farther from the city center, where truck access is better and there are less potential conflicts with surrounding use.

In addition to changes in use, the potential for modernization includes increasingly making the city more environmentally sustainable, by reducing our emission of greenhouse gases, improving water conservation, etc. While San Francisco has green-oriented building codes and the density that supports alternative transportation (i.e., anything but driving alone), there is still the opportunity to look at these issues from more of a district-level.

Given time and resource constraints, it was necessary to focus my research on a limited number of European cities. To determine which to visit and study, I undertook an evaluation based on the following three criteria:

- Which cities provide relevant case studies for my policy question?
- How did these cities address my policy question?
- Where could I accomplish the most with limited time in each city?

To answer the first question, I sought cities with similar circumstances to San Francisco's in terms of physical characteristics, development and modernization pressure, and industrial trajectory. To answer the second question, I looked for case studies involving strategies that could prove applicable in San Francisco. To answer the third question, I focused on cities where I could easily establish connections and access relevant information.[5] Based on these screening criteria, I chose to conduct my research in Torino (Italy), Lyon (France), Amsterdam (the Netherlands), and Copenhagen (Denmark). A brief context for each city and its applicability to my research is provided below.

Torino

Torino is the central city of Italy's Piemonte (Piedmont) region, with a population of 900,000 in a region of 1.3 million.[6] For much of the 20th Century, Torino was an industrial town. The retrenchment of manufacturing starting in the 1970s decimated the city, resulting in a loss of hundreds of thousands of jobs, a third of its residents, and in many ways the city's wealth and identity. Huge swaths of the city's industrial land became underutilized or completely abandoned. The ongoing revitalization of the city is largely focused on redeveloping this industrial land, much of it strung along a linear transportation network called "La Spina" (the Spine) that aptly runs through the heart of the city. [7]

Lyon

Lyon is France's second largest city, with a population of nearly 500,000 in a region of 1.5 million. Lyon has a thriving industrial sector, largely located away from the inner core of the city. By comparison, one industrial district immediately adjacent to downtown (La Confluence) and another a bit further out (Carre de Soire) have largely been abandoned and are the focus of intensive redevelopment efforts on the part of the city.[8]

Amsterdam

Amsterdam is the Netherlands capital and largest city, with 750,000 people in a region of 1 million. A historically important trading center, Amsterdam's port and industrial fortunes

5 This search was informed both by the city's participation in the GMFUS' Transatlantic Cities Network and the likelihood that interviewees would be fluent in English.

6 Regional population is used to describe the urbanized area including and surrounding the city.

7 For more information on Torino's remarkable renaissance see this City Report by the Centre for Analysis of Social Exclusion.

8 The two areas will be the main focus of my analysis. In brief, La Confluence is a brownfield redevelopment project on approximately 170 acres of land proximate to downtown Lyon. The site has ambitious architectural and sustainability goals and aims to achieve a new city center, with important retail and entertainment attractions. Carre de Soie is a brownfield redevelopment project of approximately 1,200 acres further from the regional core, in the adjacent towns of Villeurbanne and Vaulx-en-Velin. It is targeted to be more of a middle-income residential center with limited office and more local-serving retail amenities.

declined in the mid-20th Century with the rise of containerization and larger vessels. Amsterdam has wholly repurposed their industrial port into predominantly residential medium density housing, including important projects next to downtown like the East Docklands and the Noordwarts redevelopment nearby.

Copenhagen

Copenhagen is Denmark's capital and primary city, with 500,000 people in a region of 1.2 million. Compared to many European cities, Copenhagen was never highly industrialized, though shipping was important. One of the few significant industrial redevelopment opportunities is at the site of the former Carlsberg Brewing facility, a 75-acre site located in the center of the city. Another important redevelopment site is the North Harbor, close to downtown but a bit isolated on a peninsula.

