Call for applications

TERRITORIALISING THE TRANSITION ENERGETIC, ENVIRONMENTAL, URBAN AND RURAL

32nd Urban Project Workshop, Île-de-France
September 1 – 26, 2014

THE SOUTH OF PARIS AS LABORATORY

Please note the deadline (May 5th) of the call for international applications to select the participants. Students and young professionals selected will work on the topic in four different teams.

How to participate

- students (master level) or young professionals
- open to all fields of studies
- preparatory research work (see last pages)

les ateliers
maîtrise d'œuvre urbaine

The Ateliers wish to thank the partners who accompany them for the 32nd session of workshops Île-de-France.
NB : The Ateliers needs new financial partners for this project.

Summary

Immeuble Le Verger – Rue de la Gare
BP 90047 - 95020 Cergy-Pontoise Cedex
S www.ateliers.org | **E** contact@ateliers.org
T +33 1 34 41 93 91

I. What is meant by «Transition »?

Everybody recognises that there is an urgent need to organise the energy transition! We have seen a whole series of initiatives to achieve this. They involve significant changes in a wide variety of areas ranging from food supply to consumption and energy production, thereby questioning the development of our towns and cities. For its 32nd summer session, the Ateliers invite you to find out how a large area (the southern Paris region), which has been dependent on easy access to fossil sources of energy, can shape and implement its own transition. You will be invited to imagine the ways and means of changing our towns, cities and regions to make them more energy-efficient, smarter, more pleasant and more welcoming.

I. Transition : better with less

In the XXth century, massive exploitation of fossil fuels and minerals on the one hand and technical progress on the other hand led people to believe that anything was possible. The energy revolution drew its fuel from an apparently infinite planetary supply, and was driven by longer life spans and greater notions of comfort and well-being.

Climate change is now here to remind us of the downside and negative consequences of such a lifestyle. As finite natural resources grow scarcer and the human population grows ever more numerous (seven billion today, nine billion in the near future, where only two billion lived in 1900), we – humanity – have no other choice than to adapt our lifestyles in order to continue improving them. The guidelines are clear : « lessfossil fuels, less mineral use… and more collective intelligence, for the rational sharing of space and resources, and along acceptable economic and social paths, for the enjoyment of living.»

II. A worldwide shift

Today, the world has the necessary human, tangible and intangible means to set necessary changes into motion. The question, therefore, is : how to mobilize them in the fastest and most efficient way [1]?

Change will only be set into motion if everybody takes part to the evolution on their own scale : from the citizens to the national governments, including international or supranational agencies. The sheer

[1]The most recent work by the GIEC states that objectives had better be attained not by 2050 but by 2030.

size and urgency of the issues at hand makes it essential that actions be multiplied. We can infer from the repeated failures of international climate conferences, that solutions for climate change will probably not spawn from inter- or supra-national initiatives.

Faced with such a situation, local and collective initiatives are multiplying all over the planet, to manage territorial transition in specific areas. Little by little, these initiatives come to reinforce each other, from the village to the planet.

We are the issue, and we are the solution : where we live, where we work, were we spend our leisure.

III. Of individuals and flows

Setting change into motion on a territorial level depends on a good translation of global issues at the local scale : based for example on carbon emissionsof housing and transport for, on the distance between the home and the workplace, on the kilowatt hours used for heating, or on the origin of food provision.

This is a process to characterize, for a specific territory, its metabolism and flows : the movement of goods and individuals, the flow of goods for consumption and waste, those of energy and greenhouse gas emission, etc. By quantifying those flows, it becomes easier to identify levers for action. Setting the transition into motion also requires to take into account the human idiosyncrasies of an area : every stakeholder, every institution has their own goals and constraints.

Territories are dotted by instances of « silent transformations », building blocks of the transition (from creating a network of bicycle racks, to turning a disaffected logistics building into a space for culture). Those instances deserve to be spot lit, coordinated, and integrated into a larger territorial strategy for transition.

It is essential that the daily pioneers of territorial transition are given some visibility, so as to catalyze actions in cooperation with public policy.

II.Space for change : a large urban and rural area south of the Ile-de-France region

I. What about the Ile de France region ?

Like all major agglomerations, the Ile-de-Franceregion has known unprecedented human and territorial development in the XXth century, based on a tested three-part recipe of : infrastructure development and general increase in mobility, urbanization in wide swaths, and monofunctional zoning development.

This growth and – in part – the actual workings of the region stem from an easy access to available fossil fuel. In this matter also, transition is essential.

In order to tackle the larger issues of transition, the region is concentrating today on developing new infrastructures for public transit (the Grand Paris Express Network) and on densifying the territories hooked to the transit network. This is part of an effort to re-structure the most central part of the Paris agglomeration.

It is without shadow of a doubt mandatory, but will it be enough ? How can spaces evolve, which have long been developed for city sprawls fueled by « easy-access » fossil energy? How can these spaces adapt to the new energy market ? How can these spaces, generally referred to as non-urban and dependent, become cities for the XXIst century ?

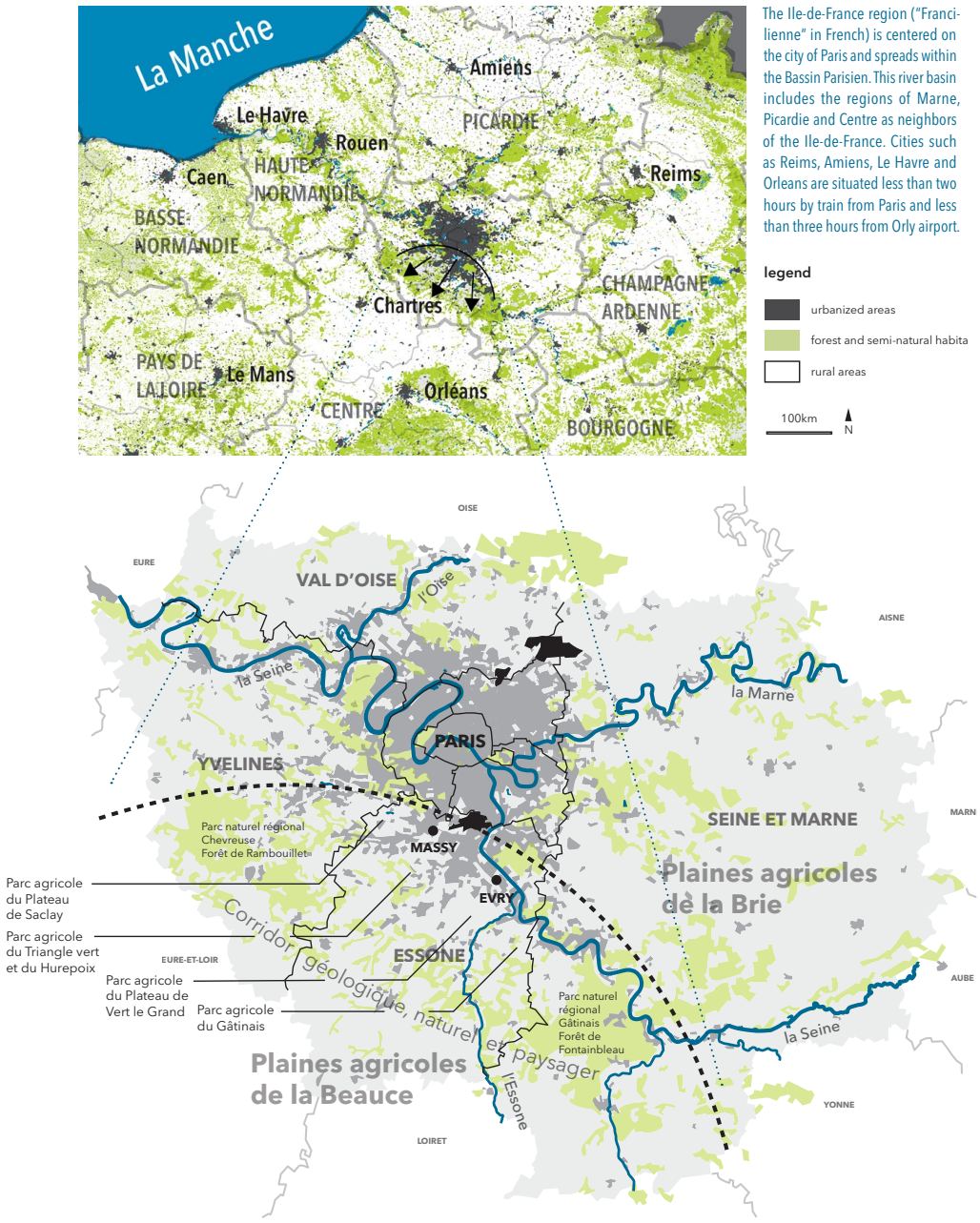
II. On what scale should the larger issues be envisioned ?

We suggest working on a scale fitted for the workings of daily life, but one that can adapt to transition and organize the shift in a thought-out way. This places us between the municipal scale (whose closeness and day-to-day quality does not enable us to grasp the flows of goods and individuals) and the Ile-de-Franceregional scale (whose distance is good to conceptualize issues and solutions, but keeps us too far from the daily life of the inhabitants).

We also find it essential to think about a territory that would include urban and rural patches, in order to perceive material flows and therefore act on green energies, green materials, spotlighting possible paths for actions such as local food and energy networks or circular economy. It is important to remember that foodstuff, green materials, and green energies are primarily produced in the rural areas and primarily used in the urban areas !

III. First location elements : the south of Ile-de-France region as part of the metropolis

We are looking here at areas that have shouldered the greatest part of the Paris agglomeration sprawl in the second half of the XXth century. Those areas now act as the interface between the central, urbanized core of the agglomeration (within the approximate limits of the A86 , the second regional highway ring) and the rural spaces of the Bassin Parisien. To be more precise, we are talking about the **South of the Ile-de-Franceregion.**



The Ile-de-France region ("Francilienne" in French) is centered on the city of Paris and spreads within the Bassin Parisien. This river basin includes the regions of Marne, Picardie and Centre as neighbors of the Ile-de-France. Cities such as Reims, Amiens, Le Havre and Orleans are situated less than two hours by train from Paris and less than three hours from Orly airport.

