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Developing Skyscraper Districts: La Défense



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As an architecture graduate from Venice University, Maria has worked in project management for large architecture and town planning agencies. Throughout her studies and her career, she has been able to deepen her knowledge of town planning, construction and architecture.

Following a Master's Degree in Urban Project Management at the Créteil Town Planning Institute, she began working on urban planning projects and coordinating new real estate projects in the renewal plan of La Défense. In her current role, she coordinates all urban studies in the La Défense area along with the creation of new public spaces surrounding construction projects. Her aim is to blend the urban development of the business district with the surrounding towns.

Her work takes place prior to project design and as such, aims to define a framework of specifications that gives a meaning, a good use, and an urban experience to public spaces in the business district. Her experience as an architect and her choice to concentrate on town planning have allowed her to better understand the intentions of the architects involved; to decipher their language; and to foresee difficulties without judging the architecture.

“The development of La Défense is based on infrastructural principles which are considered to have contributed significantly to shaping its singularity and its remarkable image.”

Given their historic context, European city centers are often not considered to be suitable locations for the development of modern tall buildings. Therefore, a number of cities chose to develop a purpose-built business district away from the city center, and often close to nodes of infrastructure. La Défense, located in the west of the Paris Metropolitan Region, is the largest of these business districts in Europe. Initiated in 1958, La Défense has witnessed over fifty years of development. This paper discusses the origins of the development; the forces which have influenced it; how development has been managed; and what the vision is for future development.

La Défense

La Défense is one of Europe's leading international business districts, and as such a showroom of the French economy. It is situated to the west of the Boulevard Périphérique, which is a major ring road which also marks the boundary of what is considered the city center of Paris and its suburbs (see Figure 1). Politically, La Défense is not part of the city of Paris, but it is straddling the communes of Puteaux, Courbevoie and Nanterre. Today, the district covers 160 hectares (400 acres), of which, 40 hectares (100 acres) is covered with a concrete pedestrian slab (see Figure 2). It has 2,600 hotel rooms, 3.35 million square meters (36 million square feet) of office space and 10,120 housing units, of which 36% are low-cost

housing. 180,000 people are employed in the area, and 20,000 people live in it. La Défense houses 2,500 companies, including 14 of the top 20 French companies and 15 of the top 50 global companies. La Défense is also home to 19 of the 25 tallest buildings in France.

Location

Due to a post-war economic boom and continued internationalization, there was a growing need to create an area within the Paris region which would allow for large scale urban development without being a contrast to the much cherished historical cityscape of the city. A location was found in the western outskirts of Paris. Not only do three municipalities meet here, but also a number



Figure 1. La Défense aerial view in 2009 © EPADESA/Mac Lean



Figure 2. La Défense raised pedestrian level © Jan Klerks



Figure 3. La Défense as the culmination of the Axe Historique © EPADESA

of infrastructural connections. But this is not the only reason why this site was chosen. The area was already dynamic and well-established before the development of the business district. Characterized by factories, shanties, and even a few farms; the government decided that this area was in need of restructuring and that the development of a large business district was a good opportunity.

Also, this location allowed for continuing the great Parisian tradition of grand urban gestures. La Défense is the culmination of the Axe Historique, a 10-kilometer (6.2-mile) long historical axis which starts at the Louvre in Central Paris and includes the Champs-Élysées, the Arc de Triomphe and the crossing of the Seine River (see Figure 3). The site was named for the statue La Défense De Paris by the sculptor Louis-Ernest Barrias which was situated on a hill between Puteaux and Courbevois. The statue, which was originally erected in 1883, has now been moved to the west of La Défense Plaza.

Organizational Structure

Because several municipalities were involved in the planned area and in order to establish a powerful framework for the development of La Défense, the French government created Opération d'Intérêt National (OIN or Operation of National Interest). Generally, these are public development authorities in which several public and municipal organizations cooperate to pool finances, know-how and

other resources. As such they are the public face of development and the business partner on behalf of the governments involved.