Analysis

In each city I studied key policies and implementation strategies intended to capitalize on the de-industrialization of their urban core to sustainably address the demands of growth and modernization. I focused on potential lessons for San Francisco and particularly the aforementioned Central Corridor Project. My analysis consisted of assessing the redevelopment policies,[9] implementation strategies, and relative successes by policy area. The policy areas I focused on are governance, housing, economic development, connectivity, and complete communities. These are discussed in turn, below. For each, I identified a particular area of concern for the Central Corridor Project, examined how this issue was addressed in relevant case studies, and assess how appropriate lessons may be incorporated back into the Central Corridor and other planning projects in San Francisco.[10]

GOVERNANCE

Area of Concern

The manner in which a society makes and implements its decisions is critical to its ability to support a high quality of life for its citizens. An important aspect of this is addressing issues at their appropriate scale. For example, many prominent civic issues are regional in scope, and thus best addressed on scale bigger than the city itself.[11] However, in the San Francisco Bay Area, there are over 100 separate jurisdictions making independent land use policy and decisions. While there is a nominal level of discussion between jurisdictions at the regional level, the end result is the tendency towards sprawling land use patterns that often disregard the environmental and social benefits of transit-oriented development. For a centralized and transit-rich location such as the Central Corridor, this may result in the continued underutilization of the land.

A second concern is that many planning processes are not considered collaborative by members of the community or other important stakeholders. In San Francisco, this results in considerable friction, often delaying projects at every level and resulting in sub-optimal results. In the Central Corridor, this could result in a mismatch between overall demand and development cycles, limiting our ability to sustainably develop.

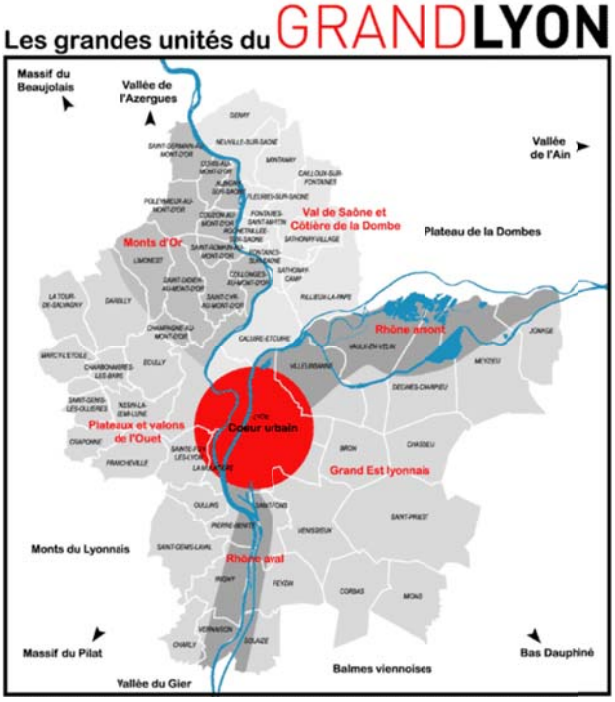
Given the opportunity for regionally important transit-oriented development in the Central Corridor, and the desire to have a collaborative and successful plan, my analysis focused on how European cities pursue effective regional governance and collaborative planning efforts.

9 The use of the term “redevelopment” in this report is meant in the generic sense of the changing of the fundamental land uses of an area, and not in the technical sense of “Redevelopment”, which connotes government entities with particular roles of powers to engender land transformation.

10 It is worth noting that these perspectives are my own, and do not reflect that of the San Francisco Planning Department, the German Marshall Fund of the United States, or any other entity.

11 Examples of issues best addressed at the regional level include land use, economic development, transportation, and environmental stewardship.

Case Study – Regionalism in Lyon



Grand Lyon's land use authority extends across this region of 1.8 million – far beyond the inner city. *Source: Grand Lyon*

The city of Lyon and its environs demonstrate the most powerful example of what regional governance can accomplish.[12] The City of Lyon is just one (albeit the largest) of 58 jurisdictions that comprise the regional body known as "Grand Lyon". All 58 jurisdictions have ceded their land use authority to Grand Lyon. Grand Lyon then uses this regional decision-making power to determine where and how to support development.[13] This is critical for an opportunity site like the Confluence, because land use planners can recognize the unique opportunity it represents within the region, and then take advantage of that opportunity- in this case, by pouring its energy into creating a world-class architectural and ecological district.[14] Similarly, Grand Lyon can look at another important industrial redevelopment site outside of Lyon proper, Carre de Soire, and identify its proper role as the location for a substantial amount of needed middle-income housing. In this manner, Grand Lyon assesses opportunity sites throughout the region with this regional perspective that can account for such critical factors as housing needs, jobs, and transportation. Together with Grand Lyon's economic development powers (discussed below), the citizens of Lyon greatly benefit from growth and modernization that complements, and does not compete with, the existing uses within the city.

