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THE INDUSTRIAL AND COMMERCIAL HARBORS OF STRASBOURG: WASTELAND TERRITORIES IN TRANSITION TOWARDS A SUSTAINABLE CROSS-BORDER METROPOLITAN CORE

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The current location of the commercial and industrial harbour of Strasbourg dates from the late nineteenth century, as the municipality decided to remove it from the inner city and bring it closer to the Rhine. In reality, Strasbourg's port facilities were first situated on the river Ill, in order to avoid the frequent flooding of the Rhine, whose course was not canalized before the nineteenth century. Located between Basel and Karlsruhe, Strasbourg is trying to assert a leading position among the other Rhine harbours and engaged a strong development policy at the beginning of the twentieth century. Today, the future development of these territories is a major challenge for the construction of the cross-border metropolis, due to harbours' central location, as well as for the energy and ecological territorial transition, a central issue within local debates. Presented as the new "metropolitan belt", the Strasbourg-Kehl urban development axis connecting together the French and German historical city-centers, highlights the interface between the city and the harbours areas. The international competition for the urban development of the customs sector in which we have participated as urban designers in 2012 is a very good illustration of these debates. In reality, the harbour sets new challenges related to industrial ecology, energy transition, environmental concerns, innovative mobility as well as contemporary urban condition and lifestyle, that are at the core of our professional practice (Atelier CMYT) and our action-research (AMUP-ENSAS research laboratory). This contribution aims to set, from a historical perspective, the socio-economical issues for the territorial development on both sides of the Rhine. We will refer to the new conceptual tools of the metropolitan scale - exploratory scenarios and Territorial Modelling and Visualizing Platform - that we explore through both our research programs and operational practice.

Keywords

harbour, resilience, industrial development, cross-border metropolis, Rhine

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INTRODUCTION

In the European context, Strasbourg appears to be an exemplary case study due to the central position of its commercial and industrial port(s) within the new cross-border metropolis and its geographical location in the Upper Rhine. The planning history of Strasbourg, considered through the harbor's relation to the city, shows that the port has always played a key role in defining a "sustainable" planning practice. In reality, since the nineteenth century, when the port first moved from the river Ill to the new southern canal, the city had already started to initiate long-term urban development thinking. By recovering and transforming old harbor sites into urban neighborhoods and completely rethinking urban connections to the new port, Strasbourg essentially engaged a "life-cycle" based urban process. Furthermore, ever since the historic establishment of trade routes along the Rhine, the "long-term" urban planning school of thought seems to characterize not only the development of Strasbourg, but also of all the cities within the Upper Rhine valley. This "long term" urban approach contributes to the creation of the polycentric urban network of the valley, structured by a very dense communication system, over both short and long distances. Ports, like railway stations, represent the strategic nodes of this system, sustaining its proper functioning and ensuring lasting durability. In this paper, our hypothesis is that the prospective planning of the city of Strasbourg and the engaged transformations for achieving a cross-border metropolitan dimension are strongly linked to both a "long-term" logic and the idea of "life-cycle". These concepts have always accompanied the city's urban development and planning. Thus, the idea of slowness as seen through a long-term, life-cycle lens, combined with the respect of natural and geographical constraints lead us to think of Strasbourg as a "resilient city". Besides, in terms of energy transition strategies, the new planning tools - the *Plan local urbain intercommunal* (PLUI) in particular - also point out this long durability tradition and attention to the natural elements of the territory.

Regarding the relationship between planning history and planning practice, we stand by the theories of historians such as Reinhart Koselleck, who understood contemporaneity as a sequence of time that fits between the "space of experience" and the "horizon of expectation". Moreover, we embrace the theories of Italian urban planners, such as Bernardo Secchi, for whom wastelands and brownfields are not to be understood as territorial "wounds", nor as "pockets of poverty" (architectural, social, economic, relational, etc.). Instead, these urban situations could be seen through the concept of the "life-cycle" and through the potential of resilience they express. We also relate to Secchi's ideas regarding the importance of future thinking for urban planning, through projects, visions and scenarios. In this sense, we also refer to Future studies theorists, like Lena Börjeson and her colleagues, whose theoretical frameworks accommodate our position in favor of an experimental and imaged prospective, as a necessary step in planning practice.

