

Regenerative French Urbanism: Sustainable Planning Strategies in Lille, Lyon and Montpellier

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Sustainability engages a complex and nuanced spectrum of issues when it shifts from the realm of architecture to that of urbanism. Individual building compliance is typically measured by objective physical design traits and performance criteria. By contrast, sustainable urban design must respond to historical, political, economic and cultural context while simultaneously addressing overarching concerns such as density and energy efficiency. The resulting urban mandate is neither formulaic nor nostalgic. Rather, it is grounded in the natural alignment of established urban design criteria - emphasizing concentrated, vital city centers as the physical, economic and social focus of urban life - with sustainable principles of compact development and controlled growth.

This paper explores the adaptability of these principles to a range of urban contexts, through case studies of several French cities that have experienced significant new development in the past several decades. Planning for recent growth in Lille, Montpellier and Lyon began before explicit sustainable design agendas were common. Nevertheless, these cities exemplify a number of planning and design strategies that advance sustainability on the urban scale. Chief among these are: 1) promoting density and a rich mix of use by reinvigorating the historic city, 2) developing urban infrastructure and transit systems that conserve energy and preserve the quality of the urban center, 3) counteracting sprawl through the establishment of concentrated patterns of growth in the urban periphery, and 4) 'urban recycling': the adaptive re-use of existing built fabric and the reclamation of urban post-industrial sites. Beatley, Gauzin-Miller, Jenks and others offer extensive discussion and healthy debate on these and related approaches to urban sustainability.¹

Each city faced a unique set of issues. Lille is a mid-sized city recovering from the loss of its industrial base. Montpellier, once a small city, is now a burgeoning technology mecca. Lyon, an established regional center, is a prosperous counter-pole to Paris. Their recent planning strategies respond differently to these specific traits and issues, but share a common agenda of concentrated growth supported by investment in cultural and transport infrastructure. Their planning and development mechanisms also differ widely, from broad-based regional planning to unusual public-private partnerships. The results are quite varied, formally and aesthetically - products of the particular challenges and culture of each locale. Yet viewed as a whole these cities present a continuous spectrum of sustainable design strategies, tactics that could be adapted and effectively applied to a wide range of urban conditions.

LILLE

A former industrial center, Lille is located in France's northernmost region, bordering Belgium. Founded as a fortified outpost in the mid 1600's, its citadel and massive enclosing walls circumscribe a compact city center with a sizable military training ground in its northeastern quadrant. Lille developed as a handsome Flemish town, with major landmarks such as the Lille-Flandres railway station, the Opéra and the stately Bourse. Industrial buildings for the textile trade and residential projects by Guimard and Mallet-Stevens round out the city's impressive built heritage.

Over time, Lille evolved into a sprawling tri-city conurbation with a total population of close to one million people. Fewer than 200,000 reside in Lille proper; the satellite cities of Roubaix and Tourcoing, plus intermediate sprawl, account for near-

ly 85% of the populace. An autoroute to Paris etched the city's eastern boundary in the 1950's, isolating Lille from its neighboring communities. The city began losing its mining and textiles base in the 1960's; the closing of the last mines two decades later signaled economic crisis. Central Lille fell into decline, its historic fabric blackened by industry. Preservation efforts dating from the mid-1970's were supported by the Ministry of Culture, but the concept of architectural heritage was not widely recognized in a city that viewed itself as industrial at heart.

The engine for change was precisely that: the high-speed train connecting Paris and London. Negotiations with Britain began in 1981 for a TGV railway corridor to be completed by 1993. Pierre Mauroy, deputy mayor of Lille, was also the French Prime Minister at that time and had direct oversight of the project. Not surprisingly, he successfully negotiated the proposed route to include a major station / connection point in Lille, the last stop on French soil before the 'Chunnel' crossing. Given the scope, schedule and high stakes of the enterprise, the task was both daunting and highly politicized.