Case Study – Collaboration in Torino

If Grand Lyon is a model for regional governance and its effect on industrial land redevelopment, the city of Torino is a model for how municipalities can collaborate internally around land use goals.[15] This is demonstrated through Torino's Strategic Planning process that informed the redevelopment strategy within the formerly industrial La Spina area. The Strategic

12 Insight into regionalism in Lyon is based on site visits and interviews with the following people, conducted during the week of June 13-17, 2011: Per Justesen and Hajo Bakker at Grand Lyon, Marc Ellenberg at CERTU, and Jacque de Chilly at ADERLY.

13 Grand Lyon's decision-making body consists of elected officials from all 58 jurisdictions, traditionally with the Mayor of Lyon as President.

14 The Confluence is a brownfield redevelopment project on approximately 170 acres of land proximate to downtown Lyon. The site has ambitious architectural and sustainability goals and aims to achieve a new city center, with important retail and entertainment attractions.

15 Insight into collaborative planning in Torino is based on site visits and interviews with the following people, conducted during the week of June 6-10, 2011: Franco Corsisco and Matteo Tabasso at SiTI, Iolando Romano at Avventura Urbana, Paolo Verri at the Urban Center, Roberta Balma Mion at Torino Internazionale, and Matteo Robiglio at the Politecnico di Torino.

Plan was borne out of both national political and local economic crises that came to a head in the early 1990s. Recognizing a limited opportunity to act, the City government created a civic dialogue that brought together leaders (new and old) from all areas of Torino's society.[16] Although many of the ideas that eventually filled the Strategic Plan were already contained in the City's Master Plan, the Strategic Plan had the imprimatur of being a collectively created and approved document. Therefore, the entire city was able to "own" it, and to be responsible for supporting its far-reaching vision to create an internationally renowned and connected city with high quality of life for its citizens. Without this grassroots support, it is likely that the City would not have been able to enact much of this vision, including the called for improvements along La Spina. Such improvements included the creation at various nodes of dense infill development, a new office center, and new cultural pole, and the re-organizing regional transit patterns through this area.[17] The Strategic Plan represented the first such effort of its kind in Italy, and has become a blueprint for numerous subsequent civic visioning efforts around the country.

Key Lessons for San Francisco

There is much San Francisco, and the Bay Area, can learn from the successes of Lyon's regionalism. Admittedly, for the foreseeable future Lyon will remain a paragon, as regional zoning and other land use regulation in the Bay Area is fiercely opposed by individual jurisdictions. However, the Bay Area is currently involved in a collective land use visioning process called the Sustainable Communities Strategy.[18] To the degree that it can learn and share visions for the future of the Central Corridor and other prominent projects, it is critical that San Francisco takes a prominent role in this process. San Francisco can also advocate at other levels, such as the state, for regulations that reduce competition between jurisdictions and support transit-oriented development. This could include tax sharing strategies and pricing policies that direct growth and infrastructure in sustainable ways.

There is also much the Planning Department can learn from Torino's collaborative planning efforts and the success it has engendered. In an effort to improve our public outreach and engagement, the Central Corridor Plan process has expanded its range of tools beyond the public workshop to focused meetings with interested stakeholder groups, online surveys, walking tours, and a popup store in the community to discuss the project. Given initial feedback on this work, it is already apparent that the final plan will benefit from this enhanced collaboration.

HOUSING

Area of Concern

Housing is our most expensive commodity and a most basic need. In San Francisco, the undersupply of housing relative to demand has led to prices that are unaffordable to all but the

16 The 57 signatories of the final plan included government leaders such as the Mayor, business leaders in important sectors like banking, auto manufacturing, and agriculture, and the heads of important regional institutions such as the local Polytechnic University.

17 Some of these development strategies will be discussed in more detail below.

18 For more information, see Plan Bay Area.

most wealthy.[19] This circumstance has a range of negative ramifications, putting a tremendous strain on our residents, stifling economic growth, and promoting sprawl. The city itself is inexorably losing its diversity, particularly its middle class. Despite noble attempts to work within the existing system, our affordable housing policy is not robust enough to rectify the problem.[20] The Central Corridor presents one opportunity to rectify this issue, as redevelopment of this area could provide up to tens of thousands of units, depending on the plan's final zoning and height controls. Given the opportunity to develop housing in the Central Corridor, my analysis focused on how European cities attempted to use underutilized industrial land to support their needs for affordable housing.