OIN's are initiated when the importance of a development exceeds the scope of local authorities, and when massive public and private capital investments, and dedicated know-how and experience are required for successful development. Typically these organizations are created when the development, stimulation, restructuring and repairing of a territory involves an area that is de-industrialized; fragmented by obsolete rail and motorways; and is suffering economically and socially.

In 1958, the Etablissement Public d'Aménagement de La Défense (EPAD) was created as an OIN to take on the responsibility for the progress of the business district. As such, EPAD was responsible for the acquisition of land; the development and construction of infrastructure and public amenities; delivery of land ready for building; and to promote La Défense as an international business district. To generate revenue it was entitled to sell the land. To be able to acquire the land, existing inhabitants and companies had to be expropriated. An important argument for mandatory relocation was found in the unhealthy living and working environment of the area.

Initially, EPAD was in charge of the development of La Défense including a part of the city of Nanterre. But as Nanterre decided that it wanted to manage its own territory, EPASA (Etablissement Public

d'Aménagement Seine Arche) was created in 2000. EPAD and EPASA had the same responsibilities, but operated on two different territories. In 2010, EPAD and EPASA merged into EPADESA (L'Établissement Public d'aménagement de la Défense Seine Arche). More than just the La Défense area, EPADESA covers an area of 564 hectares (1,394 acres) spread out over four cities: Courbevoie, Nanterre, Puteaux and La Garenne Colombes. Currently, EPADESA is managed by a 16-member board of directors, comprising six central government representatives, one eminent figure appointed by the prime minister and nine representatives of the local authorities affected by the development. Although technically not a part of the city, Paris has one representative on the board as well. EPADESA is headed by a managing director appointed by the Ministry of the Environment, Energy, Sustainable Development and the Sea (see Figure 4).

Urban Vision

When you know you're going to build a business district with international ambitions, you know you're going to need a long term vision in order to do that and that you need to think big. The time to do so was right. The late 1950s was a time of Modernism, which represents an architectural era that offered large, rational strategies to cope with large ambitions. It was perhaps fitting that an initial idea of development was to build skyscrapers connected by skybridges. This idea was based on a plan presented by the Ministry for ➤

... digital age

“If the Chrysler Building symbolizes the machine age, this skyscraper exemplifies the digital age.”

Blair Kamin, architecture critic for the Chicago Tribune, regarding Frank Gehry's Eight Spruce Street.
From "Gehry's Pleasantly Quirky Tower," Chicago Tribune, August 26, 2011

Construction to support Paris' application for the Universal Exhibition in 1958. This plan attracted the attention of government agencies which were looking to promote a business district outside Paris and to make it a showcase of modern France.

When EPAD was created in 1958 it was expected to develop La Défense within 30 years. Two years earlier, construction had already started on the Centre National des Industries et des Techniques (CNIT or Center for New Industries and Techniques). This exhibition hall was built on the private property of an industrial group, the Fédération des Industries Mécaniques, which had commissioned architects Robert Camelot, Jean de Mailly and Bernard Zehrfuss to design it. Located next to La Défense roundabout, and in the heart of La Défense, the building is notable for being the largest unsupported concrete span enclosed space in the world. Its triangular structure is supported on three points that are 218 meters (715 feet) apart (see Figure 5).

Development

The first zoning plan of 1958 envisioned the development of building blocks either parallel or perpendicular to the historical axis. The core projects of this plan were the CNIT, a number of low-cost housing units, and an office building for oil company ESSO, which in 1956 had set up its Paris-based head office on

