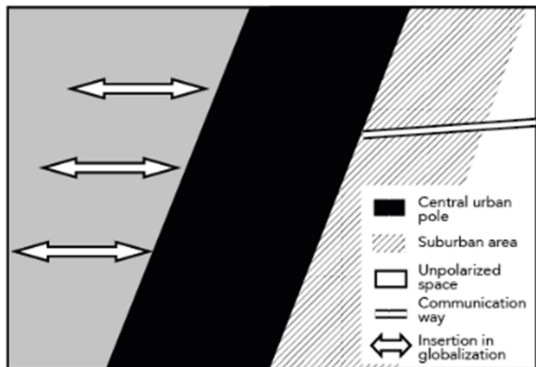


ARCHETYPE 1 Large coastal metropolis



Towns matching this archetype:

- ❑ Metropolises: Aix-Marseille, Nice-Côte-d'Azur, Toulon
- ❑ Greater metropolitan area of Cannes-Grasse-Antibes

DESCRIPTION OF THE ARCHETYPE

Spatial configuration

This archetype concerns heavily-populated coastal urban centres (between 250 000 and 2 million inhabitants). They may be greater metropolitan areas, deriving from the MAPTAM Law (*Modernisation de l'Action Publique Territoriale et d'Affirmation des Métropoles* – A law to modernise local administration and empower metropolises), such as Aix-Marseille-Provence, Nice-Côte-d'Azur, Toulon-Provence-Méditerranée or large conurbations (the metropolitan centre of Grasse/Cannes/Antibes). The archetype comprises very densely-populated areas (permanent or temporary population) that raise many issues. Even though the shoreline is typically rocky with moderate erosion and differing amounts of sediment accumulation, the high population density results in significant vulnerability to natural risks (erosion/inundation/flooding). Land reserves are relatively low, mainly within the highly-coveted coastal hinterland peri-urban centres that are subject to significant urban sprawl.

Territorial economy

These large urban areas are characterised by a diversified economy with activities that are both productive (port industries, services for businesses, high technology jobs, etc.) and *in-place* (tourism, building trade, personal services, retail, recreation, health, etc.). This diversified economy coupled with numerous and accessible employment opportunities as well as a favourable geographic location (south coast) make the areas attractive from residential, economic and tourism viewpoints. This attraction generates substantial financial resources giving significant investment capacity to local public administrative bodies.

Socio-demographic characteristics

Attractive and dynamic, the coastal metropolis is characterised by diverse age groups (young people, families with children, and older people in their main or secondary residence). The economically active population is significant and diversified (senior staff, intermediate occupations, employees, workers). This diversity results, however, in substantial social and spatial inequalities: people with high incomes live in the most sought-after areas (seafront, peri-urban areas with an attractive lifestyle), the middle classes live mainly in the surrounding peri-urban areas with fewer amenities and the less well-off are confined to large social housing developments.

Governance

The *MAPTAM* Law made the metropolis a key component of local public action in France. Elected metropolitan representatives are in a relatively strong position in their dealings with higher levels of power and can therefore obtain investments and subsidies from the State or the European Union. Public policies pursued at the metropolitan level concern two dimensions: solidarity and competitiveness. Inter-area arrangements can be complex given the large areas which may reduce the proximity to ordinary citizens. Depending on circumstances, the metropolitan level can be a fragility factor because in times of crisis it may become difficult to reconcile these two dimensions which are partly contradictory. Moreover, to be successful, effective adaptation measures require strengthened partnerships with large land users such as the managers of commercial ports.

Innovation pathways

These areas have been subject to few extreme natural events apart from some notoriously strong storms or intense rainfall periods (especially those with a Mediterranean climate). However, the anticipated sea-level rise is a growing concern stressing the expected slow but inexorable exposure of property currently protected by classic defensive structures.

Psycho-social characteristics

The relationship that residents have with the place (attachment, identity, dependence) varies significantly due to the great socio-demographic diversity of the area. This is also the case for the extent to which people are concerned about risk. The large socio-spatial inequalities mean that collective actions, which are occasionally significant, are less focused on environmental than on social issues (solidarity, social justice).

ADAPTATION PATHWAYS

Adaptation pathway (slow progression): intelligent and resilient metropolis

Where extreme events have a low recurrence rate, the metropolis' public actors make use of their capacity to become part of the wider international effort (G4), participating actively and increasingly in city networks sharing innovative experiments (T1) and good practices to address climate change (e.g. the C40 network). This participation promotes awareness among elected officials of the importance of adaptation measures. They also become aware that such measures are a powerful tool for economic development and funding (ET1).

These strengthened political and financial capacities offer the possibility for technical innovations towards resilience (T1) leading to large-scale high-tech engineering projects both onshore and at sea (sliding doors in estuaries, off-shore ports, artificial reefs). These are all the more necessary because large coastal metropolises have strategic assets to protect (densely populated, energy networks, hospitals, underground trains etc.). The focus is on adapting existing buildings and undertaking large-scale developments (G7) and may find inspiration in the adaptation measures taken by some large cities worldwide (for instance, New York in the aftermath of hurricane Sandy).

These adaptation measures for buildings promote vertical urban development (T2) in keeping with the emblematic global city (high-rise buildings with vegetated lower floors to meet the inundation risk). They are also designed to promote area marketing which seeks to showcase the city at an international level (smart city).

Their economic importance in a context of global competition enables local authorities to benefit from increasingly good relations with the State or the European Union (G1). Large-scale projects are made possible through public action mechanisms promoting "the right to experiment" (G6) which authorise the metropolis to free itself from environmental regulations concerning the coast (the Coastlines Act) and the sea (Marine Protected Areas).

Having become a reference in the fight against climate change, the coastal metropolis attracts active highly-qualified people (the creative classes model of R. Florida) (ET3) such as top-level researchers who come to work in a technology hub combining research laboratories and start-up companies (G3). Furthermore, some of the long-term residents find their attachment to the place increasing (PS1) as they are proud to live in a dynamic and innovative metropolis (place meaning). Some of them train for the new "adaptation jobs" in training centres that create pilot schemes to support adaptation (G6). Among such jobs, education and risk awareness (evacuation drills...) strengthen the positive involvement of residents.

However, this pathway tends to worsen some socio-spatial inequalities (between gentrified districts or *communes* (SD2, SD1), which are genuine "shop windows" of resilience, and socio-economically deprived areas. Furthermore, some metropolis residents may not feel part of this

new identity, more urban than maritime, more technological than ecological. Conflicts over values and representations may then emerge.

Adaptation pathway (fast progression): urban collapse

Although starting from the same point as scenario 1, the increased frequency of extreme events (EX2) greatly destabilised the existing economic model. Technological innovation is no longer sufficient (TI1) to ensure adequate resilience. Any re-building is quickly overcome by a new event causing economic reconstruction costs to soar.

This vulnerability of the system affects not only the town itself but also its sphere of influence which can be very large (as many metropolitan area services are affected: energy networks/ports/health services etc.). In this context, in order to avoid being dragged into the crisis (ET1), hinterland *communes* withdraw from the greater metropolitan area. The governance system based on the solidarity principle falls apart (G2) and area self-interest takes over.

Regular infrastructure destruction discourages investors and curbs the arrival of creative classes and other high-tech companies (ET3, SD2). The speculative bubble bursts and the property market crashes which further weakens public finances already plagued by the breakdown of the governance system. The system is then bankrupt (ET1), the *smart city* (intelligent and creative city) becomes the *shrinking city* (for instance, Detroit).

Could this collapse be an opportunity for the emergence of an alternative model (“city in decline”) promoting restoration to the natural state?