Case Study – Making Housing Affordable in Torino

One way Torino has managed to balance supply and demand – housing built in backyards.

Torino provides an instructive example of a city that meets affordable housing needs by utilizing the market to balance supply and demand.[21] While Torino's post-industrial economic downturn resulted in a loss of population, there was still a need for substantial housing. This was because much of the housing built mid-century for industrial workers was cheap, unsafe, and necessitated demolition. The second is that changing cultural preferences meant a desire for bigger housing – and separate living space for (or from) one's parents. With this demand in mind, the city has focused much of its redevelopment efforts along La Spina on providing new housing. This substantial influx of new housing is expected to keep supply and demand balanced for the foreseeable future. This keeps Torino from having to institute substantial social housing programs, or other subsidies to make housing affordable. To keep prices high enough to incentivize development, Torino set densities relatively low in all these redevelopment areas (0.7 square feet of development per square foot of land). With Torino's strong revitalization, this level has been criticized as perhaps being too low to support new demand, and may need to be revisited in the future.

19 According to the 2009 Housing Element of the San Francisco General Plan, it is estimated that only 11% of San Francisco's households can afford a median priced home in the City. Median asking rents are accessible to those of moderate incomes, but barely affordable to low income households (i.e., those households with income from 51%-80% of the area median income).

20 San Francisco currently requires new development to provide 15 percent of their units at levels affordable to the city's median income. While this is one of the nation's boldest "inclusionary housing" policies, it still means that 85 percent of new housing serves the few who can afford the market rate – which currently is about double the median income.

21 Insight into affordable housing policy in Torino is based on site visits and interviews with the following people, conducted during the week of June 6-10, 2011: Franco Corsisco and Matteo Tabasso at SiTI, Gianfranco Presutti and Liliana Mazza at the Municipality of Torino, and Matteo Robiglio at the Politecnico di Torino.

Case Study – Making Housing Affordable in Amsterdam

Affordable-by-design housing in Amsterdam made of shipping containers.

By contrast to Torino, Amsterdam is a city that manipulates the market to balance supply and demand.[22] This is necessary because of the imbalance of supply and demand that sends market rate housing skyward. However, the difference between Amsterdam and Torino is that only half of Amsterdam's housing is market-rate. The rest of housing is kept below-market rate through a number of mechanisms that interact to create this circumstance. Most relevant to this study is that the City of Amsterdam owns most of the land in the city. As such, it can negotiate with whom it likes for development, focusing on deals that serve societal goals such as the affordability of housing. This is particularly useful in large industrial redevelopment projects such as the East Docklands and part of Noordwarts, since this is where much of Amsterdam's new housing is able to be developed. The result is a dense supply of new housing that ranges from expensive ownership units in the East Docklands to a remarkable development of student housing in Noordwarts consisting entirely of former ship containers.[23]

Key Lessons for San Francisco

Given San Francisco's tremendous mismatch of supply and demand, it is unlikely we could build enough housing, as in Torino, to make housing more affordable.[24] Even so, to start moving the needle in a positive direction, it will be important to provide as much housing as possible in density-supporting sites such as the Central Corridor.[25] In addition, Amsterdam's model of land ownership is infeasible to apply in San Francisco, given prohibitive land costs. Even so, San Francisco should consider holding on to publicly owned land, and even acquiring additional land as the opportunity presents itself – recognizing that Amsterdam's strategy has taken nearly a century to implement. While in the near term it is difficult to see the European case studies as

22 Insight into affordable housing policy in Amsterdam is based on site visits and interviews with the following people, conducted during the week of June 20-24, 2011: Ton Schaap and Dimitri Frenken with the City of Amsterdam's Physical Planning Department, and Luc Vrolijks at Urban Progress.

23 Other housing strategies are less relevant to our study, but are worth noting because of they are so remarkable from an American perspective. First is that there are many "housing associations" in Amsterdam that own many of the units, and keep prices affordable for their constituents. For example, the Teacher's Housing Association uses its ~50,000 units to house the city's teachers and their families, largely removing speculation and profit-making from the equation. The third is that the City owns many units themselves, and thus is able to provide housing for those who cannot afford market rate housing but do not otherwise have support.

24 This analysis looks at supply-based measures to create affordable housing. Of course, there are also demand-based factors, such as recessions and even earthquakes, whose potential must be recognized but certainly cannot be part of a policy solution.

