egis

SLOW CITY

A CALMER CITY

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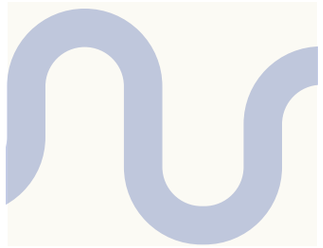

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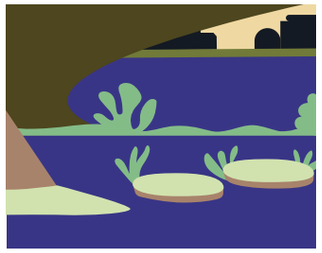

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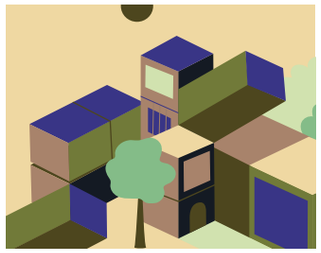

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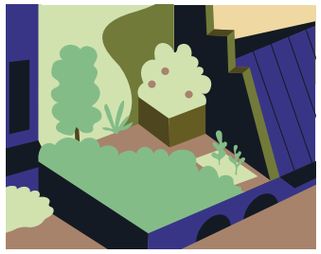

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SUMMARY

Slow City : the path to a calmer city

In a world where speed is often synonymous with progress, the notion of the Slow City is emerging as a counterweight. It's an invitation to rethink our urban ecosystems to make them more humane, sustainable and balanced.

The *"Slow City"* is a calmer city because it integrates several speeds, and it manages to make different rhythms coexist. It's in this perspective that we need to consider the future of our cities, marked by rapid urbanization and populations with mixed expectations.

However, the road to this *"slow"* city is not without its challenges.

The first is economic. As Catherine Jatteau points out in her article *"Nature in the city: a sustainable investment"*, one of the major challenges of the next few years will be to raise awareness of the virtuous nature of nature-based solutions. Many of these solutions have already proved their effectiveness, and are proving to be real economic alternatives to urban problems such as the decontamination of industrial wasteland, provided they are considered at the design stage.

On a technical level, the challenge will be to develop our ability to imagine and design projects that reconcile the city, its users and their natural environment. A case in point is the *"Promenade Bleue"* project in Asnières-Sur-Seine, where users can already experiment with a calmed island. We are proud to have completed this large-scale project, which, by offering a breathing space both inside and outside the city, aims to restore water, rivers and streams to a central role in urban development and people's daily lives.

Finally, the technological stakes are high.

We need to *"jump on the bandwagon"* of recent technological advances. As Marie Vorgan Le Barzic points out in her article *"Building for tomorrow's need : the digital advantage"*, digital tools are changing our relationship with time in project design. They enable us to reallocate time to the design of the city's constituent elements, and therefore to design with more parameters in mind: sobriety, carbon, and biodiversity for increased well-being in the city.

This calm, fluid city is a necessary paradigm for our cities, offering a refreshing alternative to rapid urbanization and the frenzy of modern life. By implementing these principles in our designs, I'm convinced we'll help create cities in which all users can flourish.

In this respect, our next dossier will focus on the city and health, two concepts with a long shared history. The years to come will be full of topicality, and this is what we will try to illustrate in this next issue!

Thomas Salvant

Executive Director, Energy & Sustainable Cities, Egis

In praise of slow cities

" What we're talking about then is not so much slowing down as producing a city that will make speeds possible, that will reconcile them."

Morgan Poulizac

Urban planner and urban foresight specialist

In his science fiction classic *Fahrenheit 451,* published in 1953, Ray Bradbury describes a city where books are outlawed and must be burned. There are no speed limits on the roads of this city. Instead, drivers must observe a minimum speed: an obligation which discourages them from paying too much attention to what's around them, except to view the advertising billboards which line the roads. It also prevents them from thinking while they're driving; the blur of speed, and the fear of accidents, leave no room for other thoughts.

City and speed are closely linked. The urban expansion of the 20th century was closely bound up with the rise of the automobile, which reduced travel times and allowed cities to expand. In the early decades of the 20th century, speed was a synonym of modernity, acceleration a symbol of increased efficiency (of production lines, processes, cycles, exchanges etc.).

And acceleration increasingly marks many aspects of life in the city: in moving around, in forms of consumption (fast fashion, fast food), in the formation of social and affective rapports, right down to contemporary *"same day"* deliveries.

La vitesse fait pourtant l'objet de contestations, historiquement par antimodernité, par Speed had its opponents, however: historically, among the anti-modernists, in the 1970s among the opponents of capitalism, and more recently in the environmental movement. For many observers (including French philosopher Paul Virilio, whose Speed and Politics was first published in 1977), speed is an expression of violence – one of the instruments of oppression wielded by the powerful and by blind market forces (with rampant consumerism, everything is fast); for others, speed attests to a will to dominate nature (this is the argument advanced by philosopher Hartmut Rosa in his book Social Acceleration, first published in 2010) and the withdrawal from the self (never *"having the time"*, never being available).

Several movements have emerged in opposition to the acceleration of our lives and cities, calling instead for a global slowdown. These movements break down into two principal tendencies. The first emerged in the 1980s under the influence of urban theorist Jan Gehl. In this tendency, cities should be planned at a *"human scale"*, and therefore at a human speed: as stress-free environments where everything is within walking distance. The second movement is more recent and more political. It calls for a rupture with the concept of growth and professes the virtues of the slow city - a city that takes its time, with a return to short cycles and lower consumption. One offshoot of this second movement calls for a break with the whole urban model and a return to country life, even if only on a part-time basis (a position not without its contradictions).

What does today's slow city look like?

A slow city is not necessarily a sluggish city. Even if the construction of urban expressways is no longer a priority in cities, that doesn't mean they don't seek to guarantee the pace and fluidity of movement which make them work (a congested city is no example for anyone). The question, then, is not to slow things down but to produce a city which accommodates different speeds and allows them to co-exist.

A slow city has three intrinsic qualities:

It's an inclusive city for slower users

A slow city allows different rhythms and paces of life to co-exist without tension. Nobody's forced to keep up with the fastest: instead, speed is managed and confined to the appropriate channels. This is the big challenge facing today's cities: the need to create new models of circulations that combine different uses and practices and respects the right to be slow. Recent controversies on the hazards posed by electric scooters are prompted less by the actual speed of these machines than by the threat they pose to the safety of people moving more slowly and in close proximity. The first rule of the slow city is that the slowest users can always negotiate the city without putting themselves in peril. The slow city adapts to slow movement, even if that means questioning the pre-eminence of majority modes of transport.

It's a city that strikes a balance

The decision by many cities to reduce vehicle speed limits has caused annoyance and consternation among many users. But these frictions express much more than the sterile opposition of factions who refuse to understand each other (although this is undoubtedly the case in many instances). They also reflect differences of purpose, which must be reconciled in a functioning city. While it's normal for tourists to want to *"take their time"* when they're visiting a city, the desire on the part of the city's commuters to get home as quickly as possible is equally legitimate. The slow city is one which strikes a compromise, and allows intrinsically contradictory patterns of use to co-exist in the same space. The second rule: the slow city is a constantly-evolving consensus.

It's a city where spare time counts

The people who produce our cities are pressed by the need to *"accelerate"*: promoters, because *"time is money"*, elected officials, because slowness *"is a mark of incompetence"*, and engineers, because speed *"is a sign of efficiency"*.

Every slow city must take these considerations into account if it's to become a reality and not a utopia. But it can uphold the virtues of slowness in the organic processes of the city: allowing time to stroll and contemplate, time to stop and talk with others, time for the city itself to take the time to build projects without circumventing natural rhythms. In this regard Hartmut Rosa speaks of a *"reconquest of availability"*: and what evidently holds for new technologies also holds for our experience of the city. The slow city, then, does not turn its back on progress. It affirms the primacy of the human over the mechanical. Which brings us to the third rule of the slow city: to make spare time count. For spare time is a precious commodity which enriches the city.

