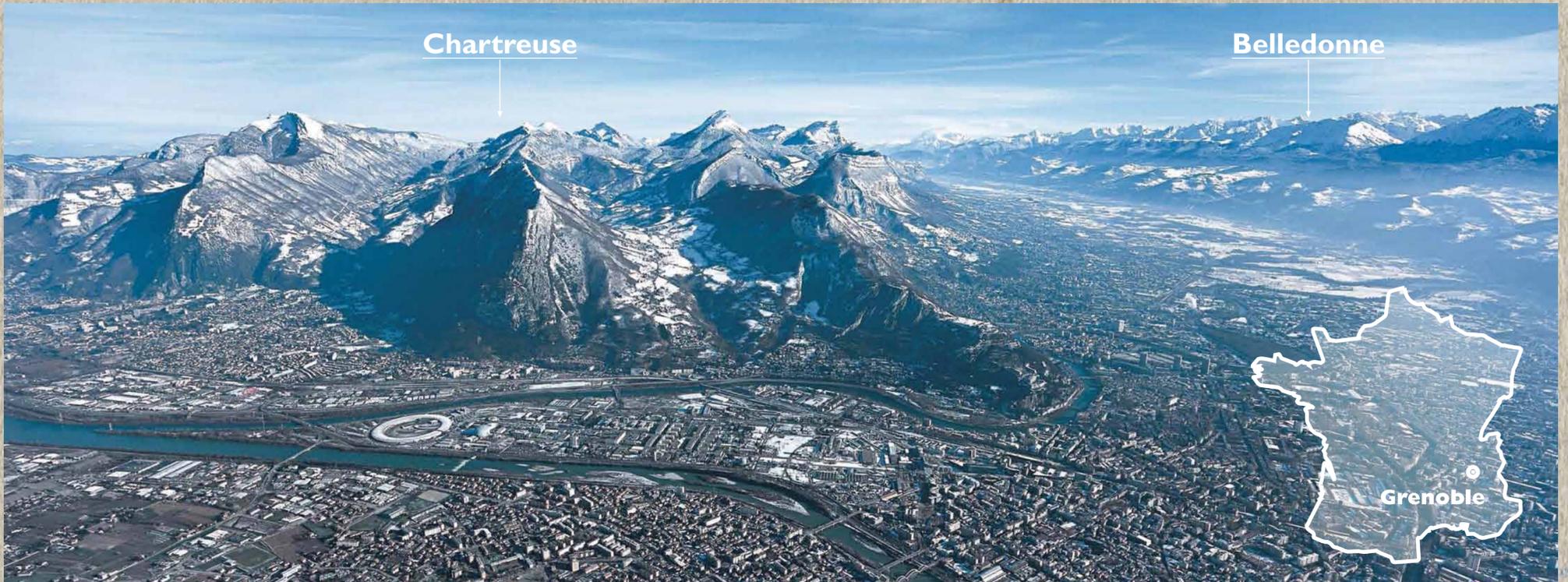


# Grenoble, a compact city without available spaces



**Main metropolis of the French Alps, located at the foot of the Vercors, Chartreuse and Belledonne Mountains, Grenoble is a compact city in a dense populated area, surrounded by nature. The Drac River and the Isère River constrain even a bit more a vital space which is not expandible.**

Regeneration of the town on its roots, tackling the environmental issue are the challenges the city has to face from decades.

It took till the middle of the 20 th century for the population to reach 100.000 inhabitants. In the next three decades, the number rose by a further 60.000 inhabitants.

The result is clearly apparent: urban development completely fills the valley bottom. No longer restricted to just Grenoble, the sense of limitation now concerns the whole conurbation and its 450.000 inhabitants.

## THE NECESSARY REGENERATION OF THE TOWN

Grenoble is taking part in the never ending process by which a city regenerates itself on its own roots.

Achievements made by architects and planners highlight possible ways of realizing a sustainable city, a place which fulfils our needs and desires without jeopardizing the environment.

