



CONSULTATION REPORT

“INVENTING THE GREATER PARIS METROPOLITAN AREA”: Information about innovation

Paris, March 1, 2017

The success of the first phase of Inventing the Greater Paris Metropolitan Area is down to the very DNA of this consultation: innovation, in all its forms. The 420 proposals received, for the much greater part, were able to capture this DNA and transform this consultation into a call for demonstrators and highly-innovative proposals. Train station neighborhoods, heritage sites, urban brownfields: the diversity of sites in terms of surface area, complexity and location allows the candidates to deploy the entire range of current know-how regarding resilience and sustainability. The consultation sites are designed to become emblematic places of the future Greater Paris Metropolitan Area, integration vehicles of the new areas and to thus make a new metropolitan identity emerge.

THE ENVIRONMENTAL CHALLENGES FACING THE METROPOLITAN AREA

Following on from the COP21 and the Paris Agreements on the Climate, the environmental issue, more than ever central to the innovations put forward by the candidates, responds to a crucial need of ensuring that the city enters into the climate change era.

Projects aspiring to environmental excellence

For this first phase, many candidates have addressed the climate issue, first, through a bioclimatic approach. In a bioclimatic approach, vegetation is not only aesthetic, but also useful; it is edible, depolluting and insulates against unwanted noise, or even all three at once as is the case for the projects selected for the ZAC Paul Bourget, in the 13th district of Paris. Here, the projects receive a double vegetation skin that insulates the building from noise, filters the air by a bio-filtration process, and allows the premises to be ventilated naturally. Crops grown in greenhouses and urban gardens, placed on the roofs, complete the picture.

The biomimicry approach, which consists of observing and drawing inspiration from nature to produce applications that are environmentally-friendly is also very popular. Some candidates have moreover chosen to focus their project mainly on biomimicry, with the ambition of constructing a place that concentrates carbon sinks, the

cleaning of pollution by mycoremediation (use of fungi to purify the water, land and soil of a particular area), the phytoremediation of wastewater (sewage treatment using algae and fungi), eco-pastures and a 100% renewable-energy mix.

This desire to strengthen environmental excellence and the well-being of users is promoted through the presence of several national and international accreditations, such as the BiodiverCity, HQE, E+C-, BREEAM, BBCA and Well labels, present over half the proposals.

Finally, it should be noted that several candidates address environmental risks (such as floods, the fragility of sub-soils and soil pollution) of certain sites through innovation, as is the case on the sites of Clichy-sous-Bois, Montreuil and Joinville-le-Pont.

Innovative mobility solutions to facilitate metropolitan connections

Innovative mobility is emphasized in this consultation, and projects promoting connected transport, soft transport and smart parking lots abound. On certain sites, candidates are also offering a range of innovative solutions, such as delivery by drone, a service station selling clean fuels, a minibus on request network whose route is calculated by an algorithm or the last kilometer logistics network for shipping under the best possible conditions the flows of goods entering, leaving and moving around the city, in particular over the last kilometer portion before reaching their exact destination.

Innovation in multimodality and in transport is also a central part of expectations for the 21 sites of the consultation in the vicinity of the future stations of the Grand Paris Express. These station neighborhoods, connection points between the various territories of the Metropolitan Area, are unique opportunities for long-lasting transformation. On the Franchissement Pleyel site, the different projects promise, on the basis of co-design, to build the hub of the future, which will combine habitat (modular, scalable, coliving housing), hotels, offices (coworking spaces, incubators), new types of mobility, shared services and urban agriculture, making it a key location of the Metropolitan Area.

TECHNICAL AND ARCHITECTURAL KNOW-HOW HARNESSSED FOR INNOVATIVE PROJECTS

Designing a “Metropolitan Architecture”

Inventing the Greater Paris Metropolitan Area can boast having managed to attract, alongside promising young French agencies, the great names of international architecture, who, for some, have completed few projects in France. Names with great reputations such as Skidmore, Owing & Merrill, Sou Fujimoto, Rogers Stirk Harbour & Partners, Dominique Perrault, OMA, Shigeru Ban, MVRDV have answered the call. The presence of heritage sites such as La Maison du Peuple in Clichy-la-Garenne or

key-sites such as the Franchissement Pleyel in St Denis are the promise of remarkable architectural productions.