The south of the Ile-de-France region is growing from the hub between Orly (International Airport, National Market) and Massy (Hispeed train station, Opera). It can be decomposed as :

› A mostly urban area based on the tripod of Orly, Massy, Evry (built ex-nihilo into an urban pole), and spreading along the Seine valley until the city of Melun.
› East of that area, in the Seine-et-Marne county, start the wide agricultural plains of the Brie.
› South-East of that area, beyond the stampian axis, start the wide agricultural plains of the Beauce (Essonne, Eure et Loir, Loiret)

› The stampian axis is both a geological and ecological corridor that brings landscape value to the Essonne county, from the Fontainebleau forest in Seine-et-Marne to the Rambouillet forest in Yvelines.
› In the space between the stampian axis and the urban area, we find open spaces with agriculture as the main activity (agriculture parks), broken by urban valleys and infrastructures.

Caption (of the second figure)
South of the Ile-de-France region / Urbanized area / Forest area / Rural area / Airport

Atelier transition - Document sujet - Janvier 2014
Immeuble Le Verger – Rue de la Gare
BP 90047 - 95020 Cergy-Pontoise Cedex
S www.ateliers.org | **E** contact@ateliers.org
T +33 1 34 41 93 91

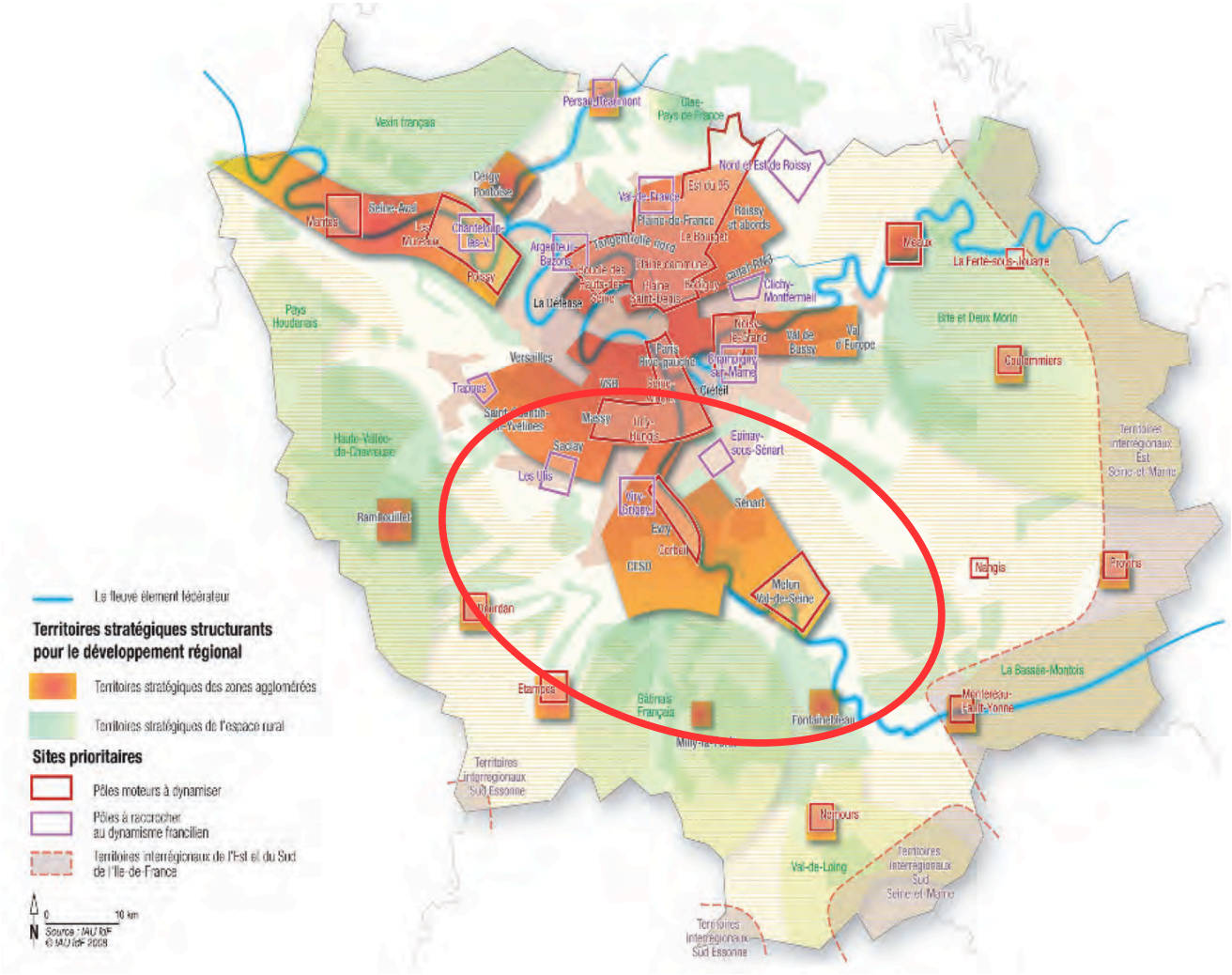


Figure 2: the regional South : a strategic area for the Ile-de-France Regional Masterplan (2013)
Caption
The river as a federating power
// Strategic structural areas for regional development
Strategic areas in the urban space / Strategic areas in the rural space
// Priority areas
Driving hubs to be reinforced / Hubs in need of connection to regional dynamism / Inter-regional territories in the East and South of Ile-de-France

The study area includes one majorly urban area, structured around the hubs of Evry (county seat for Essonne), Corbeil, Massy[2], Orly and Rungis[3].

[2] Its Hispeed train station but also the higher-education and research hub on the Saclay plateau

[3]Centered on the airport and on a large logistical hub for the National Market of Rungis

It also includes rural areas[4] that can be categorized in three main groups, with a predominant growth of cereals and oil- and protein-rich plants like rapeseed[5].

- In the South, the wide rural plateaus of Beauce and Gâtinais ;
- In the North, rural « clearings » like the plateaus of Hurepoix (Saclay, Limours, Nozay) and the rural spreads of the plateaus in the Arpajonnais, in Vert-le-Grand, and in Chevannes - all of them under pressure from the urban sprawl ;
- Urban spots landlocked in the urban sprawl, usually on valley bottoms (Orge, Samouille, Yvette), as separate plots with a constrained surface.

In the South, our study area includes the central part of the forest continuum that runs between the national forests of Rambouillet (Yvelines) and Fontainebleau(Seine-et-Marne). This parcellated forest spread is made up of a few large plots managed by the public authorities (State, Regional or Local government), and of many private forest plots with a constrained surface.

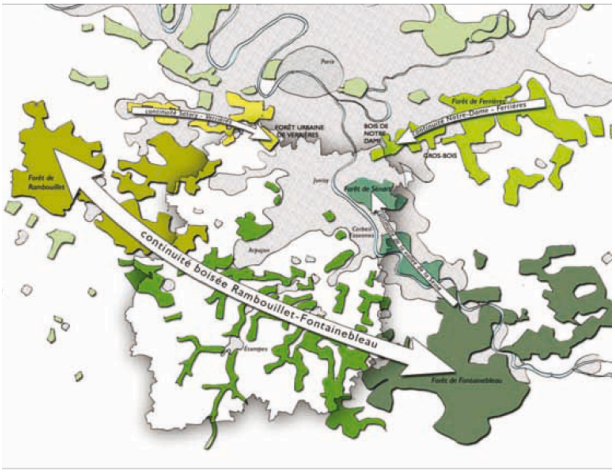


Figure 3 :the stampian axis

This is a continuity inherited from the « stampian axis », an ecological and geological corridor from the tertiary ice age.

Thus, the southern part of the Ile-de-France region is a typical example of a XXth-century agglomeration, with its « patchwork » aspect born from mixing large activity zones, housing estates, green lungs and rural areas. Today, it represents a significant slice of the territory, housing over a million inhabitants and organizing major urban hubs with all the services, activities, retail spaces and leisure offerings in daily demand.

[4] In 2011, SAU (Usable Agricultural Space) covered 85 734 ha or 47,1% of the total area of the Essonne county

[5]Those account for 72 000 ha, or 76% of SAU, and are mostly concentrated in the south of the county









PHARMACIE

IV. Historical benchmarks

From the Middle Ages to the XVIIIth century, most of the area is **predominantly rural**, organized around moderately important urban hubs (especially Arpajon and Corbeil).
The territory is structured by various culture types (cereals on the plateaus, vineyards on the hillsides, grazing in the valleys, fruit and vegetable orchards) that also shape the landscape (in an alternance of farm domains, villages, and hamlets). It is **the « bread basket » of Paris** : most of what is produced in the area is then shipped to Paris either by way of the Seine, or by the royal road (current RN7).

With the arrival of the railway in 1841 (Paris to Corbeil line) and 1843 (extension towards Orleans) come a series of territorial transformations, driven by the **growth of rail-related industry** and structures (building a station yard in Juvisy, running lines to Paris for freight trains like the « petit train de l'Arpajonnais » from 1894 to 1936, that would also carry the fruit and vegetables of the Hurepoix region to the Market Halls of Paris).

North of the Essonne county, around the towns of Viry-Châtillon, Juvisy and Athis-Mons, there is an **important industry-driven growth** ; a somewhat isolated phenomenon in this area of the Southern Ile-de-France that is quite a distance from Paris[6].
Throughout the whole area, **leisure resorts for the bourgeoisie** spring up on the hilltops, in close proximity to the train stations. This first occurrence of urban growth follows the railways along the river valleys (for the Seine, the Orge, the Juine, the Yerre, etc.).

At the start of the XXth century – and especially in the inter-war period – the hamlets and villages start turning into suburban towns through the process of **plotting out the large rural domains for housing**, destined to (and often built by) the Paris workers and employees. This rapid urban growth creates, for inhabitants and public authorities alike**, issues of livability, of access to services and infrastructures.**

Figure 4 : satirical cartoon about the housing issues in the 1920s[7]

This situation will have major political consequences as the communist party gains rapid strength in the new neighborhoods, defending the inhabitants of the small plots, the « worst off » and the « shack » owners.
The **major spatial shifts** in the Paris agglomeration thus start gaining strength in the inter-war period. Urban

[6] In the words of Jean Bastié, the industry-driven development in the Paris agglomeration was concentrated in the North of the metropolis, in close proximity to the capital.

[7] Jean Bastié, Croissance de la banlieue parisienne, P.U.F, 1964

growth follows the rail lines and is often structured by large domanial properties, like the Secquigny forest in the Orge valley (2800 hectares).