Urban regeneration is always torn between preserving the past or satisfying present needs. Urban planning in Grenoble try to make a balance between:

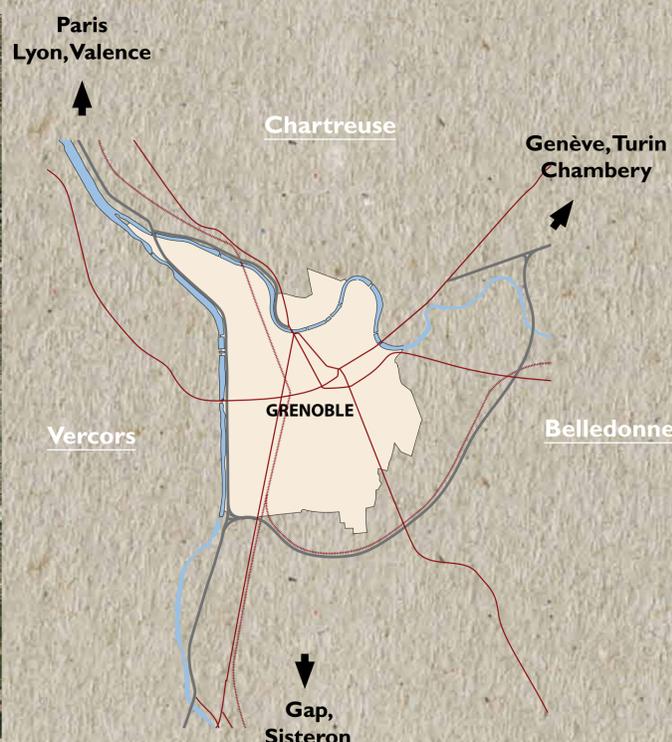
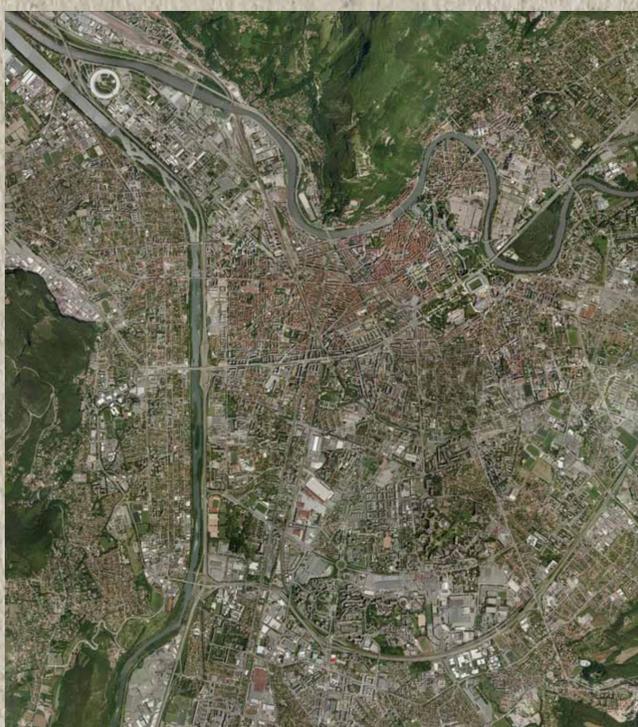
- clear and rebuild (Vigny-Musset, Bonne, Bouchayer-Viallet ...)
- reconnect and refurbish (Villeneuve, Village-Olympique, Flaubert...)
- reveal and notice (heart of town, protection area,...)

Grenoble city council intends to build the city of the future and make it an increasingly innovative sustainable city by actions such as:

- Control urban development, with a constant concern for continuity between the various neighbourhoods and harmony between different architectural styles.
- protect historic buildings while investing in the best contemporary architecture. Create open spaces and natural areas, also essential to the quality of urban life.
- recognize the value of ordinary buildings and everyday spaces which are part of our heritage too and contribute to Grenoble's identity and townspeople's attachment to their neighbourhood.

## >THE URBAN CHALLENGES ARE

- promoting a less space consuming town planning while harmonizing new urban design with older forms,
- irrigating the heart of the city with soft and clean transports,
- developing a clever Architecture that is able to reduce energy consumption and CO<sub>2</sub> reduction.