THE PORT WITHIN THE CITY: A MOVING HARBOUR ALONG THE ILL RIVER

The planning history of Strasbourg shows that although once a structuring element, water thereafter became a protective element in the thirteenth century following the construction of the Faux Remparts basin on the north branch of the river. This basin presented a central median, a piece of land where tower-gates, marking the entrance into the city, were built. In the eighteenth century, as the central median became obsolete, it was first converted into a pedestrian walking area and then completely demolished between 1803 and 1833. Thus, until the nineteenth century the harbour activity was maintained in the southern part of the island ellipse, along the old customs area. In fact, within the first decades of the nineteenth century the use of the riverbanks extended almost to the mouth of the Marne-Rhine Canal.

When Strasbourg became a border-town due to its attachment to France with the Treaty of Westphalia, a heavy fortification system designed by Vauban was consequently built. **(Figure 1: The first harbor on the Ill River)** These fortifications durably marked the city's development especially when it came to those across from Germany.

At the same time, on the other side of the Rhine, the fortress of Kehl was built in order to protect Strasbourg. Once again, water played a major role: the dam designed by the military engineer Vauban as part of the fortification, allowed for flooding in the southern territories (Montagne-Verte, Meinau, Neudorf) in case of siege.

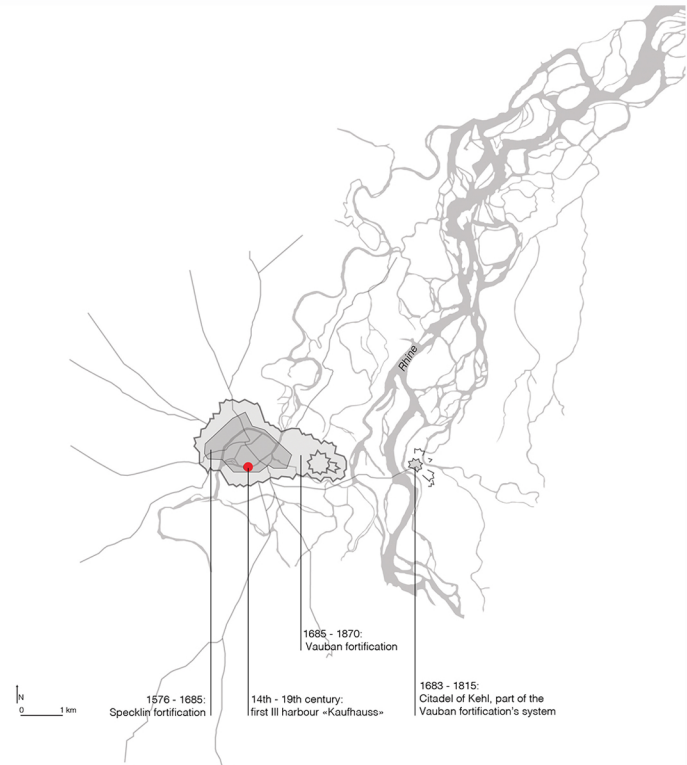


FIGURE 1 The first harbor on the Ill River

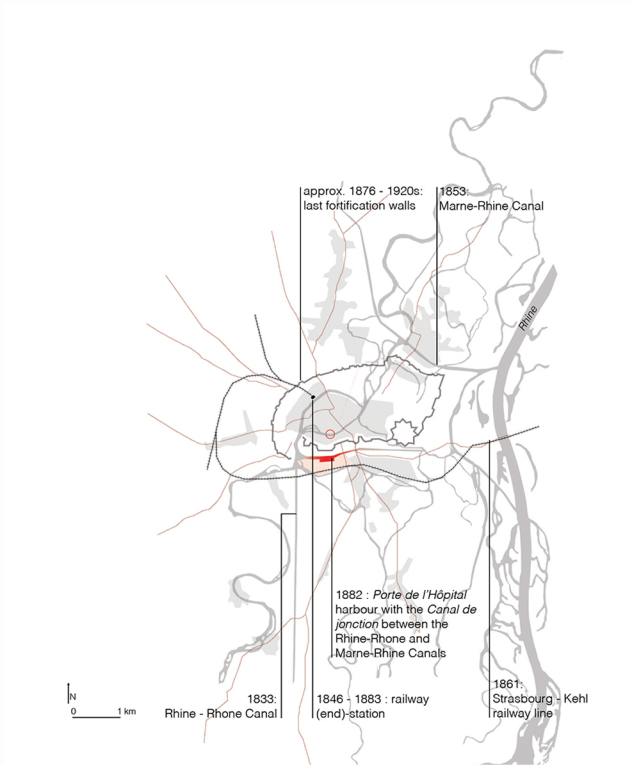


FIGURE 2 The harbor during the 19th century



FIGURE 3 Strasbourg and the canalization project of the Rhine 1830

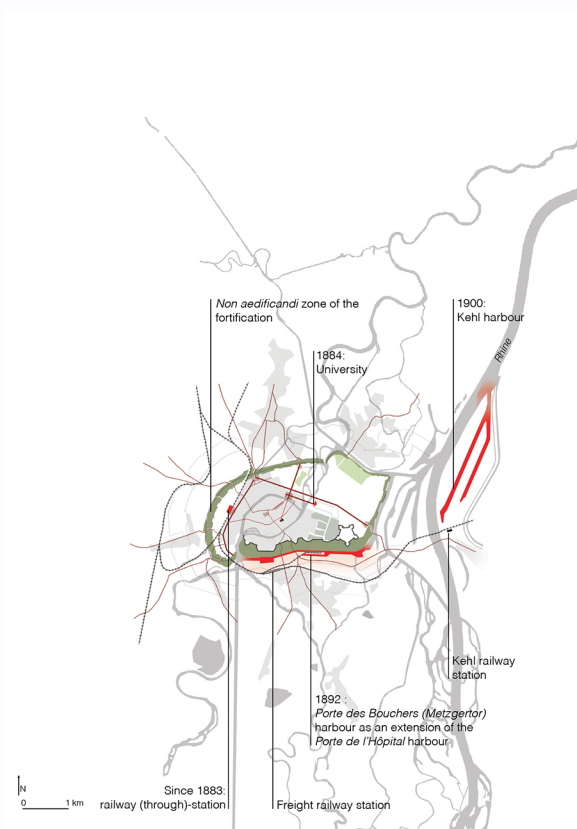


FIGURE 4 The harbor at the beginning of the 20th century



FIGURE 5 Commerce basin activity



FIGURE 6 Oil Port

Initially a protective element, the notion of water transformed once again to become a developmental factor, especially along the newly built canals: Bruche (J. Tarade 1682), Rhone-Rhine (open for navigation in 1833) and Marne-Rhine (open for navigation in 1853). The Bruche, with a length of twenty kilometers starting in Soultz-les-Bains, was redesigned according to the plans of Vauban. He quickly allowed commercial use and transport of materials, hewn stone in particular, used for the construction of the fortification¹. As for the Rhone-Rhine Canal, its Alsatian section was part of a larger project, linking the two rivers (the Rhone and the Rhine) and connecting Marseille to Rotterdam. 324 km long and punctuated by 161 locks, its construction began in 1784 and ended in 1833. Its layout in the south of Strasbourg would fundamentally change the urban development of the suburbs. The straight line of the canal crossing the countryside permanently divided the territories south of the city, which were initially vegetable plots. The suburban neighbourhoods of Elsau and Meinau were thus separated and therefore pursued different urban developments.