After the Second World War, the Paris agglomeration **enters a new and radically different era of growth**, characterized as urban sprawl in the southern part of the region.
Development now has to answer to a national issue, one that is highly problematic in Paris :**the housing crisis.** This is the era of large and rapidly-built housing estates, the era of development policies led by the State and its technical organs (such as the Ministry for Reconstruction and Urban Planning created in 1944). For around two decades, the agglomeration will know a highly organized and planned-out building effort for building tower housing, with **high levels of production** as a result (200 000 dwellings were built in the first semester of 1958).

This new era of housing production means that in a very short span of time, the southern part of the region experienced a **spectacular population increase** (the number of inhabitants in Seine et Oise, which includes our study area, was 1 400 000 in 1944 and 2 800 000 in 1964).
Construction needs – in terms of time but also of property characteristics[8] - mean that **the first areas to be used where the empty patches in the urban sprawl**, mostly situated on the plateaus, in the middle of rural areas, or in vacant industrial zones, and for most of them at a distance from the railways.
In the same period, the area undergoes **strong development of the transport infrastructures** (Orly Airport, A6 and A10 highways) and of the structures and services for **economic development of a national importance** in the following domains : aeronautics, atomic research, and high-technology (SNECMA plant in Corbeil, IBM plant, Atomic Energy Center CEA in Saclay).

At the end of the 1950s, **urban growth is strengthened and better managed**, especially through the creation of Zones for Priority Urban Planning (ZUP) in 1958 and the implantation of « villes nouvelles », ex-nihilo new cities, at the end of the 1960s. The key issue becomes organizing and structuring those large swaths of urban sprawl without choking the Paris agglomeration, and without reproducing the monotonous tower building of the 1950s so as to avoid creating only « bedroom communities ».

As the 1960s come to an end, the regional train RER D is launched and the **new city of Evry**– soon to become the county prefecture of Essonne – rises out of the fields. For many decades to come, Evry will act as the polarizing hub for new housing construction and for the installation of major economic activities (head office of the Carrefour supermarket group, Ariane Espace, etc.).

In such a way, the county has grown through a process of housing spread around the major hubs (Juvisy-sur-Orge, Palaiseau, Corbeil-Essonnes) and along the main communication infrastructures such as rail lines, boosted by the launch of significant urban planning operations led by the State (new city of Evry, housing estates) in the 1960s and -70s.

[8] Cf. Jean Bastié « the localization of housing estates obeyed the sole principle of finding a large enough vacant lot that could be bought without too much hassele, that is, a lot that would not need to be restructured or that could be restructured fast enough. »

Starting with the 1970s, the development of business parks also contributed greatly to the extension of urban space and the evolution of the Essonne landscape. The limit of the urban spread moves forward towards the Vert-le-Grand plateau and south beyond Arpajon. It appears in a limited number of shapes, most frequently retail- and logistics- areas on the main roads and housing developments around the existing hamlets. In the last twenty years, initiatives for urban renewal have been launched in the existing urban fabric.

Significant evolution : the urban spread is no longer just a menace for the fruit and vegetable orchards (because of urban closeness), but is also nearing and encroaching on large agriculture.

Finally, **economic activities have also gone through change and mutations** in our study area. In the recent years, logistics have experienced strong growth due to the quality and density of transport infrastructures on the territory. So have large distribution chains – the southern part of Ile-de-France region was, as a matter of fact, the location of the first modern shopping center ever built in France, in Sainte Geneviève des Bois.

Immeuble Le Verger – Rue de la Gare
BP 90047 - 95020 Cergy-Pontoise Cedex
S www.ateliers.org | **E** contact@ateliers.org
T +33 1 34 41 93 91

V. Main characteristics of southern Ile-de-France

In the North of Essonne county, dense and continuous urban fabric spreads in a « finger » structure : where urban sprawl once followed valleys, it has now submerged the plateaus in parts.

AN URBAN PATCHWORK //

Successive eras of urbanization have left behind a **patchwork of urban fabrics**, in the shape of **large monofunctional areas** juxtaposed with no link nor transition (detached housing, housing estates, business parks). **The rapidity of the urban growth has created a fabric that pays little attention to the landscape (or none) and is often bereft of the necessary amenities for city living.**

This urban patchwork is mirrored by a variety of local institutions all having a say in the territory. Inter-communalities, in charge of organization and spatial planning, are reduced in size and usually correspond to a specific period of city development.

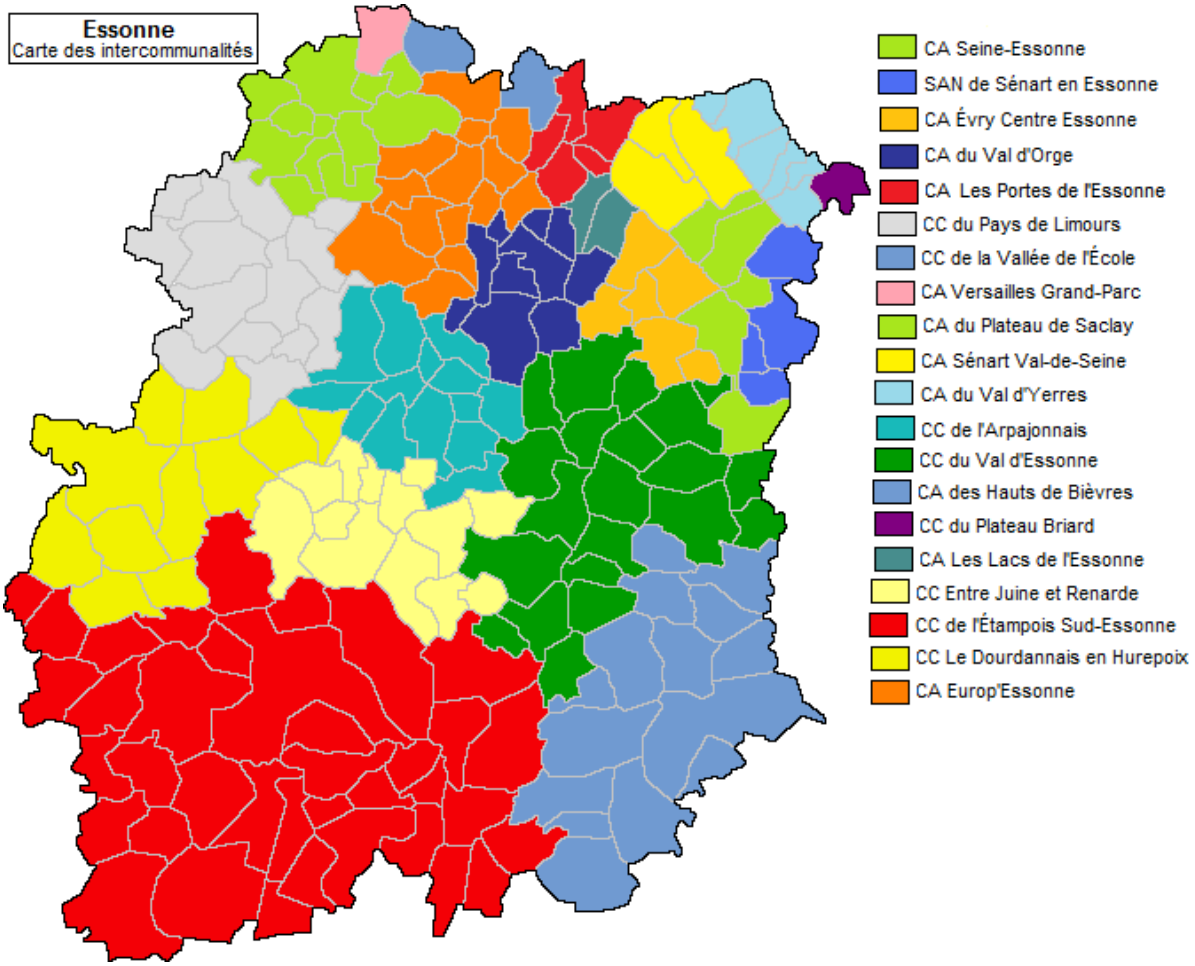


Figure 5 : Inter-communalities in the CESO (Centre Essonne Seine Orge) – many actors have a say in the territory. Audeso

CUTS //

A major issue is the reintroduction of city links and functional mixity. South of the Essonne county, the valleys are filled to the brim with most of the urban development, but some thin cuts in the urban fabric still exist between municipalities. The major urban hubs (Etampes, Dourdan, Milly-la-Forêt) tend to spread up on the plateaus. However, the villages on the plateaus have only known a limited amount of growth.[9]

CAR DEPENDENT //

Road transport infrastructures take up major space in the territory (A6 and A10 highways, RN 104, RN 20, RN 7 National freeways). In this suburban context, individual transit by means of a car is still the most frequent way to travel. **Furthermore, classic strategies of public transit development are not effective here, as human density is too low for priority lanes for collective transit, and the existent bus network is too weak to be considered as a decent alternative to car transit for the majority of inhabitants.**

AGRICULTURE AND URBAN PRESSURE //

The rural landscapes of the regional south are highly varied, with part of the production being destined to export, large cereal cultures, and local circular agriculture initiatives all juxtaposed. However, rural production in the study area remains limited by a variety of constraints born of the suburban context.

The XXth century urban development has led the city to spread right to the edge of varied activities linked to agriculture, with few links between the two.