# De Bonne

old barracks transformation into an eco-district



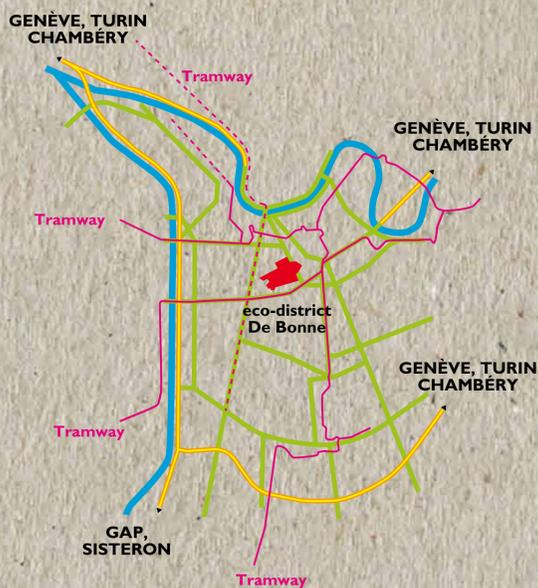
Grenoble has experimented on De Bonne in terms of functional, social mixity and environment, what will be, tomorrow, its future built-up urban area.

De Bonne scheme prime objective was to enlarge the town center by rebuilding a whole district of the city ( 8,5 hectares of military wild land left by the army in 1994) with its own shops, restaurants, offices, public spaces, infrastructure and amenities, with an exemplary architectural and environmental high quality approach.

Of the old barracks, the project has kept the elegant main courtyard and the three buildings overlooking it (these have been converted into flats and shops). But all around them a new landscape is taking

shape, surprising for the diversity of its materials and colors, the co-existence of contrasting forms... and the arrays of roof-mounted solar panels.

In this project, there is also a sense of restraint, a determination to generate a nice diversity in the different architectural style.



## DE BONNE NEIGHBOURHOOD AMBITIOUS TARGETS

- Toward a self-sufficient energy district
    - 60-75 kWh/m<sup>2</sup>/yr of energy consumption per building.
    - 1.2 m<sup>2</sup> of thermal solar sensors per flat unit to cover 50% of hot water needs.
    - 1 000 m<sup>2</sup> of solar panels on the roof of the commercial area.
    - 430 m<sup>2</sup> of solar panel on the roof of the positive energy office building.
    - 9 small cogeneration modules developed for the production of electricity and heat from natural gas.
    - Cooling by heat pump on ground water for the positive energy office building, and for the shopping mall (the first ever in France for such a surface area).
    - Developments aiming at reducing electrical consumption: variable speed elevators, low consumption, lighting, etc.
  - Proposing a new mobility no car-oriented direct connection with two stops of the 3rd tramway line, one parking space per housing unit, compulsory creation of storage rooms for bicycles in each building.
  - With a real richness of social and activities diversity.
- 850 family housing units, some 40% of which in social rental accommodation (social housing), alongside of a school, a home for the elderly, two student residences, a hotel residence and 15 000 m<sup>2</sup> of shopping malls and offices, an experimental art film theatre, 5 hectares of urban parks and gardens in the heart of the area.
- This area is now a neighbourhood, well connected to the town historic center and a national showcase since the refurbishment of De Bonne area receive the First National Eco-district Prize in 2009.



# Toward the whole city renewal

The 10 years of de Bonne project was a great jump forward for city planning in Grenoble. A lot of lessons learned during this process have been shared with all stakeholders (from decision makers, planners to construction firms and end users) and spread to other projects.



## ESPLANADE

29 hectares of refurbishment will be transformed in a new district of high quality and sustainable buildings. The 1200 dwellings will benefit from a park of 6 ha on the riverside and a new 100 m high tower of flats.

- Architect and planner : **Ateliers de Portzamparc**
- End of delivery: **2015 - 2025**



## BLANCHE MONIER

A 6 hectares area targets low energy consumption buildings at low cost, for greater social mixity, develops reflection on building structure.

- Architect and planner: **Tekhnè**
- End of delivery: **2013**



## HISTORIC CENTER PROMOTION

The project « coeur de ville / coeur d'agglomération » aim at changing the face of Grenoble's historic center, with the ambition to improve the living environment for residents as for visitors.

The landscape architect A. Chemetoff has been tasked with brightening up the streets and squares of the old town center. Thus, some squares have been redesigned to enhance their overall appearance and make the more of their heritage.

The Isère riverside project is part of historic center highlighting, aiming at reinvest the waterside with a major landscaping project. The landscape architect A. Marguerit has been commissioned to reduce car traffic's share of the highway, giving more place for pedestrians and making the most of the natural and Architectural heritage of the Isère Riverside, symbolic place where the town was founded.