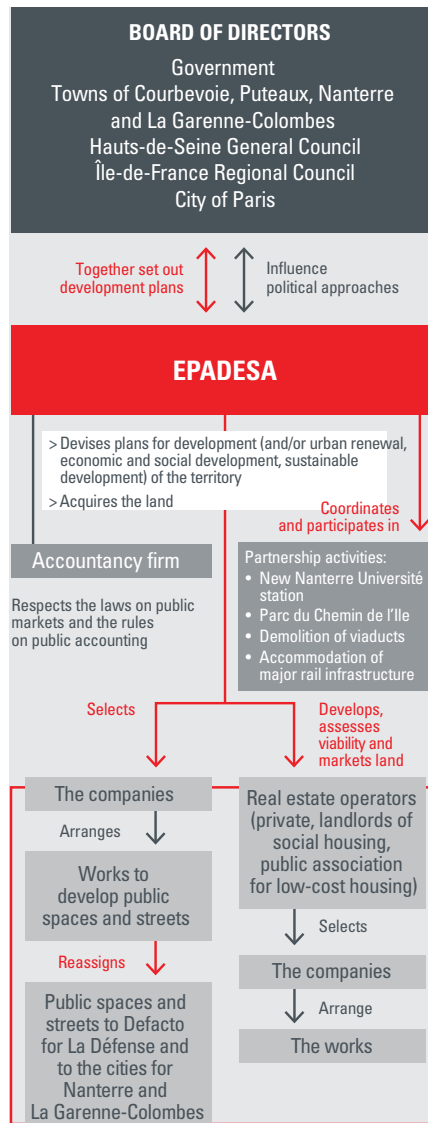


Figure 4. EPADESA organizational structure

the edges of Avenue du Général De Gaulle near La Défense roundabout.

The zoning plan of 1959 introduced some key infrastructure elements into the proposed development such as a ring road (Boulevard Circulaire de La Défense) and a motorway that would run through the business district as an extension of the historical axis. Local roads were removed and the pedestrian area opposite from the CNIT was extended above the interchange of the La Défense roundabout.

The zoning plan of 1960 covered the motorway with a 1,000-meter (3,281-foot)

long concrete slab used as a pedestrian area in between the CNIT and the River Seine. A network of underground roads was sketched separating slow from fast traffic. The urban plan included 100-meter (328-foot) tall twin towers with a floor plan of 24 x 42 meters (69 x 138 feet). Also housing blocks in the Palais Royal style were introduced, which is a setting of building blocks arranged around a square or rectangular courtyard garden and limited to ten stories tall. The total program of development was set at 850,000 square meters (9.15 million square feet).

In 1964, the block plan developed by the EPAD confirmed the volume of the twin towers and so-called Palais Royal housing blocks. During this time the ring road took final shape. What was to be developed on the pedestrianized slabs was yet unclear.

Generations of Tall Buildings

Between 1964 and 1969, the first wave of tall buildings started to emerge in La Défense, with office towers such as Tour Nobel (current Tour Initiale, 105 meters/344 feet, 1966), Tour Aquitaine (106 meters/348 feet, 1967) and the residential projects Boieldieu (1965), La Défense (1966) and Lorraine (1969). These towers are the first generation of towers to appear in La Défense (see Figure 6).

In 1970 the regional urban rail network RER started to operate a metro link in between La Défense and Place de l'Étoile situated at the end of the Avenue des Champs-Élysées in Paris. Around that time, EPAD was authorized to double its office space to 1.55 million square meters (16.7 million square feet) of offices. This was done in order to keep up with growing demand for office space from large companies, often multi-nationals. Towers were going to be substantially larger and taller.

The construction of what is now being referred to as the second-generation of tall buildings began with Tour GAN (also known as Tour CB21, 180 meters/591 feet) in 1972. The height was a substantial increase compared to the 100-meter (328-foot) height limit set only 10 years previously. In the same year, the Tête Défense project was launched with a program for 100,000 square meters