Author
Morgan Poulizac
Urban planner and urban foresight specialist

Nature in the city: a sustainable and cost-effective investment

" By integrating the slow cycle of nature into urban planning, we can not only respond to today's environmental challenges, but also create urban spaces where it's good to live without losing out financially."

Catherine Jatteau

Director, Environment, Egis

In our quest for rapid progress, one fundamental aspect has often been neglected: sustainability. The result is that Western cities, built on the premise of immediacy, are now suffocating under the weight of their own short-term thinking. Each summer they suffocate a little more, losing their appeal to their inhabitants in search of comfort and meaning. To breathe new life into these urban spaces, it is essential to turn to nature. But this reorientation raises a crucial question: how can we reconcile nature's slow pace with the need for economically viable solutions?

Nature-based solutions are nothing new. However, by demonstrating their extremely virtuous nature, they are now gaining in recognition. Numerous examples demonstrate that nature-based solutions can be cost-effective alternatives to a number of urban problems. Provided, however, that they are taken into account right from the design stage, and that we understand how to make the most of nature's long cycle.

Take polluted sites and soils, for example. The most radical way of dealing with them is to excavate the soil and send it to a treatment center. Once there, the soil is either incinerated or chemically washed. I don't need to give you the exact definition of these two treatment methods! Both are as radical as they are costly, and both put a stop to a large number of projects. This, too, is nothing new. Thirty years ago, I was already asking myself: how could cities like Paris be made up of polluted industrial wastelands on which no project was planned? It was only with time and experience that the answer became clear to me: urban developers often have a biased view of these lands. Why? The cost of these radical solutions. In practice, to undertake a development project, clean-up studies are carried out. However, according to most of them, no project can be envisaged if the economic balance sheet of an urban project (whatever it may be) would not support a clean-up costing as much as excavation.

Phytoremediation: a virtuous and economical choice

It's easy to think that pollution remediation studies are reliable because they logically consider all existing solutions. And yet, if we take a step back, other solutions that make sense and are equal to the many climatic and environmental challenges of our century seem obvious. They are all natural methods, based on nature. "Too long", some may think! "Not economically viable enough," say others. But these natural solutions, provided by nature itself, now have the power to make sense of a polluted wasteland that no one wants, but that the city needs!

Industrial development has made us forget that nature is well designed. And it is precisely the consequences of this industrialisation and climate change that are now reminding us that there are plants that can absorb pollutants and thus remove pollution naturally. The other good news is that planting is not expensive. In fact, it's a triple win for :

- Urban biodiversity, which also helps to combat urban heat islands;
- Improved air quality and storm water management.
  Remember, healthy soil absorbs more carbon and filters more water!

Using time wisely to make the most of it

"Plants are ideal, but they need time to act, and time is money... Taking more time is often incompatible with the constraints and requirements of an urban project." These are classic remarks that need to be put into perspective. An unused polluted industrial site in or near the city is quickly subject to insecurity, unhealthy conditions or even illegal dumping. A wart that damages the image of the town and the daily lives of its inhabitants. Initiating a natural decontamination process by planting suitable vegetation will certainly take longer than treatment after excavation. But that doesn't mean that there won't be any benefits until the site is completely cleaned up! For example, by bringing the soil back to life, plants open the door to other temporary uses. Brownfield sites, for example, are fantastic tools for raising awareness of biodiversity. All you have to do is create an educational trail to discover certain plants. This shows that time, often perceived as a cost, can become an asset if we know how to use it wisely. This applies not only to wasteland, but also to any other urban space.

Rewarding sustainable behaviour

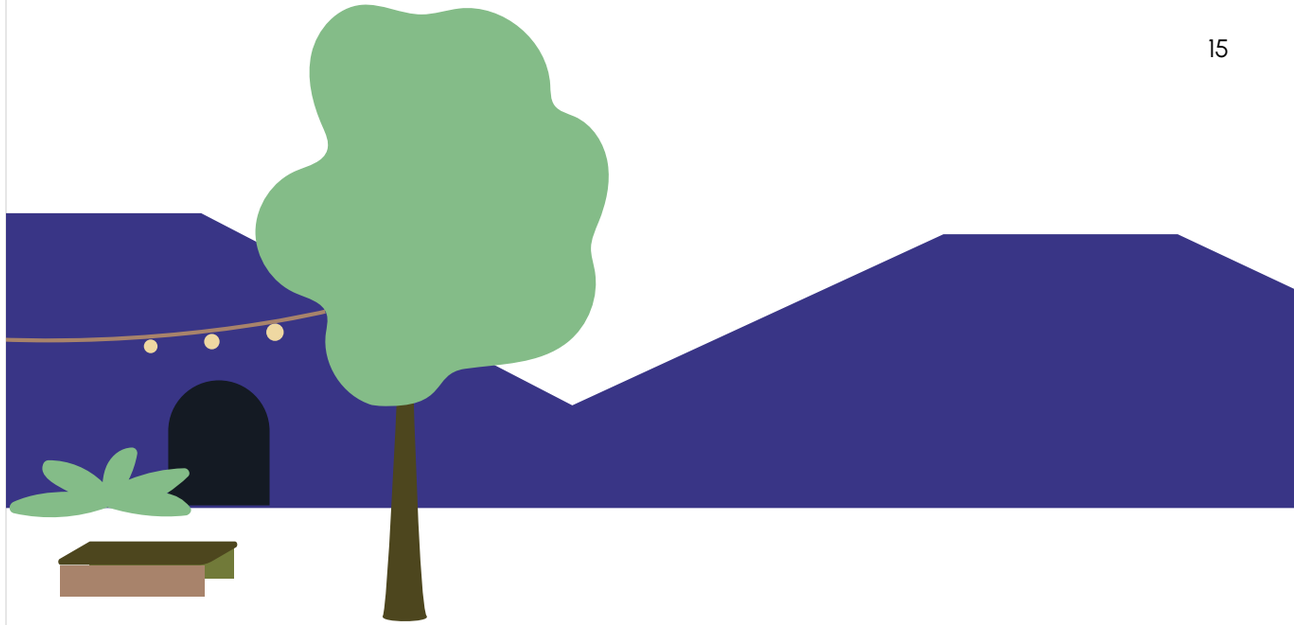
The only downside is that the main obstacle to the adoption of such methods lies in the current structure of economic and regulatory incentives. Let's face it, contractors have no incentive whatsoever to find more virtuous and less costly solutions. This is because most of them are paid on the basis of a percentage of the cost of the work. This inconsistency requires not only a change in the rules, but also a fundamental change in the way tenders are organised. To encourage the adoption of more environmentally friendly practices, all contractors who favour this type of approach should be rewarded and not penalised by a reduction in their remuneration.

Unlocking the potential of urban land through nature

Many public and private stakeholders have unused land in cities and towns that, far from being just empty space, has considerable environmental and economic potential. Often perceived as a burden to maintain, this land can be transformed into a valuable carbon sink if managed wisely. Again, the key is to adopt nature-based solutions. By selecting plant species with strong root and aerial development, these spaces can activate their carbon sequestration capacity while requiring minimal maintenance. This approach not only reduces operating costs, but also offers significant co-benefits to the city from the moment the planting is carried out: combating urban heat islands, improving air quality, social acculturation in favour of biodiversity, etc.

This process is a perfect example of how nature's long time frame can be harmoniously integrated into the urban fabric to produce economically viable solutions. Plants take time to grow, that's a fact. But if a project is well designed, it is possible to combine environmental and economic interests. The rhythm of nature requires urban projects to be designed in a way that moves away from traditional approaches such as road or concrete construction. In this sense, it is essential to take into account the specific characteristics of the soil and climate, including their future evolution. This obviously extends the design phase. On the other hand, the implementation and acceptance phase will be much faster! The end result is a more socially, environmentally and economically virtuous project.

Following the cycle of nature opens up new possibilities, but above all it is in line with the philosophy of the *'Slow City'*, which aims to create urban spaces where residents can take the time to appreciate and experience their environment to the full. An approach that naturally implies that the design itself takes time. Time for what? Time to think sustainably in order to make savings, to anticipate tomorrow's uses so as to avoid having to invest again, to implement natural spaces that are adapted to climatic contexts, but also to the general demand of citizens to give cities the possibility of remaining attractive for a long time.



