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# The History of the European Skyscraper

Due to the compact and historic nature of its cities, some unpopular designs, and an unfortunate association with public housing, Europe had historically been slow to build skyscrapers. But currently, the continent is outpacing North America in skyscraper construction. Within Europe, relative newcomer skyscraper cities such as Moscow and Istanbul are outpacing their forbears in Frankfurt and Paris.

Written by Nathaniel Hollister, *CTBUH Contributor*

European cities, while certainly not afraid of building tall structures (as demonstrated by centuries of cathedral construction), were historically reticent to accept the skyscraper typology as developed and embraced by their new world colleagues. Prior to 1950, while the United States had already completed well over 200 skyscrapers in excess of 100 meters and a handful of others were complete in Canada, Brazil, and Argentina, Europe had only one (Genoa's 108 meter Torre Piacentini, completed in 1940). While this lack of skyscrapers was certainly exaggerated as the continent recovered from two world wars, six decades later Europe has taken a decidedly different approach to tall building development – completely unique from the North American model. The history of the European skyscraper, while perhaps not as fast-paced as in other regions, has provided the world with a number of unique examples of integrating skyscrapers into historic urban contexts.

Skyscrapers have come to play a vital – and carefully planned – role in many European

cities. Today, Europe is building more tall buildings than North America. While tall building construction is diversifying, there are a select number of key cities that have historically championed European skyscraper development: Moscow, London, Paris, Frankfurt, and Istanbul.

### The Beginning: 1950–1970

It was not until the 1950s that Europe began to experiment with buildings over 100 meters at any significant scale. In 1952, the first of Stalin's "Seven Sisters," Kotelnicheskaya Naberezhnaya at 176 meters high, officially opened its doors. The ambitious project, spurred by Stalin's desire to compete with the skylines of capitalist cities, would see seven buildings over 100 meters open in Moscow – giving Russia a huge jump on its neighbors – and ushering in a new age for the European skyscraper. The tallest of the Seven Sisters, MV Lomonosov State University (originally Moscow State University) at 239 meters was

Europe's tallest building from 1953 until 1997 (see Figure 1). Interestingly, after its initial ambitious skyscraper enterprise, Russia would not build again until the 1980s.

Through the rest of the 1950s, a number of tall buildings over 100 meters were completed in both Eastern and Western Europe. The motivations and architecture of these projects is noticeably different. Those in the East, located primarily in Moscow, but also in Warsaw, Riga, and Bucharest, were built as celebrations of government and culture: administrative facilities, universities, and notably (in Moscow) residences and hotels. All of these Eastern European projects are examples of Socialist Classicism (or Stalinist Architecture). The Warsaw Palace of Culture and Science (1955, 231 meters) (see Figure 2), dubbed "a gift of the Soviet Union to the people of Poland," is a prime example of imported Stalinist Architecture. The project remained the tallest European building outside of Moscow until 1990, and is still the tallest building in Poland and 18<sup>th</sup> tallest in Europe.



Figure 1. MV Lomonosov State University, Moscow. © Antony Wood



Figure 2. Palace of Culture and Science, Warsaw. © Nnb



Figure 3. Torre Velasca, Milan. © Ghirardini Ossola

Alongside the significant construction in Eastern Europe, Western Europe was also beginning to build. In the 1950s, encouraged by a booming economy, Italy completed six buildings over 100 meters, bringing the country into second rank, next to Russia. These projects, including the distinctive Pirelli Building, were primarily Modernist office buildings. Milan's Torre Velasca was a notable exception to the Modernist towers built in Western Europe in the 1950s. While the Torre Velasca (see Figure 3) was reminiscent of the city's Gothic architecture, the building's top third protrudes from the rest of the building in a nod to ancient watchtowers.

The 1960s saw Western Europe continue to build with the United Kingdom, Germany, Belgium, the Netherlands, and Monaco, all completing their first 100-meter skyscrapers. While Europe completed 29 buildings over 100 meters in the 1960s (as opposed to 20 in the 1950s) it is interesting to note that the average height of these buildings was only 111 meters – compared to an average of 142 meters during the 1950s. This significant change reflects the move from a decade of construction dominated by the architectural style of the East – complete with its massive profiles and significant spires – to a decade of rectilinear modern boxes of the West, none of which were over 150 meters tall. By far the



Figure 4. La Défense skyline in 2016, Paris. © EPADESA/JM Charles/Pixium

largest European developer in the 1960s was the United Kingdom, which completed 9 of the 29 skyscrapers in 1960s Europe – more than 30%.

Two very different methods of developing skyscrapers in historic cities emerged in the 1960s: Paris' La Défense experiment and tall building development in the City of London. Paris, like many European cities, was struggling to deal with a desire for significant centralized office space within its dense and historic urban fabric. The La Défense solution was to create a business center on the outskirts of the city. Interestingly, Paris did not have a law restricting height until 1973 – shortly after an outburst of disgust over the effect of the newly-completed Tour de Montparnasse on the Parisian skyline. Interestingly, no office towers had been built inside the city limits prior to Tour de Montparnasse. However, the creation of La Défense created a strong draw for investors and made it the natural location for high-rise construction.

La Défense, which in its 50-year history has undergone a number of development phases, served as one model to deal with high-rises and historic skylines – keeping the new typology a safe distance from the historic center (see Figure 4). Many other European

business districts, including London's Canary Warf, Moscow City, and Vienna's Donau City, have since been developed along similar lines.