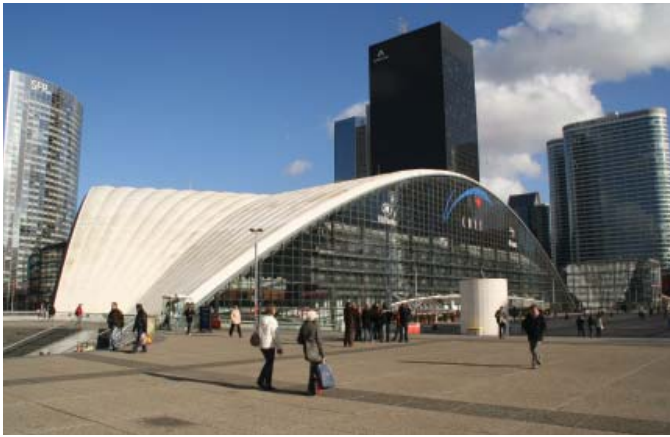


Figure 5. Centre National des Industries et des Techniques, La Défense © Jan Klerks



Figure 6. First generation towers in La Défense © EPADESA

(1.076 million square feet) of office space. At a spot near CNIT where Bernard Zehrffuss had envisioned towers in 1969, plans called for a 100,000-square meter (1.08 million-square foot) shopping center and a 1,000-room hotel.

The period between 1973 and 1975 was a time of economic stagnation in much of the Western world, which put an end to the general post-World War II economic boom. It took until 1979 for construction to pick up again with a new generation of towers, the third one in the development of La Défense. The 1973 oil crisis, which was one of the causes for the stagnation, also forced buildings to be more energy savvy. These towers, characterized by naturally-lit spaces, are more economical in terms of energy and were better adapted in terms of new technologies such as thermal and acoustic insulation and IT management. Architecturally, tall buildings started to look less boxy.

In 1982, EPAD organized an international design competition which was part of President François Mitterrand's Grands Travaux (Grand Projects) program to continue the view of the axis from Paris. Out of the 424 projects that were submitted, the President himself, seduced by its purity and strength, chose the 110-meter (361-foot) tall Grande Arche, designed by an unknown Danish architect, Johan Otto Von Spreckelsen. After years of technical research, the Grande Arche was inaugurated in July 1989 and instantly became one of the major icons of 20th century Paris (see Figure 7).

After the recession of the early 1990s, 400,000 square meters (4.31 million square feet) of office space was built in La Défense, mostly by renovating old towers and bringing them up to date under current quality standards. Examples of refurbished 4th generation towers are: Tour Europlaza (123 meters/402 feet, 1972); Tour Initiale (former Tour Nobel, 105 meters/344 feet, 1966); Opus12 (106 meters/348 feet, 1973); and Tour Logica (former Tour CB16, 110 meters/361 feet, 1971). But also new and more sculpted projects were built including: Cœur Défense (162 meter/532 feet, 2001); Tour EDF (former Tour PB6, 148 meter/486 feet, 2011); Tour Dexia (143 meters/469 feet, 2005); and Défense Plaza (50 meters/164 feet, 2004).

New Ambitions

Influenced by continuing internationalization and the evolution of the idea on how to create and shape urban spaces, views on how the district ought to be developed started to change in the early 1990s. This was formalized in 1994 through the objectives of the Schéma Directeur de la Région Île-de-France (SDRIF) which was the land planning document for the Paris metropolitan area. This document dictated that La Défense had to reconcile its status as a major economic European hub. It also stated that it had to adapt to contemporary urban perceptions and to new usages in order to improve competitiveness. These visions eventually lead to the ↗