The quality of the sites honors the landscaping agencies, present in most groups. There is a strong international contribution, since many participating agencies come from Northern Europe (mainly Germany, the Netherlands and Denmark).

Innovative processes for smart projects

As far as technological innovations and techniques are concerned, there are two distinguishable categories: high-tech innovations and low-tech innovations.

The high-tech innovations are for the most part in connected buildings, equipped with smart-grids or micro-grids, and using home automation and the Building Information Modeling (BIM) which consists of modeling a building's data via the creation and use of a 3D model. Several projects include specific digital platforms, intended to control and improve the energy performance of buildings.

Low-tech innovations are more in the construction field, where there is a lot of use of natural or recycled materials. Wood construction is particularly popular, and present in more than a quarter of the projects. It ranges from the structure in wood, to the entire building, or even to the whole neighborhood. Thus, given the selected projects, the site of Marne-Europe could in the future, become the largest area built entirely of wood from Europe.

Bio-sourced materials, derived from plant or animal biomass, or geo-sourced, local materials, natural, extracted locally, are also present in more than one third of the selected proposals. Several projects also include constructions of raw earth, thus recycling the materials from the excavations of the Grand Paris Express.

Finally, green construction sites, the dry sector and the reuse sector account for nearly 40% of cases. Some projects focus mainly on reuse, by recycling materials from deconstruction of the site, but also its material and plant resources found in each plot.

Rethinking logistics

The projects are also putting forward notable logistical innovations. Thus, the proposals selected for the logistics center of Bercy Charenton promise to bring logistics into the 21st century, while reconciling modernity with aesthetic concerns. Multimodality is emphasized, with highly developed tram-freight, integrated fully into the Ile de France network, while giving value to logistical waste via upcycling (creative recycling). Finally, a long way from the traditional logistics center, the projects also include a park and urban agriculture, making these spaces places of relaxation and strolls.

THE NEW FABRIC OF THE URBAN PROJECT

The proposals are however not simply technical innovation showcases, deployed on and around buildings. The approach taken to building the projects has been one requiring a lot of new thinking and innovation for the candidates. It requires placing the end user as early as possible into the planning stages and fully integrating them into the various project development phases.

Including local residents from the planning stage

Candidates have given thought to how they can associate local residents with the planning stage in order to reduce any gap between the design and use of the urban spaces. Several mechanisms, such as co-design, co-construction and consultation 2.0 cover this aspect. A recent but exponential innovation, participatory habitat -which allows individuals to design and carry out together a small-scale real estate operation- is present in 10% of the proposals. These innovations in the processes are dependent on specialized operators or on the local associative fabric (A third of proposals are developed with local associations). Some candidates incorporate a place dedicated specifically to local residents' participation within the project itself.

Facilitating the re-ownership of a place via an activation phase

Once the project has been drawn up, this entails making the "future" project into an area that is already integrated into the neighborhood. Re-ownership of the site undergoing transformation then includes an "activation" stage of the place, incorporating the inhabitants into socio-cultural activities or short-lived events. This phasing takes account of the new temporality of urban projects: they are designed to be long-term whereas the profiles of the local people and habits are changing fast.

Building life cycle and residential pathways, the watch words of architectural design

The consultation has seen projects emerge which consider the life cycle – and no longer simply space, as an essential part of the planning information. The question of residential pathways is taken into account in the very design of the housing unit, which becomes scalable in more than half of the proposals. The reversibility and flexibility of the housing units reflect the themes of recycling and reuse, applied here to the life cycle of buildings. One proposal tackles this question of residential time scales from two different angles: firstly, that of the life cycle of the user, for whom the housing adapts during their lifetime; secondly, that of differentiated residential needs, over the short, medium and long terms.

The relevance of urban projects for the 57 sites of the call for proposals therefore includes account being taken of users at all times: they are present during the design, activation and evolution of the project.