A cost-effective ecosystem approach

The ecosystem approach to nature and the city is proving not only profitable, but also essential for anticipating and adapting to future challenges, particularly climate change. Thanks to the principle of genetic selection, for example, it is now possible to choose plants on the basis of their real capacity to adapt to an area, but also to its potential for climate change. This selection enables plants to stand up better over time than certain inert materials, paving the way for more adaptive and resilient urban development. This notion of adapting to climate change is very new among developers, and also implies that long-term planning should no longer be seen as an obstacle, but as an opportunity. An awareness that is far from collective! This is borne out by the Greater Paris projects, which were not designed to adapt to climate change and which, in the face of predictions, run the risk of rapidly becoming obsolete, requiring new investment in the medium term. Further proof, if proof were needed, that it is not nature's long cycle that represents an economic challenge, but rather mankind's inability to integrate it effectively into its urban development plans.

It's time to rethink our economic and regulatory approach to encourage the development of nature-based solutions. Far from being an economic burden, these methods are a wise investment in the future, promising more resilient, healthy and sustainable cities. By integrating the slow cycle of nature into urban planning, we can not only respond to today's environmental challenges, but also create urban spaces that are great places to live without losing out financially.

Author
Catherine Jatteau
Director, Environment, Egis

Reconnecting with water: an urban challenge

" The 'Promenade Bleue' project aims above all to re-establish a close link between the city and the river. It aims to restore water to a central role in urban development."

Céline Boittin

Project manager, waterway and maritime developments, Egis

Water plays a vital role in the development and prosperity of cities. Over the centuries, many cities have grown up along rivers, lakes and coastlines, benefiting from access to this precious resource. However, as cities have developed and industrialised, the link between water and the city has often weakened. Today, more and more cities around the world are seeking to reconnect with water and reintegrate this vital element into their urban fabric. A challenge with many benefits!

Water, the resource behind some cities

Many great historic cities owe their existence to their proximity to natural sources of water. Rivers, lakes and oceans have long been essential transport routes, enabling trade, fishing and the supply of drinking water. Cities such as Venice, Amsterdam, Paris and Bangkok owe their unique character to their systems of canals, rivers and harbours.

But with the rapid urbanisation and industrialisation of the last two centuries, many cities have turned their backs on the water. Rivers have been channeled, wetlands drained and coastlines turned into industrial estates. This neglect has often led to environmental problems such as water pollution, loss of biodiversity and increased flood risk. Not to mention the negative impact on local morale.

Reconnecting with water to promote urban well-being

Many cities are waking up to the importance of reintegrating water into their urban development. To this end, they are undertaking initiatives to restore waterways, create riverside parks and promote sustainable waterborne mobility.

These efforts aim to improve the quality of life for citizens and strengthen urban resilience in the face of environmental challenges.

Water, already at the heart of many urban projects around the world

Several cities around the world have successfully implemented water reintegration projects. In Melbourne, Australia, the Docklands precinct project was developed by reintegrating water into the city. It includes green spaces along the quays, navigable canals and public access to the banks of the Yarra River. The aim is to bring peace and tranquillity to the city's residents. Copenhagen is also known for its innovative approach to water management.

The city has created public spaces along its quays to bring residents closer to the water. What's more, the Nordhavn district development project has paid particular attention to reintegrating water into the urban environment, with the creation of navigable canals and green spaces along the water's edge. France is not to be outdone! In Asnières-Sur-Seine (92), the *"Promenade Bleue"* will link the Asnières and Clichy bridges in a few years' time. This major project is part of the *"Plan for the development of the Seine and its banks"* supported by the Hauts-de-Seine département.

The *"Blue Promenade"* project is an opportunity to create a link between the city and the new port activities. All this in a harmonious and relevant way, re-establishing a strong connection between land and water. In practice, the project provides for fluid transitions and buffer spaces that allow for a gradual transition from water to land. The geometry and treatment of this promenade have been designed to reassert the connection between the banks and the Seine in a way that will have an impact on residents. Like a backbone, the *"Promenade Bleue"* will not only support new urban uses, but will also encourage the biodiversity that is specific to this buffer space, acting as an interface between the river and the sloping urban area. Gone will be the stress of the RDN7 and its dense traffic. Thanks to the *"Promenade Bleue"*, pedestrians will be able to move easily from the city centre to the banks of the river and enjoy a journey that doesn't take place in urban time. It's a pleasant way to get around, while enjoying the fresh air and reconnecting with nature, both on land and in the water.

Soon a promenade along the Seine

The main aim of the *"Promenade Bleue"* project is to re-establish a strong link between the city and the river. It aims to restore the central role of the water in urban development, with new facilities, direct access to the banks and lively public spaces.

Objective: to reclaim the riverbank for local people

Today, pedestrians have no choice but to walk along the pavement of the Route Départementale 7 (RD7) or along the banks of the river.

Tomorrow, thanks to the Promenade Bleue, they will be able to enjoy an 800-metre route designed especially for them, accompanied by the sound of water, fauna and flora. A natural circuit where the urban dynamic is interrupted for the benefit of nature.

A real invitation to stroll! *"There is already a park at the top of the riverbank and we noticed that pedestrians stay there. Very few of them dare to go down to the riverbank (i.e. to the Seine), even though there is a footpath. The reason? It's not very attractive and the continuity from Port Bas to Port Van Gogh is not really obvious,"* continues the Egis River and Maritime Development Project Manager. *The idea behind the Promenade Bleue is to create a new, simple, even obvious proximity between the city's inhabitants and the Seine by offering them a walk along the water, with seating, picnic areas and places to rest".*

To encourage people to walk along the river and enjoy a moment in the heart of nature, away from the hustle and bustle of the city, access to the banks will be greatly facilitated (jetties, vantage points for a better view of the Seine, etc.). The aim is to offer a route accessible to all.

Author
Céline Boittin

Project manager, waterway and maritime developments, Egis

Four reasons to reconnect the city to water.

1. Improving quality of life.

Riverside green spaces and urban beaches provide residents with places to relax and enjoy themselves, enhancing their quality of life.

2. Sustainable mobility.

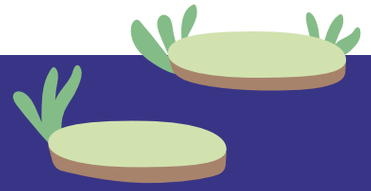
River and marine transport systems provide an environmentally friendly alternative to road congestion, reducing greenhouse gas emissions.

3. Storm water management.

By reintegrating water into the city, storm water can be better managed, reducing the risk of flooding and pollution.

4. Biodiversity.

Restoring aquatic ecosystems promotes urban biodiversity by creating habitats for local flora and fauna.



The Promenade Bleue is designed to open up Asnières-Sur-Seine to the Seine and vice versa, reconnecting the river with the city by removing the boundaries created in the past (concrete quays, etc.). The aim is also to enhance the banks of the river and, in particular, to give access to a more natural riverbank - a far cry from the concreted ones we're used to along the Parisian banks. The 800 metres of promenade will consist of almost 800 metres of plants.

It will be a bucolic area for families to stroll along at weekends, but also for commuters to get to work, as it will allow pedestrians to link up with two major routes. It won't take any longer than walking along the RD7 pavement, but the journey won't be the same - both environmentally and psychologically!

The floating promenade will also be illuminated with LED lights, making it accessible day and night. The aim is to link two areas of activity on either side of the future Promenade Bleue. These are the locations of the accommodation and the commercial boats.

PROMENADE BLEUE

Cities and birds: a harmonious duo ?