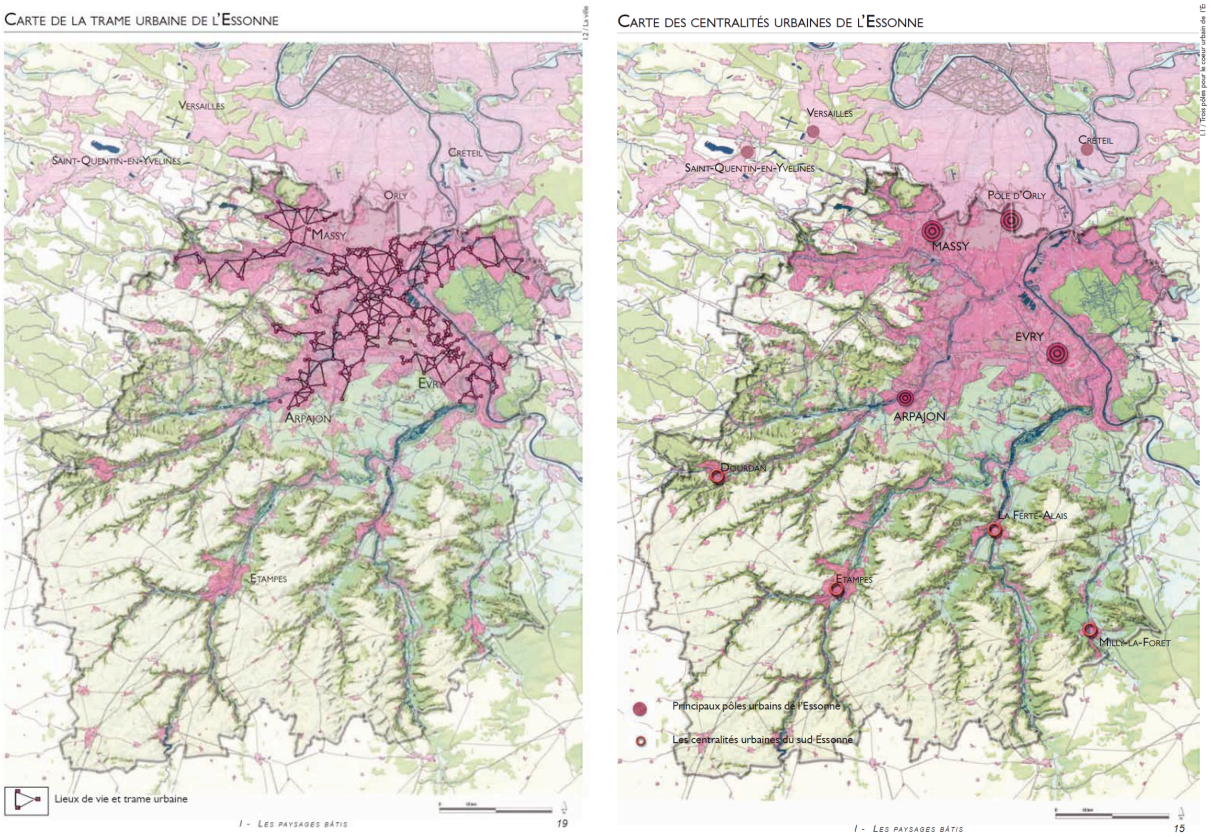
MIGRATORY DEFICIT//

The population in the Essonne county is far from stable. In 2009, there was a migratory loss of -0,3% as more people left than arrived in the county. Migratory exchanges with the rest of the Ile-de-Franceregion do not compensate the loss of emigrants to other regions. Looking closer, Essonne remains an attractive destination for young adults beginning their careers (25 to 39 year-olds), and loses mostly pensioners and adults at the end of their professional life. This massive outflow of pensioners is, however, not enough to counter the aging of the population[10].

[9]It is important to point out that, according to the MOS (Surface Occupancy Mode) analysis by IAU Institute, between 2008 and 2012 the new urban developments in Essonne were due for 217 ha to « recycling » existing buildings (58%) and for 160 ha to urban spread (42%). This shows a clear – but recent –progress in the fight against urban sprawl.

[10]Youth index went from 1,9 in 1999 to 1,6 in 2008.

Immeuble Le Verger – Rue de la Gare
BP 90047 - 95020 Cergy-Pontoise Cedex
S www.ateliers.org | **E** contact@ateliers.org
T +33 1 34 41 93 91



Figures 6 and 7 : Urban fabric of the Northern Essonne and hubs / Guide to the urban and natural landscapes of Essonne county

The area is also characterized by obvious potential complementarities.

POTENTIAL LINKS//

Our study area includes both a part of the Paris agglomeration, and a part of the large rural or natural spreads of the Beauce and the Gâtinais. Although the situation today is one of un-linked juxtaposition, a number of initiatives such as the Triangle Vert[11] are trying to underline the importance and strategic character of all interfaces, as well as the potential links that could exist between all those spaces for greater sustainability.

POLARITIES//

The various urban hubs within the area (Evry, Massy, Arpajon, Corbeil) could take on **a greater role** in the daily life of people living in the peripheral housing zones, or in the activities of those working every day in the large business parks of the southern Ile-de-France.

VARIED AGRICULTURAL OUTPUT //

The agricultural output currently produced within the area is highly varied, from circular local food networks to nationally- or worldly-bound produce.

[11] Voir : http://www.trianglevert.org/ L'association du Triangle Vert défend depuis plus de 10 ans et avec les élus locaux, la valorisation des terres agricoles périurbaines.

A DYNAMIC TERRITORY//

It is important to point out the strong dynamism of this area, which has doubled in population size in the past thirty years and is globally witness to important economical growth.

Problem statement for the 2014 Workshops

Faced with the stakes of the transition, the southern part of the Ile-de-France region (representing around a million people) has some specific assets : a large number of logistics infrastructures, a diversified economic fabric (services, industry, logistics), agricultural production resources and significant biomass, a first-rate university and research network, as well as high-quality natural spaces and landscapes and tested-and-true local initiatives.

In order to support the transition of this territory, the workshop is expected to identify levels for actions effective in our particular context. Widely-used theoretical levers for action should not be cast aside, but considered and adapted in the light of the human and geographical specificities of the territory. Running initiatives should be integrated to the wider operating strategies that will be identified.

The following are a few example questions that we hope the workshop shall tackle : How can we move from a system based on fossil fuels to a sustainable system (from the « industrial revolution » to the « energy revolution ») ?In order to do this, how can the urban fabric be made nicer and more welcoming ? Can the city be better articulated with its surrounding landscape and territory ? How can we move from a linear to a circular economy ?

We should allow ourselves to picture the South of Paris as a laboratory for change, based on its considerable assets, to invent and set into motion its particular process of transition and, why not, facilitate the transition of the whole metropolis.

III. Suggested Operating Principles

The workshop thus aims to produce food for thought and routes for action that will ease the regional south into the transition and, more generally, create a nice and easier to live in territory after decades of significant rapid urban growth.
Though stimulating, the topic is so wide, and the routes for action so numerous, that one might lose focus. This is why we decided to start by pointing out what we consider **red herrings,** before moving on to operating principles and a few guidelines for reflexion.

I. Red herrings ; what a workshop on territorializing the transition should not be

First of all, we are not expecting work that would produce a master plan (or even a guiding plan) type of timeline management to (mechanically) organize the spatial evolution of the study area.
Of course, the spatial planning (or re-planning) of the area and the re-structuring of its many parts (for example : helping large business parks evolve into less monofunctional and more urban spaces) are major issues of this workshop. However, it twill also be necessary to explore dimensions closer to the daily life practices of the stakeholders (citizens, companies) and others than can more globally evidence the **metabolism** of the territory.

// TERRITORY METABOLISM//
« is the way in which a territory consumes and transformes both matter and energy ; the manner in which they mobilize and transform resources from the biosphere. The notion was born in realizing that territories depend on said resources and act on the biosphere at various levels by using those resources. It helps to ***characterize in a systematic way the interactions between nature and societies*** *: how much energy does a city need to maintain its total activity level ? How many resources – water, foodstuff, industrial products, etc. ? Where do flows go, once they enter the urban fabric, as they get used and transformed ? In what shape are they eventually poured back into nature ? What are the consequences ? »*

12

The workshop is expected to produce food for thought on the best paths for change in the south of the region, an area that is today highly dependent – like most urban areas – on fossil fuels :

- Can we extract, from the territory, part of the energy that it consumes (biomass, geothermal, etc.) ?
- Can we produce, in the territory, part of the material goods that it consumes (for energy rehabilitation, for building needs, for heating needs, etc.) ?
- Can we limit the energy consumption of the territory (for example by reducing the need for travel) ?

[12] Sabine Barles, *Le métabolisme territorial : un outil de compréhension des interactions entre les villes et leurs environnements*

On the other hand, we are not expecting a global prospective scenario describing a god-like perspective of precise changes for the area in the ideal future. **The point is to trace new routes for change, to clear a path and clear up intricacies.**
The process should avoid both those pitfalls : too global an approach, or too specific and technical.
After identifying the red herrings, now for a few operating principles to guide collective reflexion.

II. Articulate local initiatives with public policy

The study area is home to a flourishing associative context, with a large number of initiatives having to do with the transition at many levels and on every scale.

We can refer once again to the association called **Le Triangle Vert**, that has been promoting for the past fifteen years the development of a fruit- and vegetable-agriculture, with related activities (retail), over a 4500 ha area. One of the goals of the association is to prove that dynamic agriculture close to urban areas is not only possible, but essential. « **Les potagers de Marcoussis »** also works in a related direction in their status as an example agricultural hub organized around the principle ofsolidarity. They support the reinsertion of more than twenty individuals through garden culture activities. « Les potagers » cultivate biological vegetables that are distributed, weekly, as baskets of produce, to a network of members. This project showcases the urban character and solidarity potential of gardening and garden agriculture.

Figure 8 : Borders of the « Triangle Vert » (Green Triangle) regroup five municipalities from the North of the Essonne county : Marcoussis, Nozay, Villebon-sur-Yvette, Saulx-les-Chartreux and Champlan.

Another type of action (in a different domain) are the various artistic initiatives in Viry-Châtillon around **« la Friche »**, a former logistics warehouse transformed into a space for associations and culture. A former telecommunications company plant (for FranceTelecom), La Friche was opened in January 2012 to its new functions through the organization *L'école du Jardin Planétaire, université populaire des Lacs de l'Essonne.* The project follows a transversal vision through culture, nature, popular teachings, and aims to break down the barriers between disciplines.

During the workshop, participants are expected to **bridge the gap between isolated initiatives**, **to articulate local dynamism and public policy**. At stake, indeed, in this workshop for urban planning, is

to articulate the urban issues of spatial organization and the punctual initiatives currently running in the area that were launched by companies, municipalities, groups or associations.

The problem statements are complex and have been little looked into :

- How can we federate local initiatives ?
- How can we articulate the regional and the municipal scales ?
- How can running initiatives act as a basis to support more efficient public policies ?

III. Work with what already exists

In the Essonne county, around two-thirds of the housing capacity was built after 1967. The housing stock is therefore quite recent. **Transition, here, is less about producing new energy-efficient dwellings and more about rehabilitating the energy consumption of existing dwellings**[13]. From that point of view, the main issue in Essonne has to do with degraded condominiums and housing estates.

Transition depends evermore on the articulation of public powers and local initiators when one considers that new construction, yearly, for buildings and infrastructures, represents 1% of the existing built, serviced and planned stock. The thermal rulings in place since 2012 and the impossibility of massively improving the transport infrastructure means that 90% of greenhouse gas emissions in 2030 will come from the buildings and structures that are in place today.