25 Keeping in mind other policy goals, as discussed elsewhere in this paper

anything more than inspirational, the City and region still need to be proactive wherever possible and keep the long-term view in mind.

ECONOMIC DEVELOPMENT

Area of Concern

The City recognizes the limited influence of local government over economic matters.[26] And yet, to remain a successful city, San Francisco needs a strong economy – particularly one that provides quality jobs for our residents.[27] Unfortunately, over the past three decades, there has been negligible job growth in San Francisco, as much of the region's jobs have chosen to locate in suburban office parks.[28] Only recently have we witnessed some shift in this pattern, as growing technology companies are looking for space in the city to help attract their urban-oriented workforce. The Central Corridor is uniquely positioned to capitalize on this opportunity, as it is adjacent to the city's existing cluster of technology firms, and has the space to provide up to tens of thousands of jobs, depending on the plans final zoning and height controls. Given the opportunity for new economic development in the Central Corridor, my analysis focused on what strategies European cities utilized to support job growth in their formerly industrial areas.

Case Study – Promoting Economic Development in Lyon

In general, the cities I visited were not looking to their formerly industrial areas as an area for economic development. Mostly, city leaders and planners were focused on housing development, which supports the creation of only a nominal number of jobs in retail, education, and other services. Indeed, most of the cities visited were not strongly focused on economic development at the local level.

The obvious exception was Lyon.[29] Similar to land use issues (discussed above), Lyon addresses economic development problems at the regional level. This arrangement has profound advantages in the ability to identify a regional economic strategy and tie it to land use policy. Part of this regional strategy has been to actively maintain and enhance their vibrant industrial sector – a remarkable strategy given that de-industrialization is considered a fait accompli in so many other Western cities.[30] By maintaining this existing sector, there is less of a demand in Lyon to grow other sectors – and less space in which to do it. This regional economic perspective also enables Lyon to ascertain the amount and location of land necessary for industry or other types of employment, and to recognize when areas such as the Confluence are no longer needed to fulfill this role.

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26 For example, local governments have very limited influence over the overall strength of the economy, the cost of currency, and the cost of labor – including unionization rates and immigration policy.

27 That is, jobs that provide career ladders and high wage relative to the worker's educational achievement.

28 The allure of these office parks is often their freeway accessibility. But with the ascendency of Silicon Valley, many firms have chosen to locate in these areas based on prestige and proximity to other important firms.

29 Insight into economic development policy in Lyon is based on site visits and interviews with the following people, conducted during the week of June 13-17, 2011: Per Justesen and Hajo Bakker at Grand Lyon, Jacque de Chilly at ADERLY, Patrice Berger at the City of Lyon, and Sylive Josse at Grand Lyon - La Confluence.

30 Maintaining these industries in light of global trends requires substantial perseverance and engagement on the part of Grand Lyon. Beneficial strategies include identifying critical economic clusters (foremost, in this case, being life science and green chemistry), limiting intra-regional competition, supporting connections between industry and technology developers (such as local universities), and providing global marketing support through the quasi-governmental (ADERLY).

Despite this regional visioning, Lyon has not fulfilled all of its economic goals. Most prominently, the region has failed to accomplish its desire of developing a strong office sector. For example, the Confluence project contains plans for two office towers. However, development of office towers is barely even occurring in Lyon's Central Business District, because the market rents for office space are too low to justify the construction cost for such developments.[31] Therefore, there was little expectation that these office towers would be realized in the less central Confluence.

Key Lessons for San Francisco

Certainly, the continued success of Lyon's industrial sector, and the efforts undertaken on its behalf, provides tangible proof of the upsides of regional economic planning. While centralized regional land use and economic development authority is not being considered in the San Francisco Bay Area at this time, the region could engage in regional economic visioning, which can inform the strategies and policies of individual jurisdictions within the region.[32]

Another lesson for San Francisco is to be positioned to best utilize the market. When the economy is weak (such as Lyon's office market), there is very little a city can do. However, when the market is strong, the City needs to have its plans in place to be ready to direct that development in appropriate locations – i.e., those well served by transit and where displacement of other essential businesses or populations will be minimal. The Central Corridor is an obvious example of such an area, and as such, the City needs to be prepared to direct growth to this area as the region's economy once again begins to grow.[33]