“ Urban green spaces and the presence of birds play a crucial role in promoting mental and physical health, offering places of peace and relaxation. They are also essential in the fight against pollution and climate change, acting as lungs for cities. ”

Hippolyte Pouchelle

Ecologist expert and technical referent in the biodiversity, ecological engineering and climate department, Egis

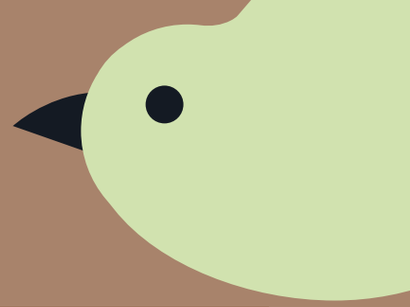
Imagine cities where birdsong blends with the urban hum, creating a natural symphony in the midst of concrete spaces. This vision, relegated to the realm of dreams as urbanisation accelerated, is gradually becoming a tangible reality. So much the better! The integration of biodiversity, and birds in particular, into urban environments is more than just an ecological embellishment; it's a fundamental change in the very concept of urban life.

Nature and human health: a vital link

The impact of nature on our mental health is undeniable. This is confirmed by numerous studies on the subject, such as the recent one by Geoffrey H. Donovan, which highlighted the dramatic consequences of biodiversity loss on human health, particularly cardiovascular and respiratory health. In short, according to this study, tree mortality increases human mortality. To reach this conclusion, Donovan, a biologist, analysed the disappearance of more than 100 million trees killed by the forest pest known as the emerald ash borer and found a significant increase in human mortality rates. *"I was interested in cardiovascular and respiratory diseases because they are influenced by air quality and stress,"* explained Geoffrey H. Donovan in an interview with PBS Radio, quoted by *huffingtonpost.fr*.

"In the 15 states infested by the beetle, the researcher found that 15,000 more people died of cardiovascular disease than the average in areas not affected by the insect," the news site reports. The same was true for respiratory diseases, with 6,000 more people dying in deforested areas. And as if to underline this link," the researcher also found that the longer the insect had been present in a region, the higher these mortality rates were, whereas it takes 'between 2 and 5 years for a tree to die'," as the biologist himself reminds us.

Other studies, such as those by Ulrich and Parsons, confirm the link between nature and human health. They show that the presence of vegetation has a calming and regenerative effect on the human psyche, underlining the importance of integrating nature into urban living spaces. Specifically, their research showed that hospitalised patients with views of green spaces from their windows recovered faster and required less pain medication than those with views of walls or sterile urban spaces. Similarly, studies in prisons show that inmates with access to natural spaces suffer less stress and anxiety. These findings underline the therapeutic power of nature, not only as a source of emotional wellbeing, but also as a factor influencing our physical health.



Current urban planning: an obstacle to the rhythm of birds

While these studies alone demonstrate the need for urban design that integrates nature, not as an additional aesthetic element, but as a fundamental component of the quality of life and health of city dwellers, the city itself is detrimental to the development of animal species that are essential to the sustainability of nature. Top of the list: birds! It's a widely recognised fact that human activity has an impact on the ecosystem in which it takes place. This is particularly true in cities, where many of the invisible species essential to maintaining the natural balance can no longer reproduce or rest. The cause? The artificialisation of urban areas. To curb this phenomenon, in 2019 Egis will launch the Landboost® project: a solution for the integration of life-inspired devices designed to encourage the return and sustainable settlement of species in urban environments. The result of in-depth research, these habitats combine advanced technology with respect for the environment. A symbiosis between human innovation and the natural needs of species.

Landboost®: the intelligent integration of biodiversity in urban development

Landboost® is a project that, as its name suggests, aims to increase the capacity of the habitat to host biodiversity," explains Hippolyte Pouchelle, ecologist and technical advisor in the Biodiversity, Ecological Engineering and Climate Department at Egis. *The objective is multiple: to reintroduce nature into the urban fabric for very basic reasons such as seed transport and insect predation, but also to preserve human health (physical and psychological). We have brought together all the expertise available at Egis (experts in ecology, buildings, engineering structures and road design) to develop integrated solutions that are both technically feasible and acceptable for accommodating biodiversity in current and future constructions".*

Several projects are underway and will see the light of day as early as 2024. Where? *"In a Parisian apartment block, where a colony of sparrows has taken up residence. This is thanks to the brick façade, which has allowed them to slip in and build a nest,"* continues Hippolyte Pouchelle. This apartment will soon have its external insulation replaced, but the brickwork will remain. However, wild animals will no longer be able to pass through. So we worked with the architects to ensure that a special reception area would be incorporated into the new façade. Another project involves the construction of a school canteen near Grenoble. We started with a study of the existing building to identify the reception areas that birds had created for themselves. The aim was to provide new, more suitable, shelters that would not have any long-term effects on the structure (cracks, holes, etc.).

Tomorrow's challenge: Balancing the needs of wildlife with the expectations of people

"Of course, nobody wants to see bird droppings on their doorstep or balcony! Fortunately, integrating birds into urban life does not impose this constraint. Thanks to our technical expertise, we know that a particular species will produce droppings at the base of its nest, and we can design appropriate solutions such as recuperators," explains the Egis ecologist.

For example, we make a lot of bat boxes that are open at the bottom so that their guano can be discharged directly into planted medians. Their droppings are in the form of small dry balls and make excellent fertiliser. Ultimately, all that's needed to make this a win-win situation is some targeted landscaping. Analyse the species that can actually nest on a frame and then ensure that they are properly accommodated. Conversely, for those species we don't want to welcome - and there are some - the challenge is to exclude them by sizing the holes or positioning the nest boxes. It's this technical expertise, combined with the construction experts at Egis, that enables us today to have our solutions tested and approved so that wildlife can thrive and people can enjoy their many benefits.

Contact with nature: a benefit to humanity

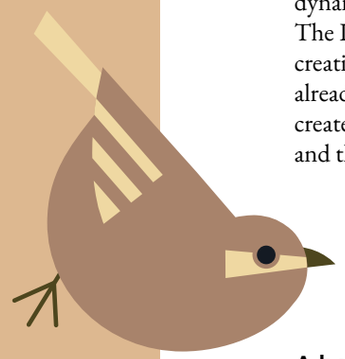
The relationship between people and nature is fundamental to our well-being. Urban green spaces and the presence of birds play a crucial role in promoting mental and physical health, providing places of peace and relaxation. They are also essential in the fight against pollution and climate change, acting as the lungs of cities. Indeed, living in a city to the rhythm of nature and its wildlife has many benefits. It contributes to better air quality and a reduction in the noise that reflects the frenetic dynamics of cities, but it also fosters a closer community and a heightened sense of responsibility towards the environment. Surrounded by birds, people are constantly reminded of the natural rhythm of nature and, indirectly, of their own inner rhythm.

Nature in the city: a question of availability

Hartmut Rosa's theory of *'availability'* offers a unique perspective on our relationship with the world around us. This theory emphasises the importance of a dynamic, reciprocal interaction between individuals and their environment that goes beyond mere physical presence or accessibility. In practice, availability implies that we are able to interact with, respond to and be affected by our environment in meaningful ways. In the urban context, this means creating spaces where nature is not only present, but is actively integrated and engaged with city dwellers. In other words, fostering environments where interactions with nature - such as tending a community garden, participating in educational programmes about local flora and fauna, or simply enjoying green spaces integrated into workplaces and living spaces where flora and fauna are present - become an everyday part of urban life.

This approach fosters a deeper, more meaningful relationship with nature that goes beyond aesthetics or functionality. An active engagement with the natural environment through which cities can foster a sense of belonging, well-being and environmental responsibility among their inhabitants. Not to mention the positive impact, not only on the mental and physical health of individuals, but also on the environmental sustainability of the city itself.

A theory that encourages urban planners and decision-makers to see nature and wildlife in the city not as a luxury or an add-on, but as an essential element of a balanced and enriching urban life. In practice, this means redesigning urban spaces to become dynamic places where interactions with nature are facilitated, encouraged and valued. The Landboost project is and will continue to contribute to this need. Moreover, by creating structures that facilitate the life and reproduction of various species, Egis is already demonstrating how technology and ecology can also be perfectly combined to create more liveable and sustainable cities, respecting the rhythms of fauna and flora and those necessary for human equilibrium.