From the start, the project was defined by transportation and location. The French national railway (SNCF) had originally envisioned a location near the airport, ten kilometers outside the city proper. The Euralille planning group's decision to locate the station centrally increased the project budget by 800 million francs, half of which came from city and regional coffers. This may well be the most significant decision of the entire project with regard to the overall revival and long-term viability of the historic city center. The program envisioned a business center at the crossroads of the European rail system, complemented by related urban amenities: commerce, housing, educational and recreational facilities, and public open space. Over 3 million square feet of new buildings were slated to occupy 300 acres of vacant military grounds adjacent to the historic city center. The mayor characterized the plan as a 'decisive leap into the future', and called for 'an ensemble whose architectural audacity would bear witness to a resuscitated metropole.'²

Lille had no public planning entity at the time: the tri-city Urban Community had disbanded the city's

urban agency in 1977, allegedly due to conflicts over a proposed metro system. Mauroy created an unusual private-public partnership to spread the financial risk between the city and private interests. Euralille Métropole, a private firm headed by prominent businessmen and financiers, was charged with assessing the feasibility of a new business center, defining the scope of the project, as well as marketing and managing its implementation. Decision-making was characterized by corporate pragmatism, driven by the need to attract private investors. The budget for Phase I was approximately 1 billion dollars, of which 70% was privately funded. This equation presented a new approach to urban development, promoting long-term private investment and betting on transportation and city-center positioning.

Rem Koolhaas, master planner for Euralille, has written extensively on the process: "We had to untangle a whole multitude of infrastructures [highways and rail lines], with architectural elements almost taking second place."³ and the underlying design assumptions: "The site was important not because it was part of the city, but because it would be only an hour from both London and Paris. Lille itself would be an accidental appendix – almost a décor."⁴

The signature image of the development is a light, sinuous rail station (Duthielleul), bisected by a raised access roadway and straddled by two towers: Crédit Lyonnais (de Portzamparc) and the World Trade Center (Vasconi). The 'Triangle' complex (Nouvel), standing across a bleak open plaza, is a vast commercial space of 1.6 million square feet that includes a shopping mall, restaurants, theaters, a business school, housing and parking for 3400 cars. Koolhaas's Palais de Congrès (nicknamed CongrExpo) sits on a separate parcel, isolated from the rest of the development by a moat of highways and rail lines with little to bridge the void. Its giant oval roof shelters a 5500 seat concert venue, a conference center and an exhibition / trade fair hall.

The project may be seen as a radical implant: neither its architecture nor its planning appear to take much account of the existing urban fabric (consistent with Koolhaas' manifesto of that era, "F--k context"). Euralille exists as an essentially independent second center within the city, whose



1. Lille: Euralille rail station, viaduct and towers

citizenry is defined by its rail connections to London, Brussels and Paris. Not surprisingly, given the scale and velocity of the enterprise, the work has precipitated a wide range of response.⁵ Setting aside questions of architectural quality, there is much to critique in the lack of development of meaningful public space, pedestrian access and connections with the historic center. Koolhaas eventually withdrew entirely from the process, embittered by the vehemence of French critics.

Yet the project turned the tide for Lille, which rebounded sufficiently to be named a European City of Culture in 2004. High-speed rail access brought essential business and commercial growth to the city. CongrExpo has become a major European venue – due, at least in part, to its TGV accessibility – and plans for expansion are currently underway. The adaptive re-use of historic properties, a fledgling movement in Lille in the 1980's, has been greatly bolstered. Projects such as the addition to the Beaux Arts Museum (Ibos & Vitart) and the National Studio of Contemporary Arts (Tschumi), illustrate the possibilities for dialogue between historic and contemporary architecture. 'Recycling' existing buildings has harnessed and revalued the resources of Lille's historic urban fabric.

Local architects and planners counsel a visitor to not focus unduly on Euralille itself, much as its architectural bravura commands attention.⁶ The more important issue is the city's restored urbanism: the risky strategy of radical implantation has revived the ailing city, providing the economic and regional transit base to support future growth.

Lille's subsequent planning builds on these critical first steps. Its 1997 master plan established an explicit sustainable mandate and "focuses on reconstruction of existing districts within the existing city envelope, rather than new development beyond it...".⁷ Euralille Phase II is in process, with plans to infill an underutilized former industrial zone just south of CongrExpo. Phase II aims to establish better pedestrian and local transit connections with the historic city, and will include a major museum and media center, regional government offices, housing, sports facilities and a variety of parks and public amenities. These efforts confirm the city's ongoing commitment to sustainable reconstruction within its historic urban center.