With two consequences :

- **The main issue at stake is to ecologically improve the existing city and countryside, instead of focusing solely on the land not yet used.**
- The heavy binding arsenal of laws, norms, rulings, policies and fiscal boosts is a necessary evil ; however, **the transition will not take place without the initiative of inhabitants, entrepreneurs, local governments and local representatives**, without their support and decision-making. They are the ones on whom hangs the evolution of territorial metabolism, from the municipal to the regional scale.

Those consequences are not self-evident. They go against the grain of our usual ways of thinking and acting, of our knowledge and organizations. **Creating something new is always more visible, more media-appealing, and more rewarding than working on what already exists.** The key now is to organize action in the area, as it is.

[13] In 2010, 31,2% of the dwellings in Essonne are hooked to a collective heating system (lower numbers than in 1999) , 40,2% are equipped with individual heating and 24,5% with « electric » individual heating (higher numbers than in 1999).

Immeuble Le Verger – Rue de la Gare
BP 90047 - 95020 Cergy-Pontoise Cedex
S www.ateliers.org | **E** contact@ateliers.org
T +33 1 34 41 93 91

IV.Themes

The topic as it is being so wide, it is important to start by underlining some of the potentially interesting themes. **The point is not to work on them all but rather to choose, within this compendium, the most effective, those on which it will seem possible to act with ease or rapidity, and the most strategic ones.**

I. Organize the lighter city

The south of the region has come, historically[14], to be organized into large juxtaposed « sheets » (business parks, housing boroughs). This patchwork – which also includes agricultural and natural plots – is characterized by a lower density than exists in the center of the agglomeration (itself shaped by a relative shortage of natural and agricultural space).

Another characteristic of the study area is the strength of its interactions with other parts of the Ile-de-France region : expressed as migration patterns (inhabitants moving from the dense center to the outskirts for housing), in the process of economic activities, and in the life of the inhabitants (socio-cultural movement). Finally, the study area is characterized by significant reliance on individual cars and on trucks.

Beyond its specificities and characteristic trains, the southern Ile-de-France can be identified to the concept of « lighter city » as defined by Finn Geipel, born of a low-density urbanism (made up of housing boroughs, housing estates, business parks, disregarded zones). **The « lighter city » has a strong potential for evolution**, and represents one of the essential levers to set the Paris agglomeration transition into motion towards a « more sustainable, thrifty, ecological, accessible metropolis ».

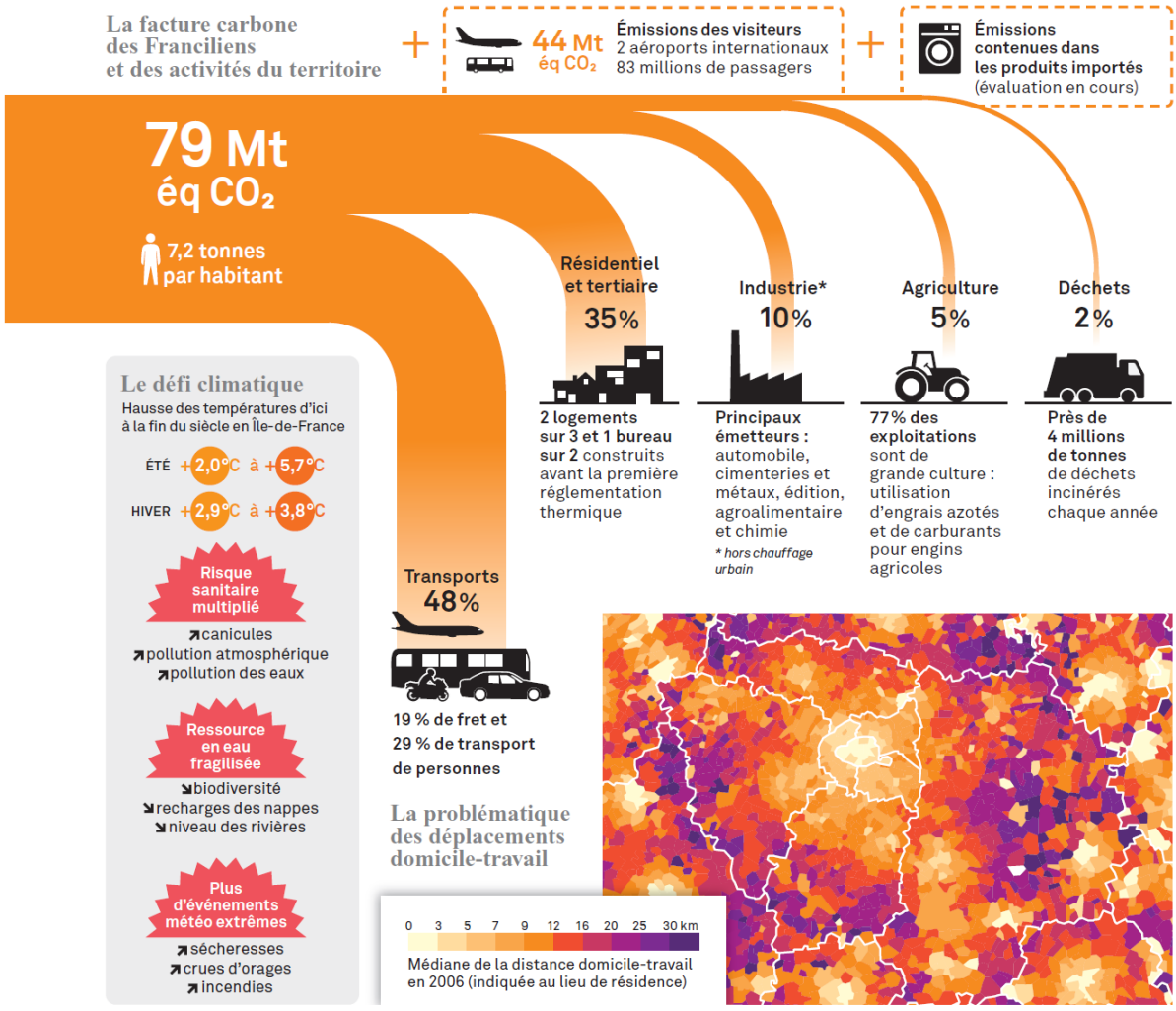
The south of the region can thus be envisioned as an area full of promises in which to think and apply the metropolitan transition. What alternatives can be put in place, for example to reduce vehicle dependence ? Solutions lie as much with of transport engineering as with territorial planning (as expressed by the location of activities, jobs and retail) and with the re-conquest of public space.

How can a « patchwork » territory evolve into a « systemic » complex one ? How can urban spirit grow, where everything is segregated ? How can breaches become hinges, to create a complementarity between built space, rural land and natural areas ?

[14]Planning projects have grown in a juxtaposition instead of a complementarity because, in a large part, of how fast urban growth has taken over the area in the XXth century.

II. Work on territory metabolism

Territory metabolism has to do directly with the behavior and the way of life, the preoccupations, the means and the responsibilities of the various inhabitants, entrepreneurs and elected officials in the area. **One of the main goals of this Workshop is, of course, to suggest some ways to shift from a fossil fuel-based metabolism to a more sustainable one.**



18 OCTOBRE 2013 DÉFIS, PROJET SPATIAL RÉGIONAL ET OBJECTIFS

Figure 7 : The carbon footprint cost for inhabitants of the region and for territorial activities
Caption : 7,2 tons/ inhabitant, of which : 48% due to transportation (19% freight and 29% individuals) / 35% due to housing and services (2 out of 3 dwellings and half of the office space were built before the first thermal ruling) / 10% due to industry (Main emissions : car industry, concrete and metal production, printing, food transformation and chemistry) / 5% due to agriculture (77% of farms are large-scale exploitations, use azote fertilizer and fuel for the farm equipment) / 2% due to waste (around 4 million tons of waste are burnt yearly). // Map : the issue of the daily commute (median distance between home and work location in 2006, as indicated per residence area) // Sidebar : The climate challenge : Temperature increase in the century for Ile-de-

France -> Increased health risk (heat waves, air pollution, water pollution) + Weakened water resource (biodiversity, water table renewal, river level) + More frequent extreme weather patterns (Droughts, storm floods, fire).

The main percentages to remember are : 77% of greenhouse gas emissions in the Ile-de-France area are due to construction and to the movement of people and goods, while 33% come from the food chain.

Construction:

In total, the current built surface in the Ile-de-France region amounts to around 700 000 000 sq. meters. **In the region, around half of them can quite easily (technically and economically) be fitted with outer isolation**. This isolation would help lower their energy consumption and the emission of greenhouse gas, from twofold up to eightfold.

We should point out that there is neither data nor engineering solution available for buildings under 1000 sq. meter. What types of actions could be undertaken for that part of the market ? Can we think of mutualization and economies of scale ? Under what conditions ?

The other half of the current construction cannot be so easily isolated from the outside, for architectural reasons, while isolation from the inside represents a loss in net usable space.
In theory, all of them could be hooked to urban heating networks fed by renewable and reusable energy, so as to diminish twenty- to thirtyfold the greenhouse gas emissions of said buildings before turning to isolation.

// MEETING THE ENERGY COSTS //

The state of the current construction shows that, nationally, 15% of all condominiums are degraded and in dire financial straits. The degraded goods are then unsellable on the market and often exploited by « sleep dealers » (illegal charging of roofed space in unregulated conditions).

It is significant that the cost of heating often generates condo costs out of all measure with the resources of the owners.

Households that cannot meet the energy costs (those spending over 10% of their revenue on heating) have been estimated at 330 000 in the Ile-de-France region, or 7% of all households. Their percentage could considerably grow with the increase in energy prices.

Individual mobility

Individual travel is one of the main sources of greenhouse gas emissions. A certain number of factors are currently responsible for the pattern of travel in the regional south and, more generally, in the Ile-de-Franceregion.

First off, **the geographical repartition for employment is very different than the one for housing**. Today, 70 out of the 1300 regional municipalities concentrate 70% of all jobs, and offer over 10.000 positions to employees from other parts.

Furthermore, the urban growth of the XXth century has resulted in the development of large, often monofunctional zones. Therefore, **travel is necessary in order to shift from one type of activity to another** (work to leisure, for example), and travel is often reliant on motor vehicles. In this context, the individual car was the most adapted mode to the territory, and has become the main issue at stake in terms ofgreenhouse gas emissions and, quite simply, in terms of effectiveness (congestion in the transport infrastructures constantly decreases the main travel speed for all). Indeed, road transport infrastructures are very present in the territory (national highways A6 and A10, national freeways RN104, RN20 and RN7). They have acted both as a support to the urban development, and as a chisel that fragmented the territory. Today, all those infrastructures are in strong need of requalification.