CONNECTIVITY

Area of Concern

Connectivity encompasses all modes of transportation, especially those such as walking, bicycling, and transit usage that do not require reliance on a private vehicle. A lack of connectivity limits the potential for community connections and economic development. In San Francisco, the Central Corridor area is well connected regionally by access to two freeways and multiple regional rail lines. While regional connectivity is good, local connectivity is lacking. Within the Central Corridor area, there is a lack of regular bus service along the long east-west blocks.[34] Car- and truck-choked roads make bicycling unpleasant and unsafe, even along designated bicycle routes. Long, industrially-oriented blocks make walking unpleasant. The elevated eight-lane I-80 freeway bisects the South of Market neighborhood, limiting connections to a series of dark, unpleasant underpasses. Given the transportation challenges facing the

31 It was noted that if you could afford such rents in France, you would be located in Paris.

32 Such potential for such regional economic visioning received a boost with the November 2011 award of a nearly $5 million Sustainable Communities Grant from the Department of Housing and Urban Development (HUD) to the Bay Area's regional agencies.

33 San Francisco knows well the risk of not having a location to direct growth: during the dot.com boom at the turn of the century, new jobs were not strategically directed, and the result was the displacement of a wide swatch of lower-paying but vital non-profit, arts, and other community-enhancing organizations. The negative ramifications of this time still greatly inform all land use planning in San Francisco.

34 Recent transportation planning efforts have identified this area for improvement, but such improvements are a couple of years away at minimum, pending environmental review and identification of capital.

Central Corridor, my analysis focused on how European cities attempted to increase connectivity, particularly at the local level.

Case Study – Reconnecting Torino

This barrier continued for 10 miles and kept Torino divided for nearly a century – until now. *Source: City of Torino.*

The most profound example of reconnection comes from Torino, a city historically bifurcated by train tracks serving its largest employer, FIAT, and its ancillary industries.[35] As these industries declined in importance in the late 20th century, the city determined that the 10-mile long physical barrier they created was no longer justified. To rectify this problem, Torino engaged in a dramatic project to shift freight to tracks on the city's periphery, underground the existing tracks for use as passenger rail, and create an important civic boulevard above the tracks. The process, still ongoing, is resulting in the reintegration of the east and west sides of the city that have been divided (except for occasional overpasses) for nearly a century, creating a more complete city. This increased connectivity also enabled Torino to better utilize land fronting La Spina, such as utilizing an old train sheds as a museum celebrating the 150th anniversary of the unification of Italy.[36]

Case Study – Walking and Transit in Lyon

Another example of a lack of connectivity can be found in Lyon, where the Confluence development site is largely isolated due to both the natural and man-made barriers.[37] The natural barriers are the Rhone and Saone rivers, whose confluence is the southern tip of this area, thus giving the area its name. The man-made barriers include elevated transportation infrastructure which physically and visually separates the Confluence from Lyon's historic downtown immediately to the north. This includes the historic Gare de Perrache train station and affiliated tracks, as well as one of Europe's most important highways.

To overcome the natural barriers, the city is planning to build a series of new bridges connecting across the rivers. This will include two pedestrian-only bridges. These improvements will increase connectivity without undermining the natural beauty and setting of the rivers.

To overcome the man-made barriers, the City has done an excellent job of building and running frequent surface transit service between the Confluence and downtown in anticipation of new development. By prioritizing the development of this transit service enables new residents and

35 Insight into reconnecting Torino is based on site visits and interviews with the following people, conducted during the week of June 6-10, 2011: Franco Corsisco and Matteo Tabasso at SiTI.

36 Of which Torino was the first capital.

37 Insight into connectivity in Lyon is based on site visits and interviews with the following people, conducted during the week of June 13-17, 2011: Sylvie Josse at Grand Lyon – La Confluence, Garance Troupillon at Grand Lyon – Carre de Soie, and Marc Ellenberg at CERTU.

workers to immediately benefit, rather than developing hard-to-break reliance on private automobiles.[38]

However, the city has yet to achieve perfect connectivity in the Confluence. In this eminently walkable city, the pedestrian is still subject to either a long, dark tunnel with narrow sidewalks or a convoluted elevated walk through a large train station. Both are sub-optimal experiences for the pedestrian who would otherwise be apt to walk between these proximal spaces. As the Confluence development becomes a full neighborhood, it is imperative that the city develops improved pedestrian connections between these otherwise symbiotic neighborhoods.

Case Study – Bicycling in Copenhagen

Separated, dedicated lanes make biking safe in Copenhagen under any conditions.