MONTPELLIER

A rapidly expanding Mediterranean city, Montpellier is a former port and long-established university town. Its population of just under ¼ million has doubled over the past 40 years, and it stands braced for continued growth. Founded in 985, the city's concentrated urban center is defined by an 11th century wall. Its universities (Law, Arts and Medicine) date from the mid-1200's and ensure Montpellier's place as a seat of research and learning. This tradition has been skillfully exploited in promoting the city as a 'technopole', with a particular focus in biotechnology and communications research and development.

Montpellier's primary challenge has been the trend towards sprawling and unregulated growth, a result of its thriving economy. George Frêche, mayor from 1977 - 2004, was highly influential in establishing planning strategies to cope with rampant development, and his urban vision has dominated the past few decades of planning in the city. Under the laissez-faire approach of prior administrations, a number of poorly planned districts had been built in areas that were remote and disconnected from the city center. Frêche sought to reverse the tendency toward sprawl by creating a series of new neighborhoods connected to the historic center by a high-profile tramway system: a 'string of pearls' that will ultimately re-link the city with the Mediterranean Sea. This program required significant investment in both transit and public works infrastructure; the first step in creating viable sites south of the center was a major flood-control project along the Lez River.



2. Montpellier: tram station & bus interchange

Public planning began with the tramway network – the key to establishing growth patterns that could promote energy efficiency and prevent vehicular traffic from overrunning Montpellier’s compact historic center. It is a radial scheme, with a major central interchange and plans for phased expansion. The system is distinguished by its commitment to design: there is a strong contemporary image for all stations, yet each is unique in its specificity to site and neighborhood. The tramcars are wrapped in bold graphics and generous public amenities are incorporated in each stop. The tramway’s presence and high visibility give form to urban infrastructure: the system has created a strong public image that encourages its use and advances its sustainable agenda.

Montpellier’s development mechanism engaged the private sector through a ‘mixed economy’ entity named SERM (Société d’Équipement de la Région Montpellieréenne) that worked in close collaboration with the city’s planning department. The city took responsibility for programming, urban planning and design, and land assembly in a manner akin to the urban renewal process in the U.S. The SERM then purchased the land, installed the requisite infrastructure and public amenities, and sold parcels to developers to build within the context of the master plan. This public-private structure enabled the city to move quickly with its urban mandate, creating a series of new mixed-use neighborhoods and adding 700-800 housing units and 25 acres of parks and open space per year.⁸

Each district bears the signature of its master planner. First built was Antigone (Bofill), a post-



3. Montpellier: urban planning model

modern commercial and residential project built on former military grounds adjacent to the city center. Critiqued by many for its grandiose scale and classical pretension, it nevertheless succeeds in shaping significant public spaces and creating a strong pedestrian axis southward. The quarter was recently enriched by the construction of a municipal library (Chemetov & Huidobro), an aquatic center (Bofill), and an open-air market. Proceeding southward on the tramway one comes to the Consuls de Mer district (Leon Krier), whose predominantly residential first phase is now complemented by the new City Hall (Nouvel).

Across the Lez River, the Richter quarter (Fain-silber) has an extensive university campus as its centerpiece and a full range of commercial and residential development along the riverfront. Further south are several districts that are primarily residential, with accompanying local commerce. The final stop is Odysseum, a giddy array of recreational facilities ranging from a huge cinema-plex to an ice skating rink – a modern-day Coney Island. While this district is intended to promote Montpellier’s role as a vacation destination, the tramway also makes these facilities readily available to city residents.

Equally important, the tramway extends northwards to connect existing, previously isolated areas such as the Paillard housing projects. This bleak collection of towers, created in haste to receive an influx of North Africans in the 1960’s-70’s, is now starting to be socially and economically reintegrated with the city center. So, too, are the major hospitals, medical school and research laboratories on the northern periphery. The tram-

way now connects and extends a sense of urbanity to the city's outermost parts.

Central Montpellier is also being carefully redeveloped, with a number of sensitive restorations and new projects inserted within its dense historic fabric. Most notable are the National Choreography Center (Lipsky & Rollet) and the Cité Judiciaire (Kohn & Garcia-Diaz), both State-funded projects, and the Pitot housing district (Meier). Although portions of the city center have yet to recover from misguided commercial development in the 1960's-70's, public squares and an ample city park / promenade sustain an appealing urban center.