Finally, the Marne-Rhine Canal was created, and connected Strasbourg to the rest of the hydrographical network of the nineteenth century. With a length of 314 km, it crosses the Vosges Mountains through the Saverne Pass. This technical achievement was not only an answer to economical issues, but more importantly, it represented a political statement: the inclusion of Alsace, and Strasbourg in particular, to French territories through the river network. This was also an opportunity to restructure certain northern city districts notably the “neighbourhoods of the three suburbs”. The establishment of an intramural railway station was also announced and the structure of main boulevards in the northern insular ellipse, were to be further extended in the nineteenth century in the Neustadt. The train station’s location on the site of Les Halles in 1855 would have a major impact on further port developments, which took a decisive turn. **(Figure 2: The harbor during the 19th century)**

Indeed, in the 1830s, Mayor Schützenberger considered the development of a new intramural port. However, the idea was quickly abandoned, as the military was strongly opposed to it. Besides, sailing conditions seriously deteriorated partly because of the canalizing works undertaken by the Baden engineer Johann Gottfried Tulla². **(Figure 3: Strasbourg and the canalization project of the Rhine 1830)** In 1864, the port of Strasbourg was no longer accessible to the barges coming from the Rhine and freight transport upstream of Mannheim was done via railway.

THE PORT OUTSIDE THE CITY: STRASBOURG'S HARBOUR MIGRATION TOWARDS THE RHINE

After the annexation of Alsace-Lorraine to the German Empire in 1871 and the expansion of its capital city Strasbourg, the ambition to open towards the Rhine was reaffirmed. For the city and the Reichsland, this came from an economical and political necessity: to be integrated into the German market. The new urban extension plan established in 1871, tripled the city surface with a new system of fortifications. In this plan, the port as well as the railway station and the university, became the main urban polarities, symbolising the new economical and cultural role of Strasbourg. **(Figure 4: The harbor at the beginning of the 20th century – before 1910)** It is within this building momentum, attempting to become a new industrial capital that Germans decided to remove the former French railway end-station and the old port on the Ill. Thus, the construction of the new monumental through-station was planned in the west, in order to replace one of the former bastions of Vauban. The university was set to be developed in the northeast extension of the medieval city. As for the port, the long debates regarding competition of the urban extension led to its location in the southern part of the city, on the *Canal de jonction* ³.

The municipality financed the construction of the *Porte des Bouchers* harbour in 1892. This was the starting point of the slow migration of the port and industrial infrastructures towards the Rhine. The groin system of the Commerce and Industry basins opened in 1901. **(Figure 5: Commerce basin activity)** As a response to the increasing traffic and the threat of economical monopoly that Strasbourg represented, in 1900 Baden railways inaugurated the port of Kehl in order to keep control of fluvial transit to southern Germany. During this German urbanization period, a unitary vision of the city emerged called the *Großstadt*. This concept shows how the engineering of the port and rail infrastructures, as well as architectural design and urban planning, articulate together in order to shape a coherent metropolitan landscape, despite the contrasts and fracturing elements it might include and/or generate. Through this unified vision, the emerging metropolis reinvested the old port and rail sectors, offering them the possibility of a new life-cycle. At the same time, new interconnected roadway systems, such as boulevards and avenues, were set up and linked to the old urban fabric through new bridges over the Ill.

After the First World War, as Strasbourg returned to France, its harbour continued to play a major part on the Rhine's chessboard, while the port of Kehl became, between 1920 and 1929, an international organization, working in harmony with Strasbourg. A new special status for the French side of the port established new rights and freedoms: in 1926 the *Port Autonome de Strasbourg* was created. Between 1919-1928 and 1945-1951, the Port of Kehl was repeatedly put under French jurisdiction. Later, a Franco-German board consisting of members from Baden-Württemberg and the *Port Autonome* will gain control of the port. In the 1930s, Strasbourg's port was extended north and south to occupy the entire Rhine façade. To the south, connected to a shunting yard, six docks were planned therefore doubling the size of the port infrastructure⁴. However, their construction never took place due to the Second World War. Nevertheless, activities related to hydrocarbon continued to grow, especially with the oil port's creation in 1927, and extension later in 1963⁵. **(Figure 6: Oil port).**