In 1960, the City of London, the one-square-mile district within London that is the historic center and financial heart of the city, had already been one of the world's primary business centers for decades. Heavily damaged in World War II, London had no choice but to carefully rebuild – integrating old and new. The 1960s saw London build a number of skyscrapers scattered about the city. One of these, Aviva Tower (or St. Helen's), became the first 100 meter building built within the borders of the historic City of London (see Figure 5). Over the next decade

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the City of London would see a number of other significant skyscrapers integrated within its dense urban fabric. Today, this development, which is presently receiving a new generation of skyscrapers, has become one of the foremost examples of skyscrapers existing alongside historic structures.

#### Acceptance and Expansion: 1970–2000

At the end of 1969, Europe had completed 50 buildings higher than 100 meters over a period of 30 years. A decade later, this number had nearly tripled: 92 skyscrapers were

completed in ten years across 35 cities. These figures demonstrate that by the 1970s the skyscraper was becoming an accepted element of the European city.

This trend of expansion continued in the 1980s and 1990s, though not at the same rate as in the 1970s. The growth occurred in both established skyscraper cities and new markets. France built more than 40 skyscrapers over 100 meters, many in its now well-established La Défense district. London also continued to build, both within the City of London and in its own “skyscraper district,” Canary Warf. Rotterdam, now known as perhaps the quintessential European skyscraper city, saw its first substantial 100-meter buildings take shape in this time period. Istanbul, now one of the most active skyscraper cities in the world, began building tall in the 1990s.

One of the most significant developments during this period was the establishment of Frankfurt as a major center of the European high-rise. Frankfurt adopted a different approach from most other cities. By and large, the European skyscraper had continued to be focused more on functionality and immediate context, and less on achieving impressive heights or establishing iconic status. Additionally, because of the context in which many existed, the European skyscraper tended to be significantly shorter than the North American version. Even at the end of the 20<sup>th</sup> century, only a handful of projects over 50 stories had been built.

Frankfurt became the exception to the rule. Prior to 1970, the city had one building over



Figure 5. Aviva Tower, London nestled in the historic City of London. © flipr\_uno

100 meters. By 1999, there were 22, including the tallest and second-tallest buildings in Europe. The average height of the buildings completed in Frankfurt during this time period was 154 meters, significantly higher than the continent average of 126 meters. Four of Europe’s ten 200-meter tall skyscrapers were in Frankfurt by the end of the century (see Figure 6).

The tallest building in Frankfurt – and Europe – at the end of the 1990s was Commerzbank Tower (see Figure 7). Completed in 1997, the project became Europe’s tallest building at 259 meters (300 meters including its antennae), a title it would hold until the completion of Moscow’s 264-meter Triumph



Figure 6. Frankfurt Skyline. © Thomas Wolf



Figure 7. Commerzbank Tower, Frankfurt. © MG

Palace in 2005. Commerzbank Tower is unique not only in its significant height relative to the European average, but also in form and design. The project was one of the first skyscrapers to be planned with functional sustainability in mind. A rounded equilateral triangle in form, the project includes a number of sky gardens which open into a central atrium, introducing natural light and an enhanced work environment into the building's center. Each office is provided daylight and operable windows, significantly decreasing the overall energy consumption of the building.

#### Into its Own: 2000–Current

The first decade of the 21<sup>st</sup> century again saw Europe develop record numbers of skyscrapers, with 193 buildings over 100 meters completing, dramatically eclipsing the previous record of 92 buildings during the 1970s. Today, it appears that this record will once again be completely surpassed by the current decade, with around 200 buildings set to be complete by the end of 2015 – only halfway through the decade.

The two cities leading the development are Moscow and Istanbul, a newly developing tall building market. Moscow still contains more



Figure 8. Capital City Towers, Moscow. © Capital Group

tall buildings than any other European city. Despite the long cessation of construction through the 1960s and 1970s, Russia's capital will have nearly 70 buildings over 100 meters by the end of 2015.

Though it has a relatively short history of skyscraper-building, Istanbul has now established itself as the new center of tall building activity. By 2015, Istanbul will contain more than 60 buildings over 100 meters, and may very soon surpass Moscow as the European leader.

Recent activity has in no way been limited to these two cities, with Europe's other historical tall building centers of Paris, London, Frankfurt, and Rotterdam continuing to see significant or record-breaking development. Milan, one of the first skyscraper developers in Europe, has rejuvenated after five decades of silence. The eastern European cities of Kiev and Warsaw are also enjoying a period of renewed activity.

Europe is also developing projects at the higher end of the spectrum, completing its first two supertall skyscrapers (projects in excess of 300 meters) in 2010 and 2013: Capital City Moscow Tower and Europe's current tallest, The Shard (see Figures 8 and 9). An additional four supertall projects are set to



Figure 9. The Shard, London. © Terri Meyer Boake

complete by the end of 2015, all located in Moscow.

#### Conclusion

Skyscrapers, for better or worse, have a huge impact upon the cities in which they exist. This includes not only the massive visual impact on a skyline and existing sightlines, but also the lasting effects on a city's infrastructure and urban environment. These impacts should be carefully assessed prior to development in any city, let alone a long established historic urban center such as those found in many European cities. Because of these pre-existing historical conditions and unique restrictions, the European skyscraper has naturally developed in a unique trajectory. The diverse models of development and the examples of successful integration of old and new provide valuable lessons upon which future developments carefully should build. ■