According to the 2010 Global Transportation Enquiry (EGT), the outskirts of the region are currently seeing **an increase in individual mobility, especially individual car travel**– in stark contrast to the decrease of that mode in Paris and in the immediate Paris proximity. This increase – from 2001 to 2010 – is slight in the dense parts of the outskirts, but marked in the more rural areas and the secondary agglomerations. Furthermore, the ratio of car-owning households is also increasing (from 84,8% in 2001 to 87% in 2010).

In this context, it becomes essential to **look into the lifestyle of travellers**[15]in order to suggest answers adapted to daily constraints and necessities.

[15] 80% of travel in Essonne takes place within the county, and 47% within a sub-sector. Local travel is significant and should be taken into account.

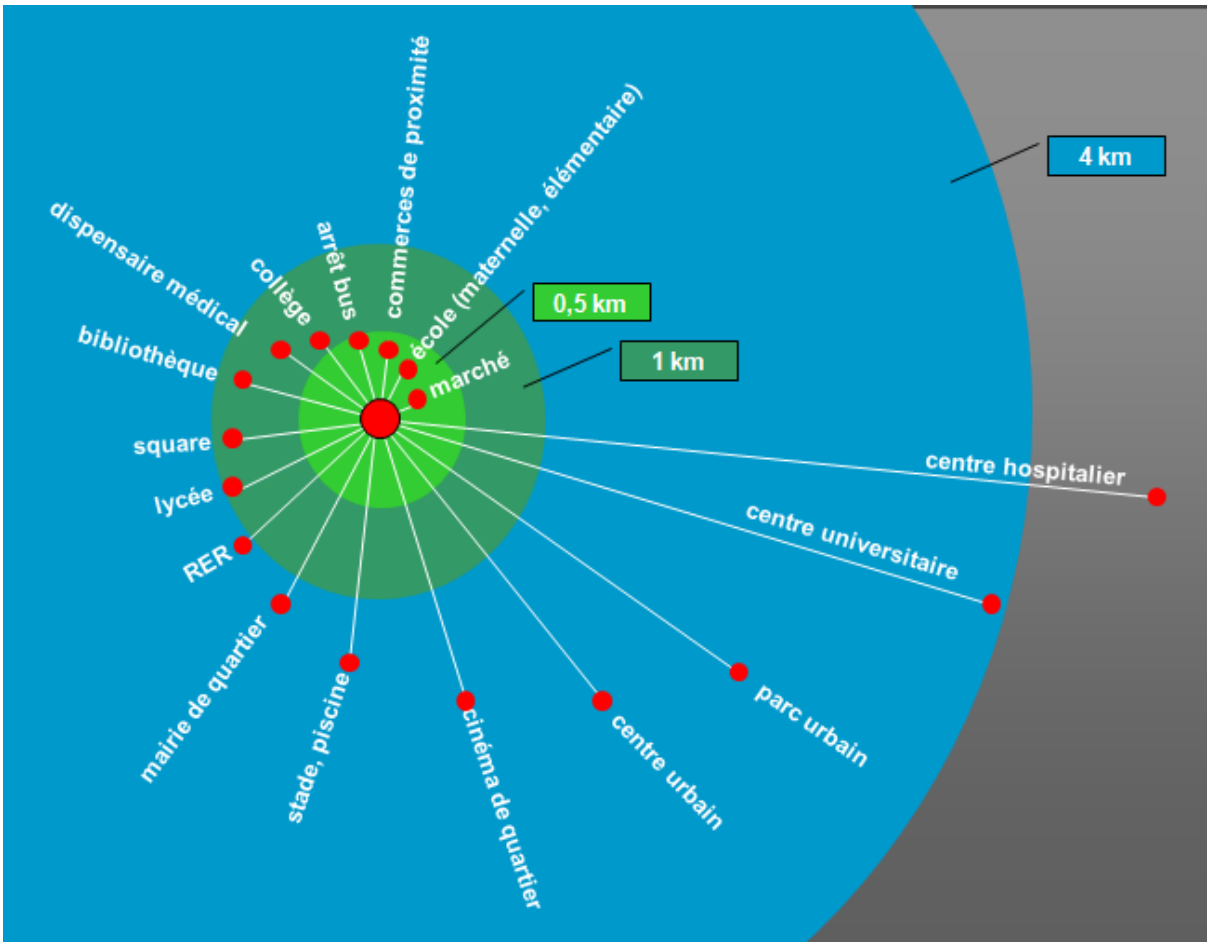


Figure 6 : **1km is doable on foot and 4km is comfortable for biking***AIGP Tribu*
Caption : (from center to outskirts) : market, school (kindergarten), small retail, bus stop, middle school, clinic, library, square, high school, regional train station, town hall antenna, stadium/pool, neighborhood cinema, urban center, city park, university, hospital.

However, **collective transit is also an important element to consider, since :**

- Congestion of the road infrastructures also impact the bus networks
- Development of the rail networks creates important issues in and around the stations. Rail station frequentation is expected to double in the region before 2030, and the infrastructure is not necessarily up to the task.

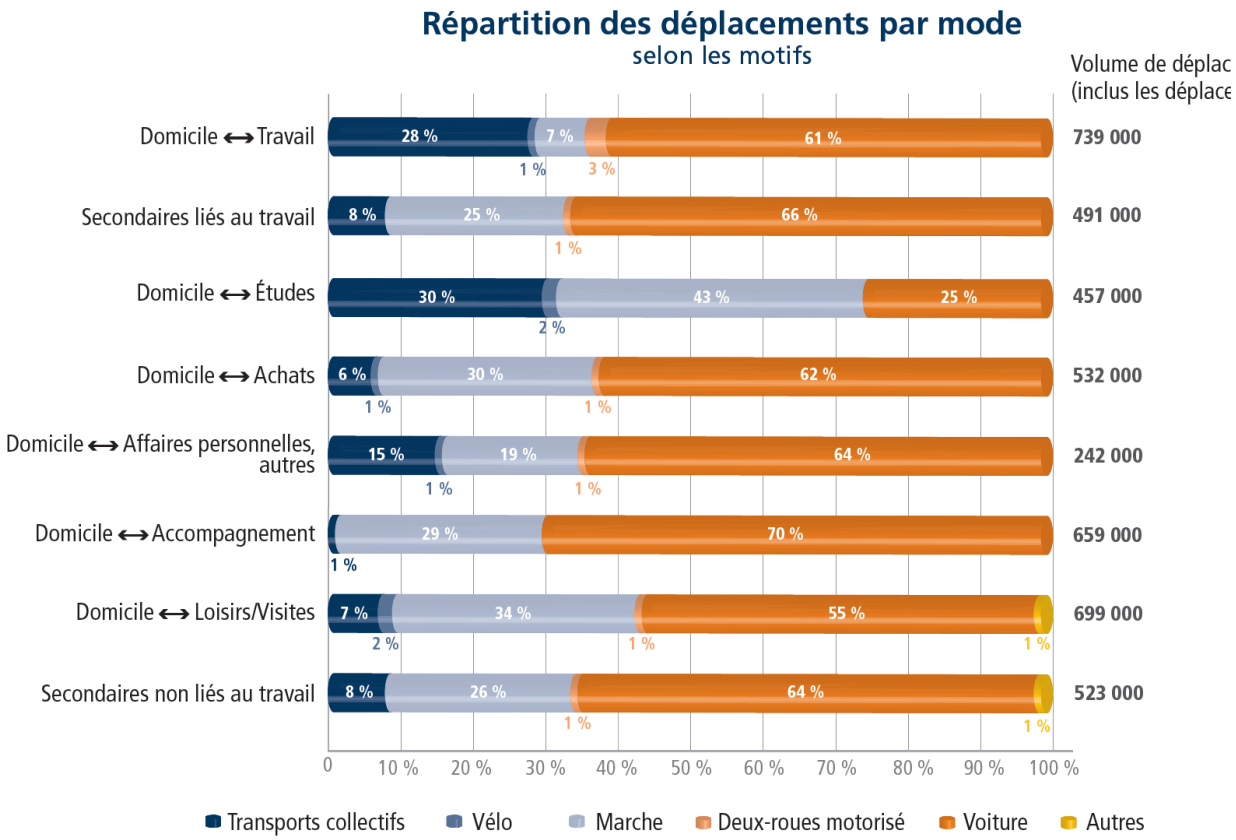


Figure 8 : Source –enquiry by STIF Essonne 2013
Caption : Modal split per travel motivation.
Y axis (top to bottom) : Home-Work / Secondary work purpose / Home-Studies / Home-Shopping / Home-discrete travel / Home-Bringing and Fetching others / Home-Leisure and visiting / Secondary discrete activities
X axis (left to right) : Collective transit / Bicycle / Walking / Motorized two-wheeler / Car / Other.

The current areas of reflection for the organization of collective transport are :

- A public car-sharing service
- Network access by location
- Developing separate-lane collective transit (TCSP, BRT…) using the existing infrastructure.

Finally, there is also the issue of meeting the costs of mobility. For example, the costs of keeping a car, per household, is perceived as lower than 200€ when it fact the real costs are over 450€ per month.

More generally, one of the key issues for this territory is to go further than the urban model for high density, and to organize adapted networks of transportation and services.

Freight transport

On top of the individual movement, it is important to consider the weight of freight and logistics in terms of flows crossing the territory of Essonne, and in terms of surface occupation for logistics activity in the county. The Chamber for Commerce and Industry has counted up to 3 million square

meters in surface devoted to logistics, 2.6 million (87%) of which consist of buildings over 5000 sq. meter in surface.**The whole of it represents around 650 ha of property devoted to this specific type of activity, that is, about half of the size of the Orly airport.**

Freight transit is characterized by an **exclusive use of road infrastructures** (80% use on a national level). At stake, thus, is the development of alternative travel solutions. Freight transit is also characterized by the absence of link between the goods produced on the territory, and those consumed within it. At stake here is to create a territorial integration of economic activities (through short circular retail circuits or longer circuits for agricultural produce, for example).

Agriculture and eco-produce

A third of all greenhouse gas emissions come from the food chain, from agricultural production all the way to household waste, including transformation, distribution, cooking processes and eating practices. **The question is : how can we work towards an agricultural chain with more local, territory-oriented processes of transformation and distribution ? Under which conditions ? What can be suggested for a more sustainable suburban, ecological, economically viable agriculture ? And how can this be applied to the whole industry, more generally ?**

All this implies **:**

- Rethinking retail: short circular circuits or longer ones, and their consequences on rural and urban organization
- Rethinking the territorial planning : how should land and property be valued and priced ? What could be an agricultural planning strategy on the long term ?