Cities may also use other transportation modes in place of physical infrastructure changes to improve connectivity. Copenhagen's bicycle network provides a useful example.[39] Copenhagen has committed to creating bicycle networks that serve all existing and new neighborhoods, including industrial and post-industrial areas. Bicycles and bike infrastructure are given the kind of support that makes riding both pleasant and easy. Significant infrastructure has been put into place to create separated and safe bicycling routes places between the sidewalks and the parking lane.[40] The result is a bicycling mode share of over a third even in their particularly long and challenging winters. The availability of such facilities has become such a norm that it is inconceivable that redeveloped industrial areas such as the former Carlsberg Brewery and the North Harbor would not be seamlessly connected into this network.

Key Lessons for San Francisco

San Francisco can learn from all of the lessons in connectivity provided by these case studies. In terms of walkability, while it is unforeseeable that the City will remove the physical barrier of its freeway, it is imperative to enhance the freeway underpasses in the Central Corridor so that they do not remain inhospitable to pedestrians, as in Lyon. One natural occurrence will be the increase in usage of this area based on increased densities on either side. However, to maximize usage, these areas must be safe and comfortable. Potential treatments include inviting lighting, wider sidewalks, and calmed vehicular traffic.

38 The effort to complete the transit network in anticipation of the development was also undertaken, in an even more pronounced way in the Carre de Soie redevelopment area, where an entire new transit hub was developed.

39 Insight into bicycling in Copenhagen is based on site visits and interviews with the following people, conducted during the week of June 27-July 1, 2011: Tue Rex at the City of Copenhagen's Planning Department and Nicolai Carlberg at Hausenberg.

40 Any discussion of biking in Europe would be remiss not to mention Amsterdam. However, this city's place as a biking mecca is greatly supported by its historic urban fabric, whose narrow, short, and windy streets are perfectly suitable for bicycles and not for cars – and therefore a poor case study for San Francisco.

Other streetscape improvements will be necessary to enhance walkability in the Central Corridor, like improving the sidewalks, and creating alleys wherever possible to shorten the length of our long industrial blocks. In terms of transit, the Central Corridor is one of the rare land use planning efforts in San Francisco predicated around funded improvements in transportation (as opposed to the other way around). Nevertheless, more can be done, particularly around improving transit along the east-west streets.[41] Finally, in terms of bicycling, San Francisco needs to take leadership in creating safe bicycle routes through the Central Corridor by separating bike lanes and giving bicycles other priority treatments, so that one day we may approach the mode shares exhibited by Copenhagen.

COMPLETE COMMUNITIES

Area of Concern

Industrial areas rarely come with the amenities we consider necessary to complete modern communities, such as green spaces, vibrant streets, moving architecture, and ecological amenities. When transforming the Central Corridor, it will be necessary to create these amenities – and to figure out how to pay for them. Given the tall order of transforming industrial areas into complete communities, my analysis focused on the ways European cities look to create complete communities out of their formerly industrial areas.

Case Study – Ecology in Lyon

In Lyon, the complete transformation of the Confluence, in conjunction with its global ambitions, has led to the creation of a stunning architectural display in an ecologically sustainable setting.[42] The Confluence's ecological orientation is built in to its master plan, including zero carbon and waste requirements, high reliance on renewable energy, and healthy biodiversity. These amenities will be provided through the building's architecture and through landscaped natural areas. The amenities are paid for in part by incorporating them into the design, and in part by the higher rents commanded by the branding and realization of this as a world-class neighborhood.

An example from Amsterdam of enhancing the value of historic buildings with new additions.

Case Study – Architecture and Historic Resources in Amsterdam

In Amsterdam, architecture is treated with the highest regard, and prominent new building must pass muster with the

41 Fortunately, the planning for the Central Corridor is occurring at the same time as long-awaited systematic transportation planning efforts which can help account for a proposed change in land uses in this area.

42 Insight into ecological amenities in Lyon is based on site visits and interviews with the following people, conducted during the week of June 13-17, 2011: Sylvie Josse at Grand Lyon – La Confluence and Marc Ellenberg at CERTU.

City's architectural panel. Neighborhood transformation often incorporates making additions to existing buildings.[43] This helps create complete communities in two ways. First, it preserves the existing historic buildings. Next, it enables the additions to create often stunning architectural effects, as they add on to and/or around the existing buildings. The profit from selling and/or renting the building additions can help pay for the rehabilitation and maintenance of the existing historic buildings.