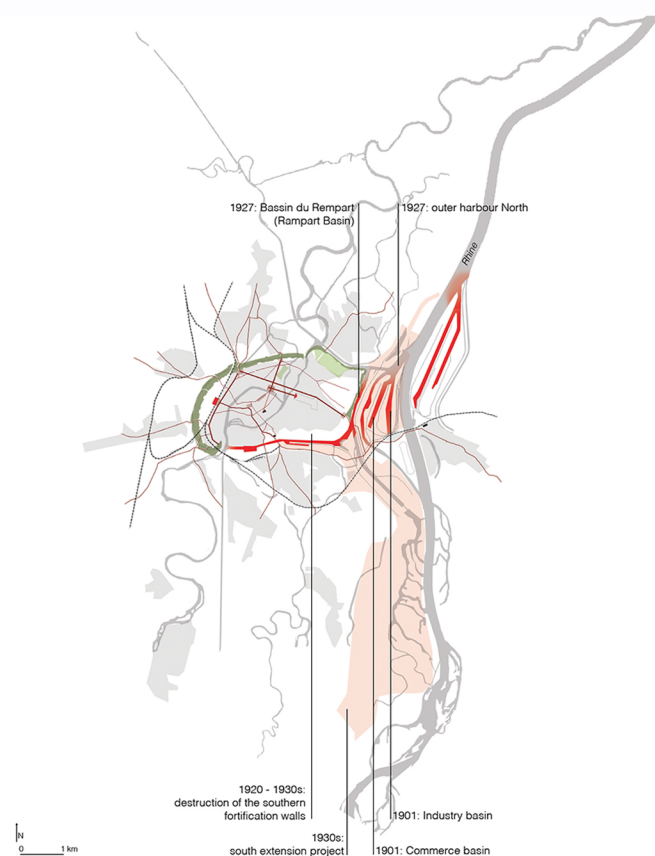


FIGURE 7 Extension towards the Rhine in the 1930s



FIGURE 8 The last extension of the harbor along the Rhine

THE CITY WITHIN THE PORT: THE CROSS-BORDER DUAL-HARBOUR-CORED METROPOLIS

All the aforementioned historical developments help to understand the close relationship between urban development and harbour areas, emphasising the complex nature of recent urban planning challenges and debates.

As previously shown, the relationship between the port and the city, in Strasbourg's singular historical context, has gone through either symbiotic or conflictual periods. Outside of the city walls, before the southern fortifications were demolished in the 1920s, the new harbour area reached a strategic metropolitan location, between the city centre and the southern neighbourhood of Neudorf and was very well connected through an efficient railway, tramway⁶ and logistical system. **(Figure 7: Extension towards the Rhine in the 1930s)** It was also directly connected to the Stock Exchange headquarters (*Place de la Bourse*), strategically located at the crossroads of the North-South transit routes and East-West fluvial trade flows (aspiring to have a major role in national and international trade). Further developed by the French state, port facilities extended progressively to the east, away from the city, creating a North-South development along the Rhine. That is why, within the second half of the 20th century, Strasbourg's urban development was conditioned by this thick double boundary – the national border and the harbour strip - preventing its growth to the east and the urban connection to the river. Thus, during the 1960s and 1970s, the city's development was always envisioned either in a North-South direction (parallel to the Rhine) or, growing at 180° angle, leaning against the Rhine and the harbour. **(Figure 8: The last extension of the harbor along the Rhine)**

However, as the harbour's activity was permanently migrating towards the Rhine, it was already agreed upon dating from the 1960s that the old port sites (west of Pont Churchill) were doomed to urbanization. By the end of the 1980s, the old port and former industrial areas on the *Canal de jonction* were vacated and became a huge abandoned wasteland territory next to the city centre. Together with the "green belt" of Strasbourg⁷ whose *non aedificandi* status was repealed only in 1990, the old harbour areas turned out to be a great urban development opportunity for the city.