Creating a **« local food chain »** could valorize, within the territory, the consumption of foodstuffs of mainly vegetal and animal origin that were produced on that same territory. Today in Ile-de-Franceregion, the food chain for cereals is a regional ones, and the food chain for fruits, vegetables and meat also runs through the neighboring counties. **It is important to account for the carbon emission of consumed produce, local or not, according to the distances of transport, the modal choice for transport, and to act in consequence.**

// LOCAL FOOD (SHORT) CIRCUITS //

Short food circuits promote the responsability of citizens in the food chain, beyond their status as « consumer ». They enable financial gain through the agreement of a « correct price » for the producer and the consumer, and by cutting out the middle men. Thank to that trade system, all the participants bring in added value insofar as their action is essential to produce the goods or service. Finally, we can underline that this kind of system calls on local stakeholders and adapts to the characteristics of the territory being revitalized.

Energy production :

What type(s) of energy could be produced locally ?

- From the biomass : what can be gathered ? waste-wood, pruning waste, forest resources, natural gas sources from waste, warm water from solar energy, recycling plants, etc.

- What are the main deposits of renewable energy ?

Ordinary biodiversity

Giving space back to nature implies accepting that men take their natural role within the ecosystem it depends on to survive. Respecting nature and biodiversity is at the roots of permaculture, a concept that inspired the theory of transition.

Transition is not simply about energy issues (essential as they may be) : it is also about creating a more welcoming territory, both for men and for other species. Open natural spaces are not simply ornaments on the land, but work according to their own inner logic that we must take into account.
Natural ecosystems produce benefits for mankind, and we are currently trying to evaluate their consequences in order to justify protecting them. However, those benefits are not just economic, their are vital for human life. Finally, one has to take into account the increasing vulnerability of the land in the Essonne in the face of climate risks (flood risk and storm risk, clay swelling after drought…).

CAUE 91 L : « Experimentation : turning a classic greenery area into an ecological garden space. »

The economy of transition

What are possible ideas to launch the shift from a linear model of economy to a circular model of economy ? Understanding the metabolism of a territory comes through identifying the flows of goods, energy and waste crisscrossing that territory.

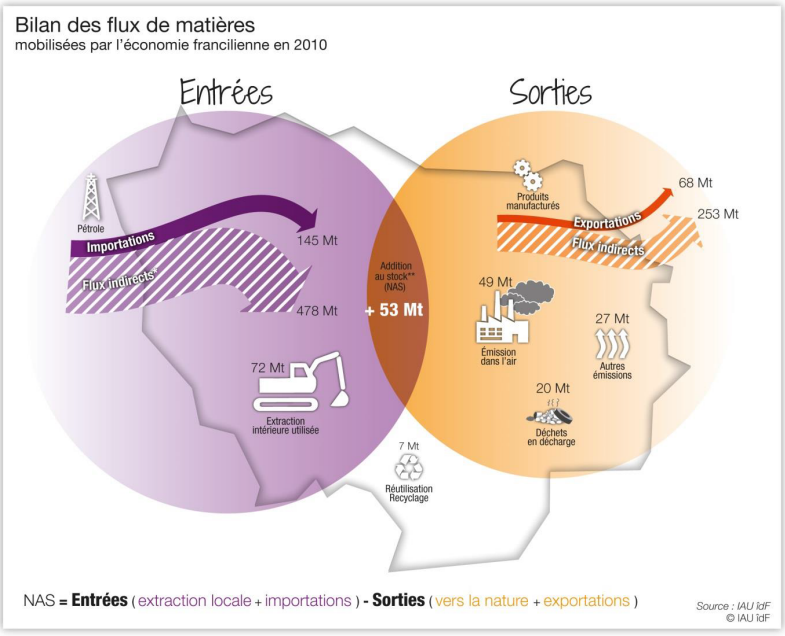
Today, there are two main methodologies available to look into the workings of territorial metabolism :

- **Industrial metabolism** (or : CFM, quantifying the flow of goods) analyzes, within a defined geographical perimeter, the flows and the stocks of goods and energies mobilized by economic activity ;
- And the analysis of a **product life cycle, at the company scale** (ACV).

In the United States, 70 million consumers use their smartphones to access digital information about the conditions of goods production. A series of notations (such as the energy cost, the greenhouse gas emission rates, the health impact, environmental impact and social conditions of production) are shared by independent structures in order to support the evolution of industrial processes.

In the case of our study area, most of the goods for consumption are produced outside of the territory. For example, electricity is produced by the nuclear power plants. Most food produce – with the exception of a small local market gardening – is imported. Even the locally sold flour (see : Annex) cannot be traced back, and should it be made from Essonne wheat, the consumer could not know it.

Figure 11 : Overview of the flow of goods



* **Flux indirects** : matières mobilisées pour la fabrication d'un produit ou d'un service prêt à être importé ou exporté, en déduisant la masse du produit lui-même. Ces flux ne sont pas physiquement importés ou exportés.

** **Addition au stock** (NAS) : mesure la croissance physique d'une économie. Elle correspond à la différence entre les nouveaux matériaux qui s'ajoutent sous diverses formes (voitures, équipements industriels et ménagers,...) et les anciens qui en sont retirés sans recyclage (mis en centre de stokage des déchets, de démolition de bâtiments, de déchets de biens durables ultimes...)

// RESOURCES//

Upstream of the value chain, the Ile-de-France region relies heavily on imports. In 2009, only 33% of the 217 million tons of resources mobilized by the economy were produced within the region. The largest proportions of locally produced resources are construction materials (83%) and biomass (15%, including soft wheat, cereals, colza, sunflower, and sugar beet). The rest of all resources is imported to the region (67%). Looking at the change in numbers, the proportion of imported resources has been growing in the past years (60% on 2003 to 67% in 2006). Half of the imports come from other regions (52%).

// IMPORTS//

For metal and metalwork goods, the Ile-de-France regional economy is totally dependent on import. The origin of the goods is fairly balanced between national product and foreign import. Ile-de-France also exports some metalwork goods. **As for agricultural produce and foodstuff**, those account for 11% of incoming flows to the regional economy. Most (85%) of the regional consumption comes from import, mostly originating in other regions of France. For example, the total production of fruit and vegetables only accounts for 15% of consumption (source : IAU).

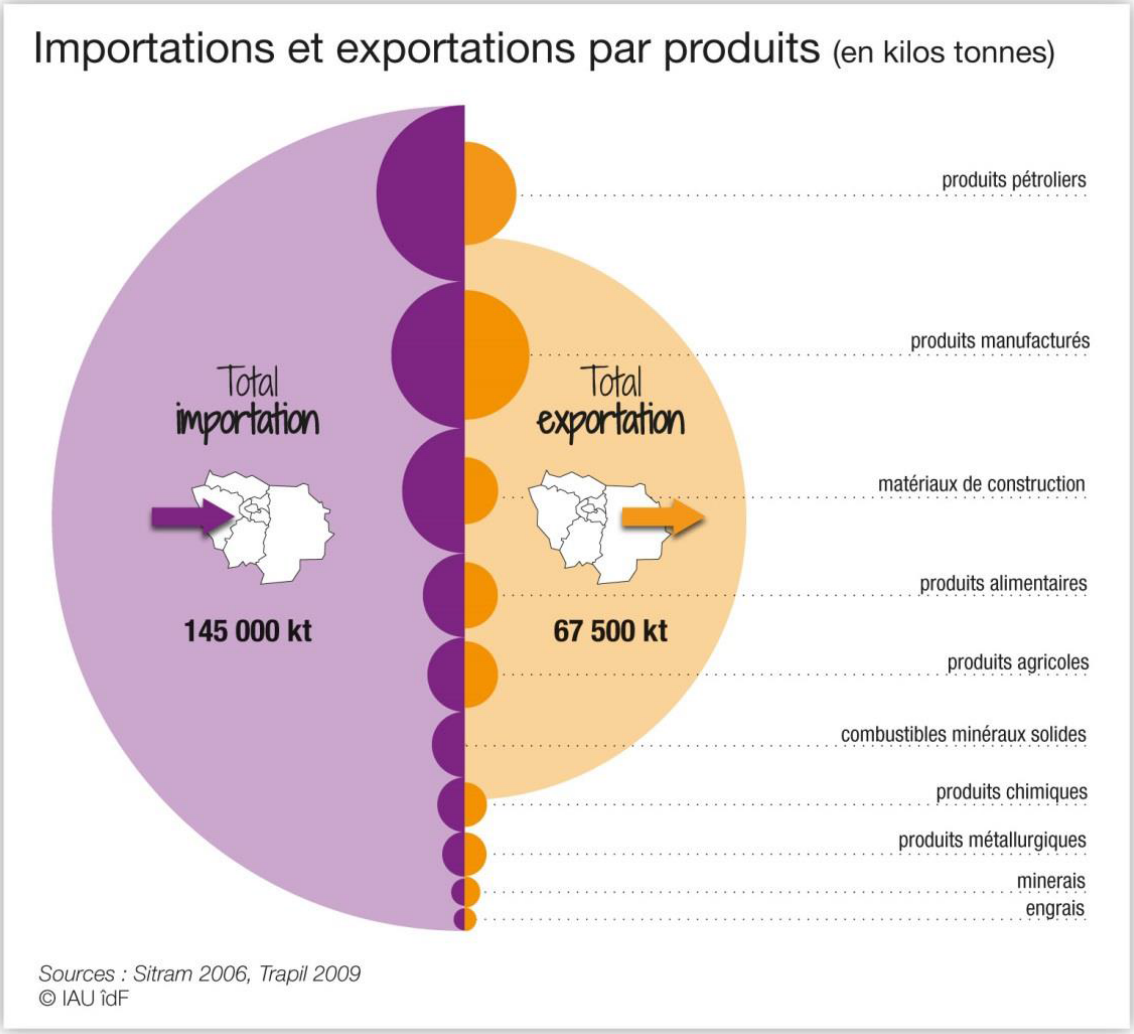


Figure 12 : Imports and exports, per product
Caption : (left to right) Total import, Total export (top to bottom) Oil products – Manufactured goods – Construction material – Foodstuff – Agricultural produce – Solid mineral fuel – Chemicals – Metalwork goods – Minerals – Fertilizer.