A balanced coexistence between man and nature is possible!

The vision of a city punctuated by nature is not a utopia, but an achievable and essential goal for the future. The innovative approach of the Landboost project and the thinking inspired by Hartmut Rosa's theories on 'availability' pave the way for cities where nature and humanity coexist in harmony. By actively integrating biodiversity into our urban environments, we are not only responding to an ecological imperative, we are enriching our living experience, improving our mental and physical well-being and playing an active role in preserving our planet. All the more reason to prioritise our objectives and the time we devote to them!

Author

Hippolyte Pouchelle

Ecologist expert and technical referent in the biodiversity, ecological engineering and climate department, Egis

Sustainable transport: the key to urban transformation

" A slow city is one that reduces its carbon footprint. Thermal engines are still the main emitters of greenhouse gases, hence the need to decarbonize the public transport network."

Philippe Rouland

Director, surface transportation and urban development, Egis

The concept of the "Calmed City" is emerging as a concrete response to the growing challenges of congestion and air pollution. At the heart of this vision, public transport, soft mobility and the organisation of urban services appear to be the main levers of an urban policy that favours environmentally friendly modes of transport and redesigns urban spaces to make them more pleasant to live in. A calmer city is first and foremost a question of mobility.

Rethinking travel

In France, no city, large or small, seems to be spared from this movement to reclaim the city centre. A genuine ecological response to the *"all-car"* movement of the last century, its main aim is to reduce the role of the car in favour of virtuous modes of transport - public transport, soft mobility, low-emission vehicles (see box *1) - in order to give the city back to its inhabitants or, better still, to reconcile it with its users. In practical terms, a calmer city must be able to control the flow of traffic, but it must also be able to bring the crèche closer to the baby, the workplace closer to the worker, the service closer to the citizen.

From Lyon (see box *2) to Annecy and Le Mans, local authorities are competing with each other in their ingenuity to give walking, cycling (see box *3), electric scooters and all other low-impact forms of transport the place they deserve.

A highly political issue, this green wave on which so many local authorities are surfing is not without its detractors. By drastically restricting the flow of cars into the heart of the metropolis, some people cannot help but see it as a sign of the exclusion of the suburbs, the consequence of which would have no other name than... social segregation. But this is not true. Road congestion has always existed. All you have to do is open a new urban road in a suburb and sooner or later it will be saturated with cars. The miracle solution is a mirage, a gamble, a fantasy. What counts for the success of projects is the bargaining chip! Understanding the gridlock caused by car congestion in towns and cities, the advantages of the proposed alternative, clearly identifying the benefits for the residents and businesses who contribute to the funding of these projects - the legitimate counterpart of the money paid out, making it possible to fulfil all the desires called tramways. Local authorities have spared no expense in this area. Virtually every town in France now has one or more exclusive public transport lines, projects to which Egis has made a major contribution in recent years (see box *4).

LOW EMISSION ZONE.

A Low Emission Zone (LEZ) is a defined geographical area where motorised vehicles are restricted from entering the city depending on their level of pollution. The aim of an LEZ is to reduce greenhouse gases and other particulate matter emitted by motor vehicles. To achieve this, an EPZ encourages the use of cleaner vehicles, the most polluting of which may be subject to special pricing or even bans. In France, EPZs are regulated by the 2015 law on energy transition for green growth.

*1

LYON PART-DIEU INTERCHANGE AND DISTRICT: AN EMBLEMATIC PROJECT FOR A CALMER CITY.

Led by Egis as part of a project management team that includes AUC and BAS SMET, the project to renovate the public spaces around Part-Dieu station is a major reference for the Group in terms of urban engineering. Launched in December 2015, the project covers all the development phases, from design to handover.

The Part-Dieu project, which has been underway for 15 years, is characterised by its complexity (restructuring of the station, development of the PEM, creation of infrastructure, need to reconcile public and private activities in a dynamic urban space).The aim is to create a resilient, inclusive and liveable urban environment by 2029, with a focus on low-carbon mobility. This will include developments that promote public transport, active transport and extensive greening of spaces to decarbonise the area.

The difficulty of the project also lies in the multi-functional nature of the district and the need to maintain existing functions throughout the construction process. Public spaces have been redesigned to accommodate a variety of uses, with wider pavements, specific planting, appropriate street furniture and new street lighting.

Divided into several phases, the project will be partially handed over in some areas in 2019, with the final handover of Egis' area of activity scheduled for April 2024. The project is colossal in terms of its surface area (13 hectares, including 75,000 m² for development) and its total cost is estimated at €50 million.)

*2

CHRONOVÉLO: PEDAL POWER FOR THE LE MANS URBAN CIRCUIT.

In Le Mans, the teams have won the project management contract for the Chronovélo cycle network. Scheduled for completion in the summer of 2029, the project aims to promote the use of bicycles by creating reliable, safe and user-oriented cycle routes in the 20 communes of the Le Mans conurbation, adding 190 new kilometres to the existing 155 km, for a total of 345 km. They are working on a 60 km connection. The aim of this inter-communal link is to connect the various districts of the conurbation and the major centres in the area.

The project faces a number of challenges, including the sharing of public space between users. To meet these challenges, it is necessary to remove certain lanes, reduce the number of parking spaces and adjust the width of pavements - delicate operations which, if they are to be accepted by as many people as possible, require a degree of ecumenism in the decision-making and design process.

*3

Decarbonising city centres

As an alternative to our over-reliance on private cars, a quieter city is also one that reduces its carbon footprint. Even in the post-industrial era, internal combustion engines are still the main emitters of greenhouse gases, so we need to decarbonise our public transport network. Pollution is one of the reasons why, in the late 1980s and early 1990s, France's major cities opted for trams rather than buses, which at that time were mainly diesel-powered. Today, the situation has changed and it is not uncommon for a number of local authorities to consider Bus Rapid Transit (BRT) solutions (see box *5) which, for certain levels of traffic, can provide full satisfaction in terms of commercial speed, CO2 emissions and integration into the road network.

A favourable context

There's no denying it: the reason why projects to reduce the number of cars in towns and cities are gaining ground all over France is because they're so popular! Judging by the number of projects in progress, planned or under study, the market could not be more buoyant. From pre-project to commissioning, Egis is able to carry out between 80% and 100% of the tasks entrusted to it in this field, whether it be feasibility studies for the realisation of projects or project management for their implementation. In terms of business volume, this is a development opportunity for Egis, which has a very wide range of skills in the fields of traffic management, urban development and transport systems.

What's next?

The planned systemisation of the electric vehicle will add a new unknown to the equation. While the idea may still seem a little futuristic, it's clear that tomorrow's postcard is more science than fiction. Whether Philip K. Dick (Do Androids Dream of Electric Sheep) or his great admirer Ridley Scott (Blade Runner) like it or not, the challenges of electromobility will not be without problems of integration into the city. For example, the initial groundswell of support eventually backfired on another major emerging player in mobility: the electric scooter. In Paris, it even lost the popular vote.

Finally, climate change will force all stakeholders to rethink public spaces to adapt to major heat waves. In the future, the cooling of cities, particularly through greening, will undoubtedly join mobility as a new major challenge for the tranquil city. Needless to say, Egis is ready to meet this challenge!

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THE TRAM, A VERY "NICE" MODE.

The Nice Côte d'Azur tramway network, which is radically transforming the city's mobility offer, currently comprises three lines (T1, T2, T3 and T4 to be completed) connecting various strategic points in the city, including the port and the airport. The T2 and T3 lines, which will be completed in 2019, have been built without overhead lines thanks to an innovative ground-based static charging system. The future T4 line will further extend the network. As a partner of the MNCA, Egis has been involved in the design and construction of the T2 and T3 lines, projects with groundbreaking innovations such as the fast charging of on-board batteries on the ground in 20 seconds. In order to minimise the impact of the tunnel section, earthworks were carried out underneath the tunnel, while the construction site endeavoured to minimise inconvenience to local residents. Another notable aspect of the project was its eco-design, with some 2,400 trees planted along the route, creating a veritable ribbon of green along several of the city's main roads. The local population was even consulted on the choice of tree species to suit the local climate. The Nice tramway is a major step forward for the region in terms of sustainable mobility, creating a network renowned for its ingenious, environmentally friendly solutions.