While the overriding power of the mayor presents a controversial issue in local planning and politics, the scope of his vision and his ability to marshal ongoing financial support for the enterprise is broadly acknowledged. A small, historic city that could have easily been engulfed by sprawling development has instead asserted its commitment to compact urbanism through public investment in transit infrastructure and correlated patterns of controlled growth.

LYON

France's second largest city, Lyon is an acknowledged regional center of art, culture and cuisine, with deep roots reaching back to the Roman settlement on its western hillsides. The French high-speed rail system reduces Lyon's distance from Paris to a two-hour trip. The city's rich architectural, urban and cultural heritage earned it UNESCO status as a World Heritage Site in 1988.

Lyon sits at the confluence of the Rhône and Saône rivers, whose paths define the central and most densely developed quarter of the city, Presqu'île. This area grew rapidly in the 17th - 19th centuries due to the city's prosperous textile trade. The urban fabric of Lyon is rich and compelling: its densely built grid is interwoven with handsome public buildings and squares. Developments in the 20th century include many significant projects by Tony Garnier, the city's famous native son, as well as an a-contextual 1970's commercial, governmental and transit complex in an eastern quarter of the city (Part Dieu). Unlike Lille, when Lyon's industrial base subsided it was replaced by business and commercial interests.

As capital city of the Rhône-Alps region, Lyon is the

largest member of the Lyon Communauté Urbain, a regional / city planning agency in existence since 1969 that includes 55 surrounding towns. Lyon constitutes one third of the total population of this grouping and receives about half of its billion dollar annual budget. The presence and stature of Lyon's regional planning agency is something of an anomaly in France, where planning was generally managed by State ministries up until the Laws of Decentralization (1982). Notably, there is no separate planning agency for Lyon: planning is understood as a broader concern, reflecting the principle that urban sustainability works best at the regional scale. Transportation and economic linkages with nearby communities, and with nearby regional centers such as Marseille, Geneva, Barcelona and Turin, are primary considerations in Lyon's recent planning initiatives.

The planning approach for Lyon was comprehensive, highly publicized and well documented,⁹ tackling issues that range from congestion in its core to the reclamation of former industrial sites on its periphery as viable urban neighborhoods. In contrast to Lille, the primary issue was an over-utilized center. In a metropolitan area comprised of some 1.2 million inhabitants, approximately 400,000 live in Lyon proper, with a trend towards growth in the 20-40 year age bracket. The city center was choked with vehicular traffic and its attendant parking requirements. This problem was exacerbated by the presence of a national motorway that was inexplicably routed through the southwest quadrant of the city in the 1970's. Public planning naturally began with transportation infrastructure.

Work within the central Presqu'île district began with an explicit goal of reinstating the pedestrian realm. An ambitious program of replacing surface parking with underground structures allowed the grade level to be redesigned as public urban plazas of varying scale and character. Many noteworthy open spaces were created - such as Places des Terreaux, de la République, and des Celestins - each the product of an international design competition. They are bold designs, with grids of syncopated water jets, telescopic views to sculptural subterranean parking ramps and other unexpected elements. Collectively, they create a memorable sequence of public spaces and promote connectivity in the urban center.



4. Lyon: *Place de la République*

Restoration of the city's substantial built heritage began concurrently, including the reconstruction of the Opera House (Nouvel). Garnier's legacy is fully appreciated by the Lyonnaise, and many of his projects have been recently restored or refurbished. Two major housing districts – Quartier Gratte Ciel and Quartier États Unis – offer a vision of urbane living. An 'Open Air Museum' was created at the latter, using the blank end walls of the blocks as canvasses for huge murals that catalog Garnier's oeuvre. His Grand Hall, the city's former meat market in the Gerland district, was restored in 1988 and now functions as an major exhibition and conference center.

Garnier's works are not centrally located; thus they draw attention to Lyon's outer districts and support a strategy of concentric development to reclaim and revalue some of the city's underutilized resources. The city has pursued a program of cultivating its periphery – reincorporating former industrial sites and strengthening the identity of outlying neighborhoods – through investment in civic and cultural facilities, and extension of the subway network.