In 1992 the city of Strasbourg organised an International Competition of Ideas for the urban development of this East-West axis, covering the old port's land up to the Rhine. The designs envisioned urban continuums expanding throughout the city and connecting them to the river by this urban strip in between Strasbourg's north harbour and south port area, while also creating connections to Kehl's urban fabric. Though not of operational use, the 1992 designs gave rise for the first time to the idea of cross-border urban development, which was to be reinforced in 1993 with the opening of the borders. Although the idea existed long before, it was only by the end of the 2000s that both French and German stakeholders commonly put pen to paper in a joint document (*Ecocités*).

Meanwhile, the first official step in this direction was the engagement of Strasbourg's and Kehl's local authorities in a common project: a cross-border garden park located on both riverbanks of the Rhine (*Jardin des Deux Rives*) in 1996. Completed in 2004, its construction became a symbolic gesture marking a different understanding of the border, a closer partnership between the two countries, a symbol of their European roots, and also the beginning of a closer collaboration between French and German stakeholders.

The *Ecocités* approach, elaborated in 2009, was the first official document expressing the cross-border metropolitan goal and stating common principles for a shared urban strategy. Signed by both Strasbourg's and Kehl's authorities, *Ecocités* structured the cross-border urban development within three specific "threads" or networks: the blue hydrographical one, the green vegetal one, and the "red" one, specifically underlining the rail and light-rail (tramway) public transport infrastructures. **(Figure 9: Ecocités Approach)**

At its core, a cross-border metropolitan "belt" connecting Strasbourg and Kehl's city centers and accommodating new metropolitan facilities and functions would take shape in the old port and the "green belt" areas, resuming the initial ideas of the Strasbourg-Kehl axis, studied in 1992. But, for many observers, this urban cross-border development directly threatened (at least on the French side) the accessibility of the northern and southern port areas, weakening and ultimately leading to a decline in port activities.

These issues became strategic key points regarding the discussions between urban and port authorities and thus led to two co-produced documents: the Development Agreement CUS8/City/Port (2010) and the *Schéma Directeur des Deux Rives*, the *Two Riverbanks Masterplan* (2012).

In the first document, the Port recognized the decommissioning of its central part as an active productive area, but decided to maintain ownership of the land. Future urban development of this territory is therefore further subject to a shared project management between the two authorities. The city also committed to ensuring and reinforcing existing industrial activities, and to maintaining a dual access to harbour areas. Both sides were equally strongly in favour of acting for the betterment of the environment and working together as partners by putting into place joint energy transition strategies⁹.

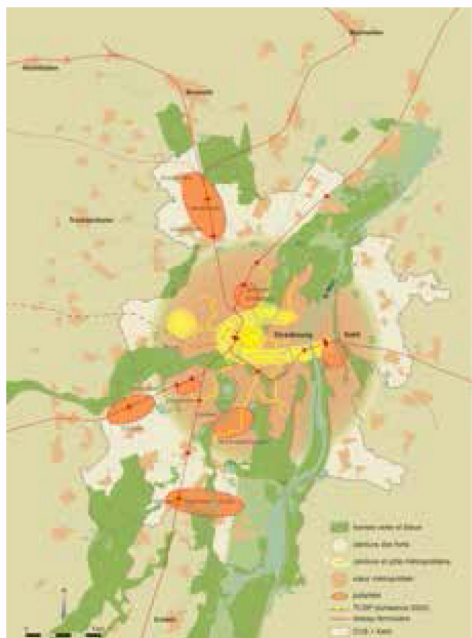


FIGURE 9 Ecocités Approach, Strasbourg, the two-riverbanks metropolis (Strasbourg, métropole des deux rives) : general view