Analyzing the lifecycle of a market good enables us to account for, and understand, the inflows that went into its production. Lifecycles shine light on the energy consumption, the environmental pollution, and the sub-components (for foodstuff this include pesticides, preservatives…) of the product, as well as greenhouse gas emission values and air- or ground-pollution emissions.

Running this analysis also brings out the losses and the waste encountered as the produce moves from actor to actor, and shows what side products get thrown out : thus, we can identify some of

the normative, financial and speculative mechanisms causing waste. Indeed, the linear economy is a polluting one, with a tendency to pillage and waste resources.

Figure 13 : Illustration of linear economy
Caption : (left to right) Natural resources – Extraction, Production – Consumption (goods) - Waste

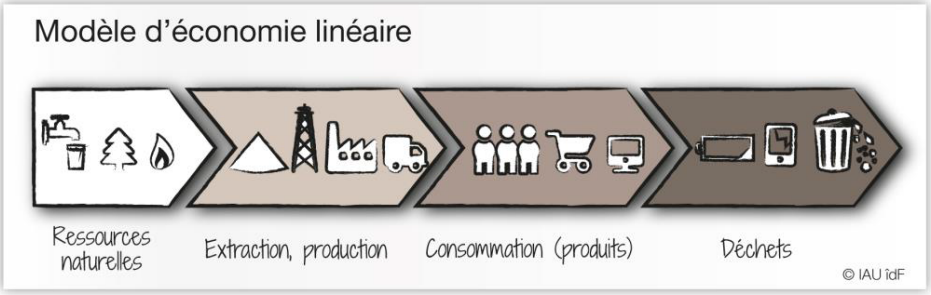
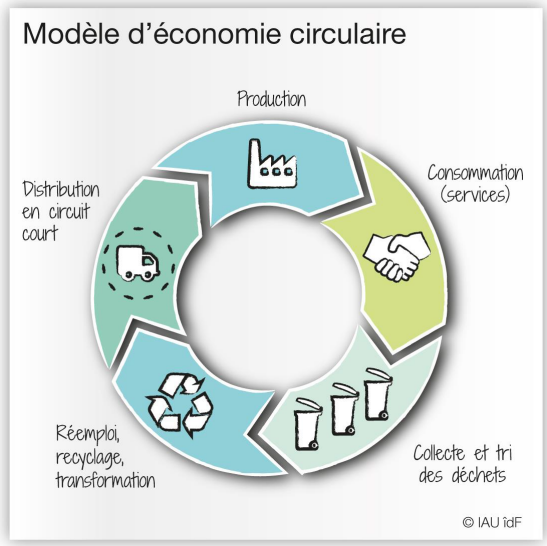


Figure 14 : Illustration of circular economy



Caption (clockwise from top) : Production – Consumption (services) – Waste collection and sorting – Reuse, recycling, transformation – Short circuit distribution

Circular economy draws from the working principles of natural ecosystems, that function as a close circle with a minimal loss in goods and energy. In other terms, this new « economic ecosystem » is first and foremost about minimizing the dispersion of environmentally noxious substances, in order to become more waste-proof and less polluting. The priority of the current economic system is to increase productivity of resources.

The two main criteria for a transition economy are : **thrift and efficiency.**

What the economy needs, in short, is intelligence. Research in that field will benefit from increased knowledge and know-hows, as classic methods are locally tested and tried. Such methods include the interactions between companies, the mutual sharing of information, the restructuration of production chains, and the organization of the logistics sector.

Conclusion

In the words of Dominique Bourg in an article from French newspaper Le Monde on 1.7.2014 :

« The goal is no longer to maximize our capacity to keep up with global competitiveness, but to adapt to a physical and biological world that grows ever more hostile to us, under pressure from climate change, and that is increasingly characterized by fewer sources of energy and resources.
One idea could be to delineate zones of no competition, in order to enable small groups to experiment with new ways of life and to develop collective know-hows. A way of life is not a lifestyle : it is never limited to the individual. No one here produces their own food, housing, clothes, etc.

This would come through enabling small groups to live at the margins of the common norm, organized around production laboratories (fab labs) and around cultivation methods promoting diversity, stability and resilience in the ecosystems (permaculture), all in all trying out low tech, robust and locally relevant techniques.

We suggest that differentiated policies could be useful in order to experiment. This would guarantee creativity and adaptation both. Promoting two different types of innovation – capitalistic, competitive and high-tech on the one hand ; social, collective, and low tech on a small scale on the other hand – would benefit to the whole of society while supporting nation-wide activity and dynamism.».

This approach is in the right line of tactical urbanism as theorized by a group of urban experts : a new way of thinking about city development that would experiment on the needs of the actors and adapt the urban space through punctual interventions led by groups of inhabitants.

The transition for energy and the environment requires to work on the most entrenched practices in order to support the evolution of economic systems and lifestyles. How can the change be supported and dynamism kept constant ? How can we breach the deep gaps between city and country, between local and international agriculture, between entropic and circular economy, between traveller's comfort and polluting-travel limitations, between developing a whole territory and valuing its component parts ?

About Les Ateliers

Les Ateliers are a non-profit association network of professionals, researchers and decision-makers in the field of urban planning. Les Ateliers focuses on the methods and application of urban planning through workshops made to foster innovation and creativity.

Workshop pilots
Benoît VERNIERE / Baptiste DURAND / Jean-Michel VINCENT, pilots
Lorraine PEYNICHOU, assistant-pilot
Claire VIGE HELIE / Léa MORFOISSE, permanent team for Les Ateliers

For any further information, please refer to our website www.ateliers.org or contact us at transition@ateliers.org

Introducing the workshops

In France and abroad, the workshops provide urban planners with a foreign international outlook and innovative proposals for their planning issues. Where Les Ateliers once only focused on the issues of planning in the Ile-de-Franceregion (one workshop per summer since 1982), the association has since developed a strong expertise in Asia (Tokyo, Doi Tung, Canton, Shanghai, Ho Chi Minh, An Giang, Can Gio, Phnom Penh, Bangkok, Cao Lahn, Changzhou) and have diversified by organizing workshops around the Mediterranean (Casablanca, Marseille, Diyarbakir), in Africa (Benin, Senegal, Mali, Cameroon) and in Latin America (Brazil, Mexico).

Organization of the workshop

The workshop will run according to the original methodology coined by Les Ateliers, which brings together, for one month, students and young professionals from varied origins and backgrounds, in four teams of six participants each.

The first few days are devoted to visits and interviews. During the opening ceremony, local and institutional stakeholders have the opportunity to express directly for participants their outlook and expectations related to the workshop topic. The pilots then split the group into teams, and the teams start working as a group, with no computers. At the close of the first week, the first exchange forum is an essential event during which teams can present their analysis and first proposals to other participants and to a local committee, which then freely offers comments and reactions.

Starting in the second week, teams work on finalizing their proposals, now with the support of computers, to prepare a written and graphical presentation that will be upheld before the international jury. The workshop jury acts as a « fourth team ». Their work is not so much to judge and rank teams as to select interesting proposals and run with them, identifying the most relevant outputs of the projects and analysis. The workshop is not a competition, since there is no prize nor market to be won. What teams work for is the capacity to collectively produce – within teams and with the jury – innovative outlooks and relevant, realistic outlines for action.

Application and Calendar

All backgrounds are welcome to the workshop !

Artists, urban planners, designers, architects, agronomists, sociologists, geographers, economists, engineers, photographs, landscape architects… and others : the workshop is open to young professionals from all countries and backgrounds, and to students with a minimum of a Masters level.
Sole constraints : Good mastery of English, complete availability for the duration of the workshop, age 30 or below.
More information and/ or documentation please contact :
transition@ateliers.org

Application :
24 international participants will be selected to work in 4 teams of 6, under professional guidance, on the basis of an application sent **before May the 5th, 2014** as **a single pdf document**(title : SURNAME_Name) containing, in that order :
1. The completedapplication file downloaded from www.ateliers.org
2. 1- or 2-page Resume
3. Personal work on the theme of the workshop : reflexion and project on the theme of the workshop but applied to a different area, ideally in the applicant's country of origin. This work will support the personal thought process of applicants before the workshop. It should your own and personal work (maximum of 8 A4 sheets or 3 A3 sheets). Pair work is accepted under the condition that the work of each member be clearly identified.

The application work must be sent to transition@ateliers.org

Selection results will be communicated at the beginning of June 2014.

Dates and Location :
The workshop will be held in Essonne and in Cergy-Pontoise from the 1st to the 26th of September 2014.

Budget :
Registration costs amount to 300 euro and include housing, some meals, visits and conferences, as well as drawing materials. Registration fees can be waived for scholarship students on the basis of social criteria.
Transportation costs to the workshop location (Essonne or Cergy-Pontoise) are at the expense of participants.

Diploma :
Participation in the workshop entails a partnership with Cergy-Pontoise University and results in a university diploma and 12 ECTS credits.

Application and Calendar

SATURDAY AND SUNDAY	30/08 et 31/08	Participants arrival
MONDAY	01/09	Introduction to the workshop + Site visit
TUESDAY	02/09	Site visit
WEDNESDAY	03/09	Site visit
THURSDAY	04/09	Site visit
FRIDAY	05/09	Site visit
SATURDAY	06/09	Free
SUNDAY	07/09	Free
MONDAY	08/09	Group work
TUESDAY	09/09	Group work
WEDNESDAY	10/09	Group work
THURSDAY	11/09	Group work
FRIDAY	12/09	9h30 – 16h at the Arts School : 1st Exchange Forum
SATURDAY	13/09	Group work
SUNDAY	14/09	Free
MONDAY	15/09	Group work
TUESDAY	16/09	Group work
WEDNESDAY	17/09	Group work
THURSDAY	18/09	Group work
FRIDAY	19/09	9h30 – 16h at the Arts School : 2nd Exchange Forum
SATURDAY	20/09	Group work
SUNDAY	21/09	Free
MONDAY	22/09	Group work
TUESDAY	23/09	Group work + Jury members arrival
WEDNESDAY	24/09	Group work Hand in graphical production Visits and interviews for jury members
THURSDAY	25/09	Presentation rehearsal Jury gets to know the projects
FRIDAY	26/09	9h : International Jury 20h : Party
SATURDAY	27/09	departure

Immeuble Le Verger – Rue de la Gare
BP 90047 - 95020 Cergy-Pontoise Cedex
S www.ateliers.org | **E** contact@ateliers.org
T +33 1 34 41 93 91