*4

BHNS AND ZFE: TWO COMPLEMENTARY PROJECTS FOR ANNECY.

Egis is involved in two major projects for the Annecy conurbation. The first aims to create a five-branch public transport network (TCSP) to provide an alternative to the car, which is ubiquitous in the area. The second project meets the legal requirement to create a Low Emission Zone (LEZ*) by the end of 2024.

For the first project, Egis is working with the Gautier Conquet PUMA architectural studio and Profils Études to build almost 40 km of fully integrated UPT/ERW. Three of the five branches will be HQPT, while the choice of mode for the other two (bus or tram) has yet to be decided. The study covers the integration of the project into the road network, the choice of rolling stock, operating systems and the bus and tram workshop.

The project faces a number of challenges, not least of which is the narrowness of the road, which makes it difficult to integrate the UPT/ERW and the associated cycleway. Another special feature is the rehabilitation of an abandoned tunnel, the Puya Tunnel, to accommodate a section of the single-lane busway. Specific discussions are underway with the relevant government authorities to obtain the necessary authorisations for the project to go ahead, not forgetting public consultation, a crucial stage before the project is launched.

Egis is working with ADALTYS and Interface-Transports to define the boundaries of the EPZ. Several scenarios have been defined regarding the geographical perimeters, the types of vehicles concerned and the Crit'Air stickers. Four workshops have already been held to involve local stakeholders. All that remains to be done is to draw up the technical file, assess the impact on mobility, air quality and socio-economic relevance, obtain exemptions, define the accompanying measures and the timetable for their implementation.

*5

Building for tomorrow's needs: The digital advantage

" At a time when everything is accelerating, including the human desire to live better, digital technology is a valuable tool for rethinking the way we design living spaces, taking into account real human expectations and the planet's essential needs."

Marie-Vorgan Le Barzic

Director, strategy and transformation, energy and sustainable cities, Egis

Digital technology helps to integrate buildings into the living environment and the city. Thanks to digital technology, it is now possible to gain a better understanding of how people use buildings today, while anticipating how they will use them tomorrow and anticipating unexpected developments. How can we do this? Thanks to data! Properly processed, data widens the field of vision of those involved in the construction industry, enabling them to target more accurately. It's a rich resource that opens the way to buildings that are as useful as they are virtuous, to modular constructions that are relevant and (almost) limitless. It's a wealth that allows us to move faster, to take time where it's needed, to build for tomorrow. But does the construction industry have the time?

Thanks to its mastery of a certain amount of data essential to design (in particular the carbon, cost and energy consumption associated with defined infrastructures) digital technology is able to intervene in the different time scales at play in the city. Reliable and practical, it can support and even clarify the choices made by operators in the sector, enabling them to make structuring choices capable of placing their buildings or infrastructures, whatever they may be (nuclear power station, hospital, motorway, etc.), in a long-term vision.

The evolution of buildings over time: the key role of digital technology

Today, only digital technology makes it possible to manipulate data to compare different parameters and guide contractors to reliable and relevant decisions over time. This is essential if we are to move towards resilient infrastructure while improving and sustaining use over time. In fact, this is the whole point of the so-called *"life cycle"*: to move beyond a simple vision of the construction phase. To achieve this, the challenge for both new and existing buildings is to take a long-term view. How can this be achieved? By thinking of the city as an evolving place, capable of responding to the diverse needs of its current and future users. And contrary to what you might think, thinking ahead also means thinking temporarily. The 2024 Olympic Games are a case in point. The infrastructure developed for this global event has been designed from the outset with other uses in mind, this time for the long term. This reversibility is in line with the social and environmental challenges facing the country. At the same time, it avoids the environmental problems associated with this type of construction, which is initially intended for temporary use. This reversibility is not only useful in this situation.

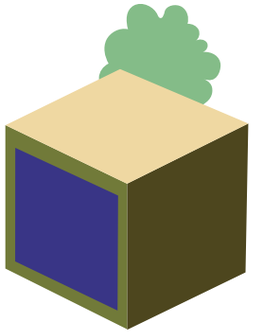
The reversibility of buildings: imagining the future to save time

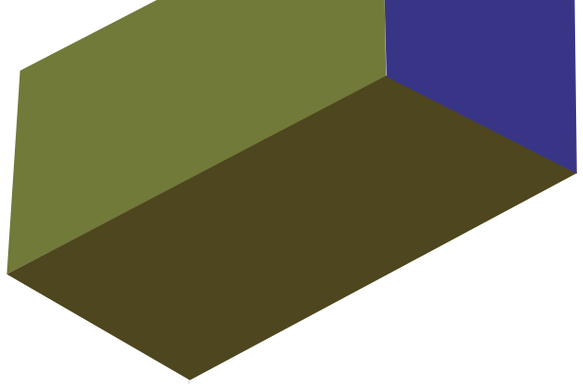
As people's habits evolve, time is often disrupted. What does this mean? Several years can pass between the time a developer starts designing a fifty-storey office building and the time the building is inaugurated. And yet, during that time, a revolution in use may well take place, rendering the building completely uninteresting as a place to work. So what should we do with the building when its design is no longer relevant to its target audience? It's worth noting that the only way to accommodate changes in use at an acceptable cost is to anticipate them from the outset. And this must be done digitally. And with good reason: the act of redoing is usually the reason for abandoning the project. By anticipating, i.e. taking the time before the design stage to identify what may evolve as society itself evolves, it is entirely possible to be part of the evolution of use itself and to adapt effectively to it. Those involved in a construction project will know how to adapt the building in progress, so they will be well informed and ready for change when it comes. This not only saves time, but also means they can respond more quickly to emerging needs. In short, it's a way of taking a long-term view thanks to improved responsiveness.

Far from being a waste of time, this work on the potential reversibility of a property represents an added value for any type of construction. It means that a social housing building is no longer simply defined (fixed) as such. Because of its design, it can easily be transformed into an office building, a logistics building or even a hospital if the need arises. The pandemic has reminded us how important it is to be able to react quickly! Of course, reversibility comes at a price and must be considered over time. In fact, it's almost inconceivable that it can be achieved at less than staggering cost unless we work with the agility and flexibility of data sets that can be modelled using digital tools driven by artificial intelligence.

Digital modelling to create living spaces that evolve and diversify

The data collected, analysed and compared using digital tools is the key to imagining the uses of tomorrow. They allow us to project ourselves into the future, giving a broader meaning, or even several meanings, to buildings to be renovated and to new constructions. Without digital technology, for example, it is very difficult to build external insulation, just as it is virtually impossible to build off-site. Modular construction (prefabricated buildings that are much more environmentally friendly), which can be used to reduce construction times, has its place in the city of the future. Everyone remembers the images from China of entire hospitals being built in a matter of weeks. Whether or not these images are true, it is important today to take stock of what off-site construction can offer: the ability to build quickly where there is demand, to meet a need in the short term (immediate and urgent).





Digital technology: accelerating informed decisions

Digital technology and the data it provides enable a higher quality of interaction with those involved in the construction industry and promote greener decision making. The result is cities that are good places to live, now and in the future, and good places to take the time to live. At a time when everything is speeding up, including people's desire to live better, digital technology is an invaluable tool for rethinking the way we design places to live, taking into account real human expectations and the essential needs of the planet. *"Yes, but analysing data is time-consuming and opens the door to endless reflection,"* some may think. *"It's a waste of time we don't have,"* say others. But it's the data that saves time. Time for what? In the arbitration phases. Thanks to data, it is possible to interact more effectively with the various parties involved in a project and, as a result, spend more time working together. More effective collaboration because it involves all the players in the construction industry.