FIGURE 10 Two Riverbanks sector (Schéma Directeur des Deux-rives) - extracts, Reichen et Roberts et associés/CUS-PAS, 2011

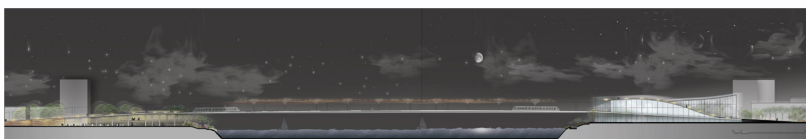


FIGURE 11 Border thickness (L'épaisseur de la frontière), urban design project - international competition "Cours des douanes Kehl et Strasbourg (Custom's Yard Kehl and Strasbourg)", 2012-2013, CMYT et associés/CUS-DAUH-Ville de Kehl, aerial perspective: Matthieu Buisson.



FIGURE 12 The harbor and the cross-border urban projects (under construction)

Accordingly, in 2012, in the *Schéma Directeur des Deux-Rives*, the eastern, cross-border part of the “belt”, called the Two Riverbanks sector (*Deux-Rives*), represents the spatial framework of these commitments. Designed at first to mainly accommodate tertiary and economic activities, the project gained a stronger residential dimension. **(Figure 10: Two Riverbanks sector)** This development strategy relies on a new planned cross-border tramway line, which would complement the existing east-west railway and road networks, and become the main structuring element of urban development, according to a TOD10 approach. This joint development strategy is an interesting and complex example of the three intertwining “threads” (blue, green and “red”). On one hand, the city-port relationship demonstrates both the strategic role of the port as a multimodal platform as well as its priority as an economic site¹¹ for the city. On the other hand, we can see the strategy used in residential areas to reduce heavyweight traffic and pollution sources. From the German border perspective, the city-port interface issues are similar. New residential neighbourhoods, connected to the tramway line coming from Strasbourg represent the city’s extension to the north, beyond the railway station, next to the Kehl harbour. The old French and German customs sectors representing the face-to-face urban development across the Rhine, were the object of an International urban design competition in 2012. **(Figure 11: Border thickness (*L’épaisseur de la frontière*), urban design project - international competition)**

The numerous ideas, sketches and designs that have been developed since the 1990s for Strasbourg, are finally coming together in the new cross-border urban band, which is still under construction. **(Figure 12: The harbor and the cross-border urban projects –under construction)** The ambition to keep the two sides of the Rhine together while remembering the multiple heritages of this strip - military functions, industrial features and heavy transport networks crossing the harbour areas -, finally leads to a unique way of imagining cross-border development. In Strasbourg, this important cross-border metropolitan project responds at first to the desire to build the “city within the city”, as well as to the goal of reconnecting to water through direct contact with basins and the Rhine. Throughout its development, what really emerges is the very idea of building the city within the port, as seen by the Port Authority position itself as a proponent of keeping control of the land.

Today, as discussed within the new PLUI, the future of this dual-harbour-cored metropolis evokes new challenges related to industrial ecology, energy transition, environmental concerns, innovative mobility as well as contemporary urban conditions and lifestyles. A new life-cycle is still at its beginning, based on the heritage of the historical structures and infrastructures of the early twentieth century metropolis.

Thus, as we have emphasized with our work as urban designers (Atelier CMYT) and with our research (AMUP laboratory), the challenge for Strasbourg is to give life to the cross-border metropolis by relying on existing mobility infrastructures, ports and railways, which are all the technical and humanistic heritage of urban planners from the late nineteenth and early twentieth century; Joseph Stübben and Georg Simmel in particular. The future scenarios we develop through our action research and master workshops, envision for Strasbourg 2030, resulting encounters between a “smart” and a “human” city, between high speed and slow mobility, between historical heritage and multiple horizons of expectation. It is through these encounters that Strasbourg may continue to be a resilient and sustainable city.

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