Case Study – Open Space in Torino

In Torino, public ownership of the land enabled the government to negotiate amenities with developers.[44] Because of the low density set by the city, and the preference for mid-rise apartment buildings, the most prominent amenity has been the development of parks on the remaining undevelopable land. These gracious public spaces are a welcome addition in an urbanized center and serve new and existing residents alike.

In Torino, new open space in the shell of an old factory.

Torino's open space options are enhanced by the ever-present "parklet" – parking spaces that have been converted to café use. These parklets bring the vibrancy of café culture into the street itself, returning this area to its function as a meeting place rather than simply a storage unit for cars.

Case Study – Vibrant Streets in Lyon

In the Confluence and Carre de Soie, the one amenity that seems lacking is a practical plan for vibrant streets.[45] In Lyon, the redevelopment efforts are often funded by revenue from regionally popular shopping centers. However, these centers typically drain activity from the streets, especially by diminishing the potential for walkable streets lined with retail.

Case Study – Community Amenities in Copenhagen

In Copenhagen, the Carlsberg redevelopment plan proposes many of the best community amenities seen elsewhere, including pleasant streetscaping and open space, historic preservation juxtaposed with grand new architecture, and environmental sustainability.[46] The

43 Insight into architecture and historic preservation in Amsterdam is based on site visits and interviews with the following people, conducted during the week of June 20-24, 2011: Ton Schaap and Juliane Kurchner at the City of Amsterdam's Physical Planning Department, Nico Tillie at the City of Rotterdam, and Luc Vrolijks at Urban Progress.

44 Insight into open space in Torino is based on site visits and interviews with the following people, conducted during the week of June 6-10, 2011: Franco Corsisco and Matteo Tabasso at SiTI, and Matteo Robiglio at the Politecnico di Torino.

45 Insight into vibrant streets in Lyon is based on site visits and interviews with the following people, conducted during the week of June 13-17, 2011: Sylvie Josse at Grand Lyon – La Confluence and Per Justesen at Grand Lyon.

46 Insight into complete communities in Copenhagen is based on site visits and interviews with the following people, conducted during the week of June 27-July 1, 2011: Jacob Andersen at Carlsberg, Holger Bisgaard at Denmark's Ministry of the Environment, Rita Justesen at the Copenhagen Development Corporation, Anne-Marie Larsen at the Cit of Copenhagen's Environmental Department, Tue Rex at the City of Copenhagen's Planning Department and Nicolai Carlberg at Hausenberg.

difficulty is that these amenities come with a substantial price tag that was factored into the cost of the development (to be paid for by new residents), but in the current economy is dragging the ability to move forward with the development. Therefore, there is consideration within the development team of whether to pull back on the amenities package, or to try to wait until the market can accommodate development that will support these amenities as well.

Key Lessons for San Francisco

For San Francisco, the lessons from these cities for creating complete communities in the Central Corridor project area are manifold. Lyon and Copenhagen show the potential for utilizing the opportunity of redevelopment to create ecologically sustainable areas. While we have many green buildings, San Francisco will need to investigate strategies to create shared efficiencies between buildings in terms of heating, cooling, energy, and water. Incorporating such strategies into the neighborhood plan itself can help identify and act on efficiencies in infrastructure and financing.

Amsterdam (and perhaps more so Lyon) show the potential of outstanding architecture to create iconic buildings and neighborhoods, thereby supporting both development and a high quality of life. To achieve such standards in the Central Corridor, San Francisco may need to consider raising architectural standards by formalizing peer-to-peer design review and/or revising our internal processes to support architectural innovation. With increased land values, it may also be possible for developments to attract the interest of top architects to the area.

Amsterdam and Copenhagen show the power of maintaining historic resources in the context of a transformed neighborhood. San Francisco will need to ensure that we protect our most important existing buildings, and support their rehabilitation potentially by allowing additions to and around them.

Torino shows the value of parks and open space, the realization of which in San Francisco will likely require the acquisition and transformation of underutilized land. To pay for this, San Francisco will need to continue applying impact fees on new development, and also seek additional sources of revenue. For vibrant streets, San Francisco must not be lured in by the fiscal promise of malls, and instead continue to support fine-grained, walkable retail streets that are our city's staple. Our own burgeoning parklet program is a major component of this strategy.