LIFE IN THE GREATER PARIS METROPOLITAN AREA

Pooling has a central place in new practices

Since the advent of the self-service bicycle in the capital, the use economy has grown exponentially, reflecting a profound change in practices. More than two thirds of the candidate companies have therefore proposed pooling a large number of urban services: car sharing (14%), shared parking lots (15%), shared gardens (16%), etc.

By offering new shared places and services within the city, these projects are the keys to economic dynamism, when more than 90,000 startups make up the global market of collaborative consumption, with turnover of 20 billion euros. They provide functional responses to major metropolitan issues, both urban (density and saturation of transport networks, the search for social and functional diversity) and social (new forms of work, consumption, mobility)

Transformations in the ways of working, characterized by flexibility, the hybridization of economic activities and the upsurge in tele-workers is embodied in the creation of shared working spaces (co-working) and artisanal creation (fablabs, makerspaces). These "Third-places", shared spaces for meeting, working and creation are really a strong upward tendency: they are present in two thirds of the proposals and become new "central city spaces" around which urban projects are organized. They allow the metropolitan map of employment to be redesigned, refocusing the places of creation of value beyond the Paris beltway.

Diversity of uses and reversibility of spaces: toward flexible urbanization

The existence of Third Places, hybrid in nature is the mark of a deep concern about the diversity of uses. The equation, "one place, one use" no longer works in these neighborhoods where economic, residential, and socio-cultural functions exist alongside each other. To this functional mix, a concern for modularity is added. The idea according to which spaces can host different activities over time and must be designed as reversible is present in more than half of the proposals. This modularity means that a neighborhood is never restricted to a single urban function and the transformations that will be experienced by the metropolitan area can be supported, unlike "monolithic" neighborhoods of office blocks and dormitory suburbs.

The return of nature to the city

These new neighborhoods, more alive and livable are also greener: urban agriculture is the real winner of the call for proposals, present in 60% of the projects. It is not only a question of greening urban spaces, but allowing nature to return to the city, in all its forms. It is in turn, a vehicle for encouraging well-being, social connections and integration through employment and economic dynamism. At the heart of a very

dense urban fabric could thus emerge a green laboratory, experimental urban farming combining spaces of economic activity with green technologies, vegetable and agricultural production and eco-citizenship training.

Smart and connected neighborhoods

By definition, the “smart city” uses new digital technologies for efficiency purposes: they improve the energy performance of buildings, regulate and analyze transport and logistics flows and allow urban data to be collected. The candidates have however drawn up a new definition of the smart city, where digital technology is at the service of local citizens: digital concierge services for 20% of residential projects, e-mobility solutions (10% of cases) or collaborative online platforms (12%) are responses to the accessibility and the efficiency of urban services.

A smart city is also a “learning” city, which provides assistance to its citizens in acquiring knowledge and know-how. The proliferation of labs, places of experimentation open to all is tangible proof of this. The academic and vocational training aspect is present in many sites, in new forms such as the hotel-school for future tourist professionals.

NEW METROPOLITAN ATTRACTIVENESS

This resilient, smart and sustainable Metropolitan Area, deeply innovative is a World Metropolis. With this call for proposals, the largest in Europe, the Greater Paris Metropolitan Area holds its own in international competition. A fantastic vehicle for enhancing its attractiveness and reputation, Inventing the Greater Paris Metropolitan Area is also an opportunity for the economy of the Paris Region: 6.5 billion (i.e. one point of GDP of the Ile de France) will be invested in these large urban projects. A call for proposals of such magnitude is the opportunity to look to the future, to anticipate the uses, services and urban spaces of tomorrow. It requires designing the Metropolitan Area of the 21st century, an area which is in touch with the major urban, social and environmental issues of its time. Finally, it is also the opportunity to activate urban development firms and push them into innovating, surprising and turning these neighborhoods into demonstrators.

This call for proposals offers a complete change of perspective for local development: it is not about increasing exceptional architectural objects but creating urban islands, whole neighborhoods embodying the modernity and the dynamism of the Greater Paris Metropolitan Area. It a reflection of metropolitan construction, bringing together within a single project many sites, experiences, population groups and geographies. The coherency of this diversity is to be found in innovation: whether it is technical innovation, innovation of use, or environmental innovation, the future neighborhoods that will emerge will be in a metropolitan future.