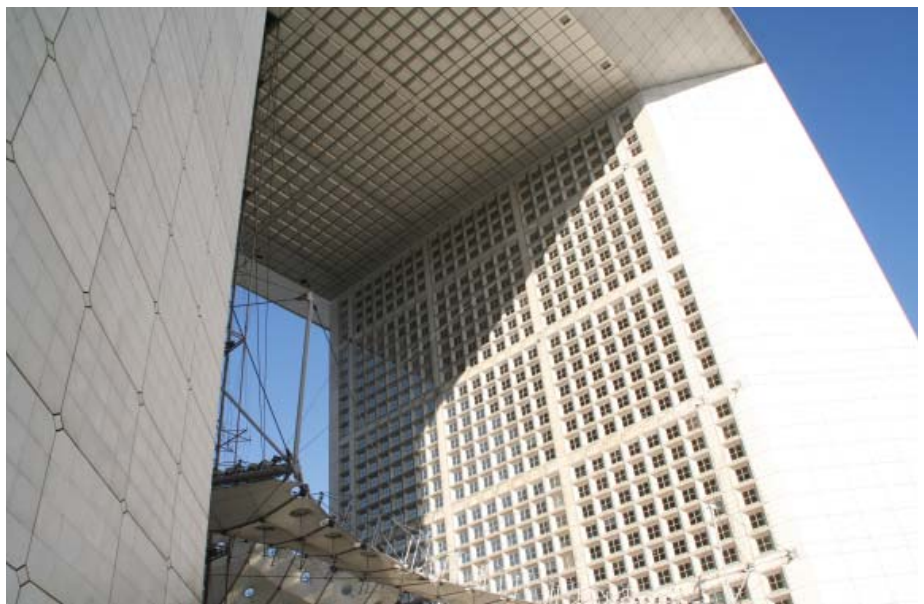


Figure 7. Arche de La Défense © Jan Klerks



Figure 8. Tour First, La Défense © KPF

- development of public transport;
- creation of a public management organization (DEFACTO); and
- promotion of a new image, with the obligation of becoming an exemplary district in terms of sustainable development.

Latest Developments

The current development of La Défense shows that the area has grown up and is now maturing in its development. The future of La Défense is based on redevelopment within the existing territory. A good example of where much of the new sustainable and redevelopment strategies are focused is the recent completion of the Tour First project which involved the refurbishment and heightening of the former Tour Axa (see Figure 8).

Instead of just focusing on the functions which are based in La Défense, more attention is being given towards the space in between those buildings. Also, the way in which La Défense as an area can be better integrated into its surroundings is a topic of research. Examples of this development are studies conducted by private architects and urbanists. The firm, Atelier Castro Denissof Casi, from Paris is focusing on use, functioning

and “landscaping” of the south ring road and the surrounding public spaces. This team is currently managing a project which reconfigures the south ring road in order to integrate it into the neighboring urban fabric.

Djamel Klouche, partner of the Paris-based architecture and urbanism firm l’AUC, is researching the northern section of the district, towards Courbevoie. This team tries to restore legibility and consistency between the historical axis that crosses La Défense and the town center of Courbevoie. The main goal is to define new routes, enabling La Défense to be a singular district, but also one that is integrated into the town. Following the merger of EPAD and EPASA into EPADESA in 2010, the office of Dusapin-Leclerq is carrying out work on the greater territory encompassing La Défense and Seine Arche, the base for a new project from the Seine to the Seine, taking into account the evidence of the impact of these new urban orientations on neighboring territories (see Figure 9).

Learning from La Défense

The development of La Défense is based on infrastructural principles which are considered to have contributed significantly to shaping its singularity and its remarkable image. These principles are:

presentation of the La Défense Renewal Plan. Nicolas Sarkozy, at the time Minister of State, Home Affairs and Land Planning and Dominique Perben, Minister of Transport, Equipment, Tourism and the Sea, presented this plan in July 2006. Focus points included:

- the redevelopment of outdated towers;
- new ambitious and innovative projects;
- a refined balance between offices, residences and other functions; and
- new transport connections to other parts of the Paris metropolitan region.