Gerland, the city's former slaughterhouse and meatpacking district, has become the centerpiece of Lyon's expanding research and technology base. The École Normale Supérieure (ENS) Science, a prestigious national university, was relocated to Lyon in 1987 along a newly designated 'scientific boulevard' that quickly became home to numerous research laboratories and related business enterprises. The university presence was greatly expanded by the French government's decision in



5. Lyon: *Gerland district campus master plan*

the late 1980's to relocate ENS Humanities from Paris to Lyon, for which a new 20-acre campus was built in the southern end of Gerland. The campus buildings are emphatically modern and individually quite interesting. The complex as a whole makes a strong statement of public interest in a previously neglected zone of the city, effectively reintegrating a post-industrial hinterland.

The Gerland quarter is linked to central Lyon by an expanded metro system, with stations that have become focal points of related housing and commercial development. This same strategy has been used in other outlying districts. For example, Vennissieux, at the southeastern edge of the city, has been reconnected with the center by the metro extension. New stations such as Parilly (Jourda and Perraudin) and a striking branch library (Perrault) reinforce the identity of this formerly underserved neighborhood.

The city's latest reclamation enterprise is its most ambitious to date: the Perrache-Confluence project, begun in the late 1990's. Redevelopment plans entail major realignments of both vehicular and rail interchanges, to eliminate the web of roadways and railroad tracks that isolate this district from the adjacent city center. The master plan for this 370 acre site outlines a well-integrated program of service and commercial activities, residential development, and significant open space for recreational and marina use. The city has actively sought public input and promoted discourse on the project, through exhibitions, publications and conferences, "the aim... being to

ensure that the project remains throughout an exemplary exercise in transparency and consultation.⁷⁰ The commission to design its signature building, a museum and cultural center at the southern tip of the site, was awarded through an international competition. Coop Himmelblau's winning entry signals Lyon's unflagging commitment to modern design.

Perrache-Confluence is expected to take 25-30 years to complete, and will become a fully integrated extension of the central city fabric. The scale and breadth of the vision is emblematic of Lyon's overall approach: a process of renewal and regeneration, based on the principles of interweaving and re-connection. By reinstating the civic and pedestrian realm of the historic center and supporting the development of concentrated neighborhood identities, Lyon has established a pattern for long-term urban growth that is both sustainable and urbane, assuring its continued prominence in the region.

CONCLUSIONS

Many other cities in France, and elsewhere, have implemented noteworthy sustainable urban planning in recent years. Dunkerque has established "one of the country's best examples of co-operation between industry and local communities..."⁷¹ through careful planning for port-related growth that respects environmental and urban quality. Rennes has adopted a far-reaching sustainable development plan that identifies "four 'indissociable elements': the urban quality of the city and surrounding region; social cohesion; a rational economy, and co-operation between those involved."⁷²

The three cities presented here are instructive in that they describe a continuum of post-industrial urban challenges, and thus serve as a model for other cities' response to this spectrum of issues. Lille, struggling after the loss of its industrial base, concentrated first on re-establishing the economic viability of its urban center. Montpellier, faced with exponential growth, began with transit infrastructure to define patterns of controlled development that could counteract sprawl. Lyon, already an established regional hub, focused on enhancing the public realm in its historic center and re-integrating disused sites into an extended urban fabric. The sequence of interventions in each city was dictated, at least in part, by the nature and

urgency of the challenges they faced. Their evolution is ongoing: Euralille Phase II will address some of the urban quality issues that were absent in Phase I; recent projects in Montpellier have enriched the mix of use and urban context in several of its earlier developments; Lyon continues to cultivate and extend its urban fabric, actively engaging public discourse on its future initiatives.

While the planning process and mechanisms employed are particular to each locale, all three cities' endeavors are grounded in shared urban values and their corollary sustainable design principles: a commitment to compact growth, energy efficiency through transport infrastructure, conservation of built heritage and historic resources, increased quality and amenity in the urban center, and "the reclamation of urban identity and culture through redevelopment of the existing city."⁷³ Recent works in Lille, Montpellier and Lyon demonstrate the principle that vital city centers are a fundamental component of sustainable urban growth. Collectively, they illustrate a variety of regenerative strategies that advance sustainability by addressing these issues at the urban and regional scale.

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