Reallocating time for thoughtful design and operation

The time required for design, construction, implementation and operation fundamentally changes the way an infrastructure is designed for its users. But from a technical point of view, it is only by taking enough time and making the most of it, thanks to digital tools and data collection, that it is possible to make coherent and sustainable decisions. This applies to all stakeholders. Let's not forget that digital data takes time, but it saves time and, most importantly, allows us to take a long-term view of design and construction. This is essential if we are to deliver a building that can be used by its users. And for good reason, this user support is essential, especially from an energy management perspective. It is not uncommon, for example, to hear of a building that has been modernised or refurbished to minimise energy consumption and then blows its energy predictions after just one year. In most cases, however, it's not the equipment that's to blame. They work perfectly well. So where is the problem? In reality, the problem is simply the way people use the building and its equipment. The accumulation of new features (new environment, performance of appliances and materials, and all the ventilation and insulation systems) means that users need to rethink all their habits.

Encouraging use for optimal energy and environmental performance

Just as we need to change our vision to build in line with today's notion of 'utility' and to build in line with new uses, we also need to be able to support the handover of delivered buildings. The delivery of an asset (building or infrastructure) can no longer be the same as in the past. In practice, it is up to those involved in the construction industry to pass on the good habits associated with the structural and functional evolution of their buildings, which are designed to be economical, comfortable and sustainable. This is further proof, if any was needed, that taking the time to get things right at every stage of design, construction and operation is essential if we are to ensure that:

- users can fully enjoy the asset with which they interact,
- the building does what it is capable of doing in terms of modularity, energy savings and environmental impact.

There's no magic formula for achieving this! We simply need to take on the role of supporting the whole process, taking more time before the design phase and after the construction phase. All the while ensuring that the data sets generated by digital tools are properly calibrated.

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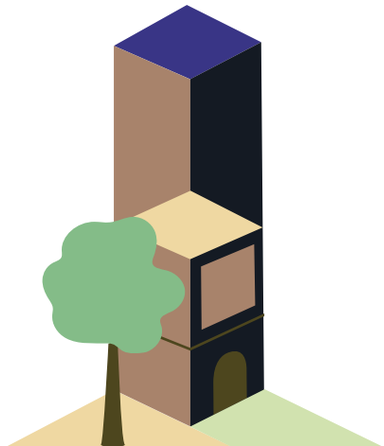

Patient, immobile, fragile city

"Fast and slower uses must coexist, immobility must be organized and accompanied. When some parts of the city become active, others fall into disuse: it's an opportunity for new practices to emerge."

Rose Mégard

Director, strategy, consulting and operations, Egis

Lucie Gorce

Head of innovative programming and usage, consulting and operations, Egis

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Head of urban transport and mobility, consulting and operations, Egis

The patient city is therefore first and foremost about applications for those who have to wait in the city. First and foremost around transport infrastructures, but more generally around large public institutions (hospitals, administrations, etc.).

The modern city has little patience for immobility. And it's almost a contradiction in terms to plan waiting areas in places designed for mass, flow and efficiency. In order to compensate for the lack of time, and in the best cases, public spaces are simply designed for short waiting periods: benches or standard furniture, with increasingly individual designs. We don't want to have to wait too long... The modern city also does a poor job of integrating vulnerability. Patience is a necessity for the most vulnerable: families with children, the elderly, people with disabilities, not to mention the homeless.

The patient city values waiting

In the projects we are working on, particularly around major transport infrastructures, we can see that waiting is no longer just about *"management"*, where we have to store flows of people in transit, where we use the time available to consume. Waiting is also a function that is used to develop new services and new uses, and to bring people together in spaces that are no longer purely utilitarian. Enhancing the value of waiting time in these major infrastructures involves the development of convivial spaces where people can read, play the piano or even exercise, as well as personal or public services (see the France Services centres, third places and concierge services set up in stations).

Egis assisted Ile-de-France Mobilités with a study and then with the design of a *"reference system for station services"*. Our recommendations were based on a twofold observation: waiting and connecting at stations can be both *"pain points"* and privileged moments in passengers' journeys, depending on the efforts made to improve the comfort and atmosphere of the station; moreover, thanks to their strategic positioning and identification, they can encourage a return to proximity by hosting activities and services aimed at local residents and stakeholders, paradoxically helping to curb hypermobility and its excesses.

The benefits of slowness

After decades of acceleration, cities and medium-sized towns are gradually rediscovering the benefits of slowness. Walkability, cyclability and the sharing of public space are the new indicators. We're reopening night train lines that were closed a few years ago. But isn't this just a green revival of urban efficiency? Travelling in your sleep saves time, exercising on your way to work maximises your day...

But these slower ways of doing things have the advantage of reducing the gap between the average city dweller and those who are more vulnerable, both physically and economically: anticipation in journeys, sobriety in means of travel, *"taking time"* for pleasure and not just because you have to.

The pleasure of waiting and contemplation in the city

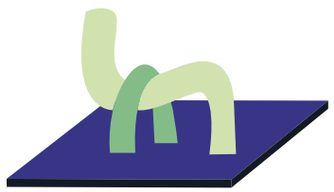
Waiting in infrastructure is also an opportunity to renew modern utilitarianism and market the region. Long corridors are transformed into exhibition areas or large panels recalling the totems of the area they serve. Railway stations and airport terminals remain the first and last places tourists see in a city when they look up from their phones. In Marseille, the station forecourt offers a panoramic view of the city that invites contemplation. It's a rare example of an urban location that combines efficiency (station, infrastructure) and *"beauty"*. In the city, people also wait for pleasure. Squares, gardens, fountains and works of art in public spaces are also designed for this purpose. This *"urban generosity"* is interesting to observe and analyse. Often close to the places of power, nobility or institutions of a city, we were reminded of some relatively daring examples of fountain programming in priority districts. This is the case, for example, in the Fontbarlette district of Valence. Quality *'free'* water is not just for the city's wealthy.

Keeping urban users patient during construction...

Let's change our perspective. A patient city is also a city waiting to be transformed or renovated. In recent years, as metropolises have reclaimed large urban areas, we have seen the development of approaches aimed at exploiting the waiting period before work begins. In some cases, the construction site opens up visually, becoming a place for contemplation of a city in transformation, which can also be *"Instagrammed"*. This is the case of the Grand Paris Express construction sites, where artistic and cultural expression is encouraged and the site is opened up for the duration of the transformation to add value to the time spent waiting and working, to accompany the transformation and to help people wait for the project to be completed.

More often, however, empty, underused or derelict spaces are used for transitional or tactical urban planning. It's a classic way of trying out new uses for a space... or, where it's more difficult, getting people to return.

In Avignon, for example, Egis worked with the city and the agglomeration to develop a transitional urban planning approach to encourage walking, resting and waiting, as well as the comfort of pedestrians in the priority district during the long period of urban renewal and land availability. In Lannion, the Léguer quays were temporarily equipped with street furniture, greenery, a *"guinguette"* and sports activities for one summer. Following this success, the facilities were adapted and made permanent in a project called *"Quai des possibles"*.



A malleable city that juggles all its temporalities

Finally, the city is patient... when spaces are underused, for a few hours (evenings, nights), days (weekends) or even seasons (resorts). We are increasingly involved in supporting developers who want to work on the sharing of spaces between different uses. This is the challenge faced by Lyon Parc Auto (LPA), for example, which wanted to extend the functions of its underground car parks and for which we helped to programme the *"Terrasse des Docks"* centre in partnership with sociologists and behavioural scientists.

In the low season, schools no longer wait, but expand public space thanks to the weekend opening of school playgrounds organised by the Paris City Council. In the low season, hoteliers are rethinking their accommodation to offer nomadic teleworkers a "workation" experience and new services.

During the day and in the evening, the analysis of uses has led to the programming of a project for a third place in Gimont, proposing cross-uses over time and the sharing of needs (in terms of parking, storage, energy or space...) between a media library, tertiary premises, an art practice space, premises for the tourist office and associative actors.

The patient city is the inclusive city

Finally, if we draw together the threads of patience in the city and a city that (us?) waits, a common approach emerges. That of programming an inclusive city that takes into account the uses of the slowest, the most fragile, the least listened to, those whose uses cannot be *'monetised'*.