Approved in December 2006, an urban development strategy was laid out according to three timescales: long-term, short-term and immediately. This master plan called for:

- the development of 450,000 square meters (4.84 million square feet) of new offices, of which 150,000 square meters (1.61 million square feet) to be realized through reconstruction of existing buildings, 100,000 square meters (1.61 million square feet) to be completed for the Ministry of Equipment;
- the development of 100,000 square meters (1.61 million square feet) of housing units;
- requalification of the ring road;



Figure 9. EPADESA operation boundary as per 2010 © EPADESA

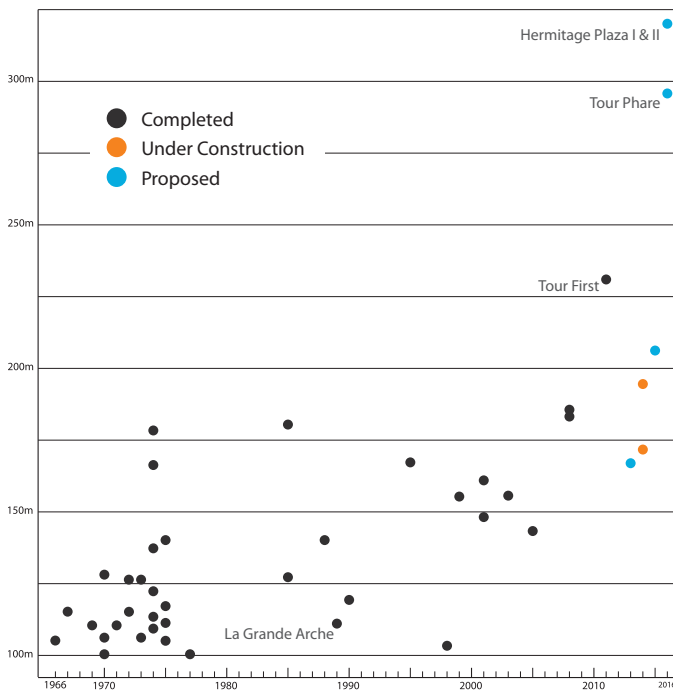


Figure 10. Scatterplot of tall buildings over 100 meters tall – completed, proposed, and under construction – in La Défense 1966–2016 © CTBUH



Figure 11. Projected La Défense skyline in 2016 © EPADESA/JM Charles/Pixium

- a functional separation of flows through the La Défense slab, built approximately 12 meters (39 feet) above the natural land level which accommodates a vast, exclusively pedestrianized area that covers all vehicle routes, public transport networks and car parks, delivery zones and technical zones;
- the development of a powerful public transport hub that combines all existing forms of urban transport, such as RER regional railway, tramway and bus; and
- the creation of a ring road that fulfils a dual function, as a transit axis between Paris and the West of the Île-de-France region, and as a main road serving the business district. This ring road surrounds the whole area and marks the boundary between the business district and the fabric of neighboring communities.

Organizational structure

The creation of the legal structure of the EPAD was a major innovation enabling the development organization to be controlled by the government but which also has

commercial and industrial autonomy. Combining the role of both private and public entities, it allows for greater efficiencies and effectiveness. Next to a development authority, a separate public authority called DEFACTO was created in 2009 to take charge of the management, promotion, and attractiveness of the public space.

Adaptability

The distinctiveness of the La Défense business district as a planned urban operation is the ability to adapt projects, programs, plans and even visions to the economic climate, architectural trends and social developments. The span of development of an area the size and ambition of La Défense is a very long term one, and arguably a continuous one. The flexibility and progression of the development have always been integral parts of the development project's objectives.

The development of the maximum heights set for La Défense is a good reflection of the changing context in which buildings were shaped. The plan of 1964 stipulated that the maximum height of the office towers should be set to 100 meters (328 feet). Very early on,

this height did not reflect the demands of the market. In the late 1960s, the plan was revised authorizing heights of 200 meters (656 feet). Following the renewal plan of La Défense initiated in 2006 by Nicolas Sarkozy, we now see towers of 300 meters (984 feet) tall being proposed, such as Tour Phare and Tour Hermitage (see Figures 10 and 11).

Future Outlook

Adding value to the business district and renewing its image in the world, the current objectives are to consolidate its economic and urban attractiveness on an international level; strengthen the geographical integration and its relationship with the Seine; improve accessibility and livability; and strengthen the urban and architectural qualities; notably through the management of public space and the development of sustainable practices. ■