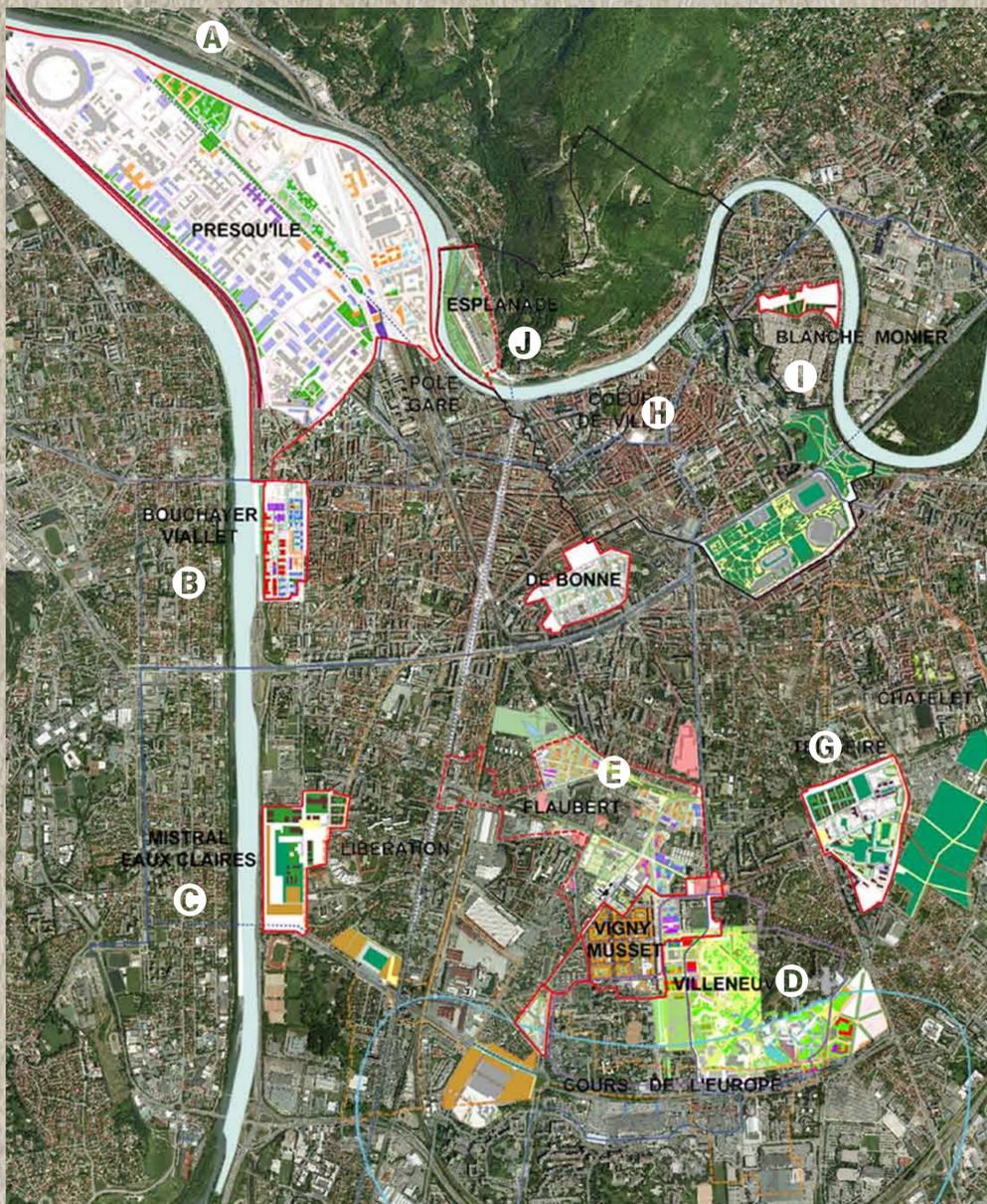
- End of delivery: **2015**



## PRESQU'ÎLE

Develops on a larger scale (240 hectares of the current scientific area) the carbon neutral city concept. The sustainable development objectives by are high performance buildings, mutualised and integrated energy system, reduction of transport private vehicles. The systemic concept of urban design integrates mobility, energy, urban development and associates cooperation, ressources-care and way of life.

- Architect and planner : **Ateliers de Portzamparc**
- End of delivery: **2025**



## BOUCHAYER-VIALLET

A former 14 hectares industrial wild land, focuses on the energy performance of office buildings and on waste management.