It's as if the hyper-efficiency of the city now demands some kind of balance. Fast and slow uses must coexist, and immobility must be organised and supported. As some parts of the city become active, others fall into disuse, providing an opportunity for new practices and new intersections to emerge,

In the end, it's probably in this balance between intensity and breathing that we find the right degree of urbanity.

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The garden: a space that invites you to take time for city life

" Leaving more room for gardens is not only going to be an added value, it's technically what's going to enable cities to survive. "

Susanne Eliasson

Architect and urban planner, GRAU agency

Much more than just green spaces, urban gardens play a crucial role in redefining time and space in the urban environment. They provide sanctuaries where city dwellers can escape the hustle and bustle of the city, encouraging moments of relaxation and conviviality. In practice, these urban oases not only transform residents' relationship with time and social interaction, but also contribute to the positive evolution of the built environment. Susanne Eliasson, associate architect/urban planner at GRAU and consultant architect to the city of Bordeaux, shares her expertise on the importance of gardens as a climatic and social challenge for cities.

Many French cities are becoming greener every year and are focusing on renaturation. For your part, you are promoting the concept of the "garden metropolis". What does that mean?

The garden metropolis is a vision of the transformation of residential urbanisation as it has developed over the last hundred and fifty years as an extension of old city centres.

At GRAU, we study and work on this theme through concrete projects and research. The latter, which we have carried out in Bordeaux, Phoenix, Brussels and Chicago, focuses on the potential for transformation of these areas, often referred to as *'urban sprawl'*. It's not a very appealing term, and it doesn't really do justice to what can be done with, for and in cities. That's why we prefer to talk about the 'garden metropolis'. These two words alone can describe the existing territory, but also its potential for transformation - largely linked to its landscape quality.

What can we learn from these zones of perpetual development, which leave an important place for landscapes and green spaces?

Neither a centre nor a periphery, the garden metropolises are areas where most of the land is privately owned. In other words, they are places where people live. Due to the lack of density, there is little or no access to public transport. Residents are therefore forced to travel by car. However, wherever they go in the area, they will find a green landscape that is much more present than in the dense city. Natural spaces that allow residents to experience the changing seasons, or to enjoy the proximity of wildlife - especially birds. These are fairly simple things, but they can give residents a different way of dealing with the passage of time than they would in a dense city.

How can landscaping and buildings work together in such an area for the benefit of residents?

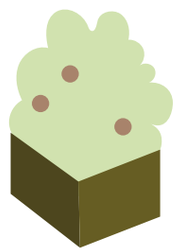
Landscaping and buildings are two things that are often at odds with each other. As a consultant architect in Bordeaux, I can see this because I follow all the city's projects. Most of the developers I meet continue to follow a logic where you build buildings first and then embellish what's left around them with landscaping. This is a mindset that needs to be overcome, not only to meet environmental constraints, of course, but also to improve the wellbeing of the city's residents and enable them to give real meaning to their surroundings! Residents understand that having a natural landscape in their garden and being able to connect it to their neighbour's garden is not just a pleasure for the eye. It becomes vital, because by refreshing the environment, they gain in comfort and well-being. With climate change, the need for landscape to play a role is becoming more and more obvious! And we can see that we are moving towards a closer relationship and a greater consideration of the relationship between architecture and landscape. But also towards a much less frontal approach to architecture. Take Bordeaux, for example, a city where it's very hot in the summer and very rainy in general. We now have to work much more on transitional spaces between indoors and outdoors. Isolated spaces and others that are simply covered, so that we have cities where you can live half indoors and half outdoors. This inside/outside dynamic reflects the transition that's taking place and the new, much more intertwined relationship that's developing between architecture and landscape.

When was your first project to change the place of landscape in the city?

Ten years ago. We were working for Caudéran, a residential district of Bordeaux with a population of 45,000. At the time, the town asked us to draw up a long-term transformation plan. The result was the Caudéran ville-jardin concept. This work was carried out in collaboration with Michel Corajoud, a landscape and urban designer to whom Bordeaux had already entrusted the redevelopment of the quays. This approach involved amending the Local Urban Plan (PLU) and working closely with developers to propose housing* that is more in tune with the landscape. The principle of front gardens is one of the concrete examples. The minimum planting depth has been set at four metres. This figure was made compulsory in the PLU to ensure continuity of vegetation along the streets, to guarantee the quality of the city's external landscape and to help cool the interiors of the houses. Since that first "Garden City" project, we at GRAU have been committed to this culture, which we call the "Garden Metropolis". It's a name that has evolved, and with good reason: it's a way of looking at things, of working and of putting architecture into practice that now goes beyond the scale of the neighbourhood. It is now up to towns and cities to take inspiration from the residential urbanisations built as extensions of city centres by changing their urban planning culture. In other words, even in densely populated neighbourhoods, they need to give pride of place to landscapes and greenery, through collective and shared green spaces - both private and public.

How will these new open spaces add value to cities in the future?

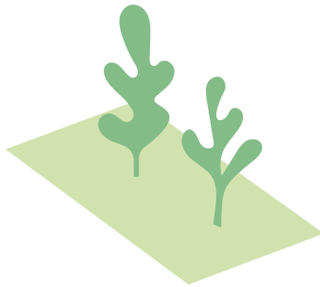
Leaving more space for gardens isn't just going to be an added value, it's technically what's going to enable cities to survive. Because of climate change, cities really need to integrate nature. For example, simply planting a group of plants (not just a lawn) in front of a house can naturally cool the interior by several degrees. This climatic comfort provided by the landscape is essential today! What's more, and this is important, we are talking about a garden metropolis, not a nature metropolis. Why is that? When it comes to defining nature, everyone has their own definition. It's a complicated term that doesn't reflect the proximity and time that a human-sized green space in the city can offer. The garden is a much easier concept for everyone to grasp and imagine. What's more, the garden brings with it a dimension of care. A garden is something that is cared for and maintained. And this can be on the scale of one's own garden or collectively in the urban environment. This notion of care fits perfectly with built up areas and cities, as they are all in the business of transforming what already exists, and therefore maintaining/improving it. We need to get away from this very binary vision of PLUs, where on the one hand there is the built-up area, on the other hand there is the obligation to provide a minimum amount of open space, and finally there is the open space that can be used for concrete, a swimming pool, and so on.



It is now possible to live in a garden or in an indoor-outdoor space. It is now possible to live in a garden or in an indoor-outdoor space... So we have to ask ourselves: should a greenhouse in a garden or a pergola extending a dwelling be considered as a built-up area? From now on, we are dealing with intermediate spaces that are destined to be used a lot in the context of global warming. And let's face it, they blur the boundaries between inside and outside and change the use of the garden itself. The garden is no longer just a place for pleasure, it is becoming a place where we can live fully and take time to anchor ourselves, individually or collectively. It's a return to our roots that should be accessible to everyone, everywhere in the city.

Are we to understand that the garden has the power to change our perception of time?

Speed is everything these days. Whether it's getting around or getting things done, everything has to be fast. At the opposite end of the scale to the constant acceleration to which cities are subjected and from which many of their inhabitants suffer, the garden, for its part, is something that cannot go *"any faster"*. Even if we want to speed up the growth of a garden, the limits of nature are there to remind us that sometimes time is of the essence. Just like the care and maintenance a garden needs! In this sense, urban gardens are a good way to put



this omnipresent over-rapidity into perspective. Whatever your age. In a garden we are reminded of the time and space of the seasons, which can't go any faster either. It's a kind of retreat, an environment that brings order to a world where things move so fast that we sometimes lose sight of the essence of things. Individuals need to come face to face with nature if they are to take better control of where they live and feel good about it. It's a way of regaining control over ourselves and our environment. The garden is a place that fosters social and intergenerational connections and encourages us to become aware of and care for our surroundings. In a garden, time passes differently and we (as individuals) learn habits that can be applied in other areas. When you understand the principle of taking time to *'look after'*, it's easier to take time to *'look after'* your home, among other things. In concrete terms, the garden has the ability to change the way we think about things, and this is bound to have repercussions in the city.

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