- Architect and planner: **Felix-Faure/Macary/Page**
- End of delivery : **2018**



## MISTRAL

16 hectares of urban renewal with demolition of buildings, creation of new functions and links with close neighbourhoods for a social housing district of 1200 dwellings

- Architect and planner: **AUC**
- End of delivery: **2015**



## VILLENEUVE

The 60 ha of the «new town» is a 4200 dwellings complex welcoming 13000 inhabitants in the South part of the city, this architectural and urban planning experience from the 70's has turn to a deprived area leading the municipality to develop several renewal programs to help the conversion of this area. A big urban renewal program has been launched, supported by the Urban renewal National Agency - ANRU, with the aim to open and connect Villeneuve to the city and to turn it in an eco-neighbourhood De Bonne project.

- Architect and planner : **Ateliers Lion**
- End of delivery: **2015 - 2025**



## FLAUBERT

Refurbishment of 90 hectares of distended urban fabric welcoming artisanal, industrial and housing activities. This area which failed to acquire an identity of its own is set for a major facelift. The old railway line will become a 3 hectare park, round with new blocks of flats which will form the new skeleton of the neighbourhood.

- Architect and planner: **Ateliers Lion**
- End of delivery: **2025 - 2030**



## TEISSEIRE

21 hectares of urban renewal, diversification of a social housing district of 1200 flats with residential approach.

- Architect and planner : **Paneraï**
- End of delivery: **2012**



## TRAM LINES AND URBAN RENEWAL

### C line - 2006

Thanks to the tramline, the urban cut the Grand Boulevard urban, motorway once formed has been healed, with a series of urban developments facilitating connections between the two sides. The picture of the Grands Boulevards renewal is a tram running along a strip of greenery between attractively renovated façades, but it reveals nothing of the outside insulation campaign done on many buildings.

(9,6 km - 7 stops in Grenoble - 17,6 km in total)

### E line - 2015

The E line will lead to an urban redevelopment work of the Jaurès-Libération whole area. This new E tram line on Jaurès - Libération boulevards is an additional component will open the way for better integration of the neighbourhoods and amenities, as well as extending the tram network, with connection to lines A, B and C.

(3,8 km - 7 stops in Grenoble - 11,5 km in total).

PREMIO GUBBIO 2012 – EUROPEAN PRIZE  
CITY OF GRENOBLE, FRANCE - SUMMARY REPORT

**Grenoble, a compact city without available spaces**

Main metropolis of the French Alps, located at the foot of the Vercors, Chartreuse and Belledonne Mountains, Grenoble is a compact city in a dense populated area, surrounded by nature. The urban challenges are promoting a less space consuming town planning, while harmonizing new urban design with older forms, irrigating the heart of the city with soft and clean transports, developing a clever architecture that is able to reduce energy consumption.

In the early 19<sup>th</sup> century, Grenoble was little more than an ill-assorted military stronghold bursting at its seams. The first Roman ramparts, then the wall built by Lesdiguières in the early 1600s, and finally the fortifications erected in the 19<sup>th</sup> Century all gradually disappeared, swallowed up by the town and digested by the city's exponential growth. It took till the middle of the 20<sup>th</sup> century for the population to reach 100.000 inhabitants. In the next three decades, the number rose by a further 60.000 inhab. The result is clearly apparent : urban development completely fills the valley bottom. The sense of limitation now concerns the whole conurbation and its 450.000 inhabitants.

**The necessary regeneration of the town on its own roots**

Regeneration of the town on its roots, tackling the environmental issues are the challenge the city has to face from decades. The aim is to grasp what makes Grenoble a genuinely contemporary town, in step with the 21<sup>st</sup> century. Grenoble is taking part in the never ending process by which a city regenerates itself on its own roots, with the willingness to realize a sustainable city, a place which fulfills our needs and desires without jeopardizing the environment.

Whether the purpose is to build new homes, fight social exclusion, retrofit housing, create jobs, open a garden or enhance our heritage,... it is up to architects and planners to turn these projects into real achievements, harmonizing new urban designs with older forms, rooted in place and history.

Urban regeneration is always torn between preserving the past or satisfying present needs. Urban planning in Grenoble try to make a balance between clear and rebuild, reconnect and refurbish, reveal and notice.

Some former military or industrial urban wasteland represented an opportunity to adjust the overall balance of the town. The aim was not just to produce floor space but to foster new links between neighbourhoods, open new parks, mix various communities... and finally create places where people can live and work.

Among these projects, de Bonne former barracks refurbishment is a good example of the process. The City of Grenoble has experimented on de Bonne in terms of functional and social mixity, what will be, tomorrow, its future built-up urban area.

**De Bonne old barracks transformation into an eco-district**

De Bonne scheme prime objective was to enlarge the town centre by rebuilding a whole district of the city (8,5 hectares of military wasteland available after the army left in 1994) with its own shops, restaurants, offices, public spaces, infrastructure and amenities, with an exemplary architectural and environmental high quality approach.

Of the old barracks, the project has kept the elegant main courtyard and the three buildings overlooking it. These have been converted into flats and shops, but all around them a new landscape is taking shape, surprising for the diversity of its materials and colors, the co-existence of contrasting forms, the design of certain facades... and the arrays of roof-mounted solar panels.

There is a sense of restraint, a determination not to overdo things, and to generate a nice diversity in the different architectural style.

De Bonne project's ambition was to create a self-sufficient energy district with renewable energy production, (from sun, ground, water..) and energy efficiency of the buildings.

## PREMIO GUBBIO 2012 – EUROPEAN PRIZE CITY OF GRENOBLE, FRANCE - SUMMARY REPORT

The project (which was part of the Concerto European Initiative launched under FP 6 frame) targeted in 2004 an energy consumption level of maximum 75 kWh/m<sup>2</sup>/yr, far better than national Thermal Regulation. Some buildings are complying with the new Thermal regulation RT 2012 (60 kWh/m<sup>2</sup>/yr for Grenoble).

The project rely on a new mobility concept, turned toward public transport (3<sup>rd</sup> tramway line) and bicycles lines and pedestrian comfort.

The district is also characterized by the richness of social and activities diversity : 850 family housing units, (40 % for social housing), a school built in wood, a home for the elderly people, two student residences, a hotel residence and 15 000 m<sup>2</sup> of shopping malls and offices, an experimental art film theatre and 5 hectares of urban parks and gardens in the heart of the district.

De Bonne area is now a entire neighbourhood, well connected to town historic centre. De Bonne became a national showcase since the refurbishment of De bonne area receive several Prizes (a lot of visitors from France and abroad are visiting the area).

### **Dissemination of the lessons learned**

The ten years of de Bonne project was a great jump forward for city planning in Grenoble. A lot of lessons learned during this process have been shared with all stakeholders (from decision makers, planners to construction firms and end users) and spread to other projects.

Evaluation studies, monitoring of the building's energy consumption, relation with inhabitants performed after the commissioning of de Bonne buildings are really instructive for the stakeholders involved in the process and also for national stakeholders of the construction sector.

Since De Bonne, all urban projects in Grenoble are taking into account social and fonctionnal diversity, environmental issues (not only energy matters), but also the importance of the management process, without forgetting the aim to provide inhabitants a better town to live in.

### **Toward the whole city renewal**

The whole city is in a transformation process, with several area refurbished like vigny-Musset, Bouchayer-Viallet or Blanche- Monier and several urban renewal projects such as Teisseire or Mistral which are showing a new face.

The current structuring projects are developed on Presqu'île and Esplanade district, where the city will experiment the next step of an innovative eco-city as well as on Villeneuve district in the South area, where the city aim at turning a famous 70's planning and architecture complex into an eco-neighbourhood, opened and connected to the city.

Between both projects, the city will refurbish Flaubert district, situated in the middle of the town, consisting today in a 90 hectares of distended urban fabric welcoming artisanal, industrial and housing activities

More than ever, the city council aims to enhance the identity of Grenoble for the future and make it an increasingly innovative sustainable city . It is done trough the control of urban development, by creating new dwellings but also open spaces and natural areas and with a constant concern for continuity between the various neighbourhoods and harmony between different architectural styles.

More than refurbishment and urban renewal projects, making the town on its roots implies to take care of the whole city spaces. Another challenge of the city resides in the recognition of the value of ordinary buildings and everyday spaces. They too are part of our heritage. Alongside remarkable historic or new buildings, they contribute to Grenoble's identity and townspeople's attachment to their neighbourhood. By paying attention to such concerns now Grenoble is building the city of the future.