21 PROPOSALS FOR A LOW CARBON ECONOMIC RECOVERY

egis

As a leading industry figure in consulting and engineering for construction and the operation of transport infrastructure, and in line with its commitment to support its clients in their low carbon pathways, **Egis has brought together its experts** to formulate 21 proposals to ensure that the economic recovery initiatives around the world are part of an accelerated change in the production model.

THE AIM IS TO CONTRIBUTE TO CREATING A LESS CARBON-INTENSIVE FUTURE THAT PROTECTS BIODIVERSITY AND LEARNS THE LESSONS FROM THE COVID-19 CRISIS THAT WE HAVE BEEN LIVING THROUGH.

The group thus echoes a concern widely expressed in society. In France, for example, the High Council for the Climate *(Haut Conseil du Climat)* considered it imperative for the government's COVID-19 crisis response to support structural transformation towards a low carbon economy to strengthen our resilience to public health and climate risks. The government has a duty to place climate issues at the heart of its Covid-19 crisis exit plan, failing which our societies will remain vulnerable to health and climate risks, says its latest report *(Haut Conseil du Climat,* April 2020). Meanwhile, the European Commission unveiled its proposal for a recovery plan on 27 May entitled Next Generation EU. The acceleration of the Green Deal is presented as one of the two pillars which must guide the European economic recovery, alongside the digital transition.

THEMES ADDRESSED

CLIMATE EMERGENCY AND BIODIVERSITY

PROPOSALS

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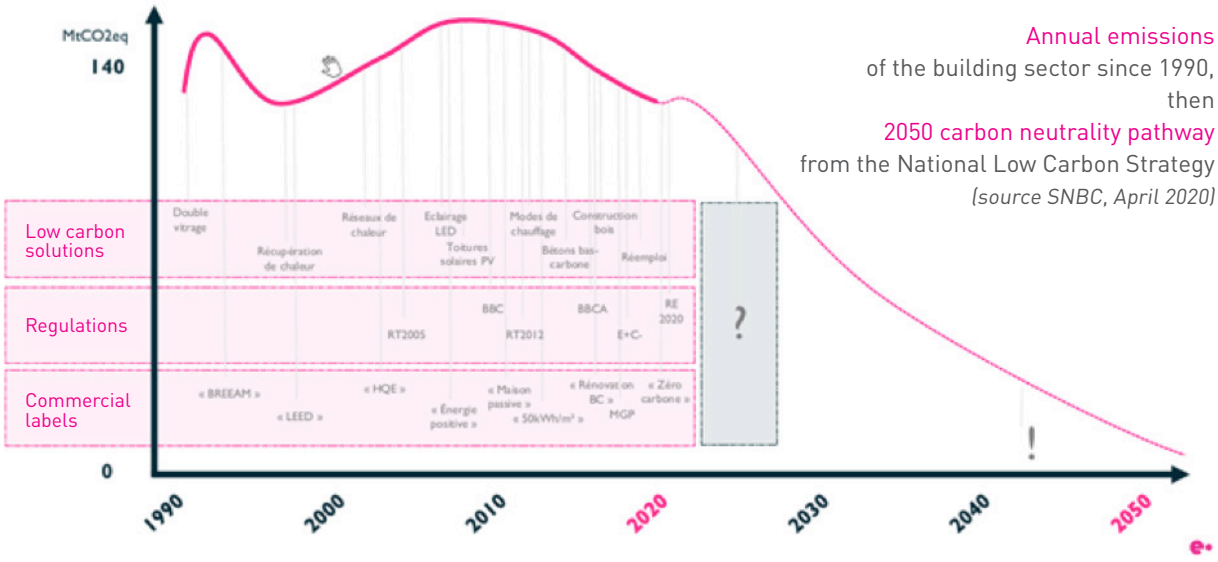
1. MAKE THE CLIMATE EMERGENCY AND THE GOAL OF CARBON NEUTRALITY THE NEW FRAME OF REFERENCE FOR ACTION AND THEREFORE STUDIES FOR DECISIONS TO BE TAKEN NOW

Maintaining a 1.5°C pathway relies on the implementation of immediate and powerful actions. Deviating from this path will inescapably lead to a crisis on a larger scale and of a longer duration than that of Covid. The more time wasted, the steeper the slope towards neutrality, the goal of the national low carbon strategy.

Simply calculating and observing the carbon footprint of construction, or leading the occasional low carbon design initiative, are not enough to stay on track. HQE, Breeam or Leed certification to obtain "green grants" is no longer enough to tackle the emergency we face, and is often solely green washing. Shifting to from low carbon design to carbon neutral-aimed design must become the reference. Changing from indicators expressed as kg CO_2/m^2 to indicators expressed as kg CO_2/ person would enable us to revolutionise the way we design structures by factoring in the "use" aspect*.

*Read the article by Elioth, an Egis group entity (in French)

Where we were – where we want to go

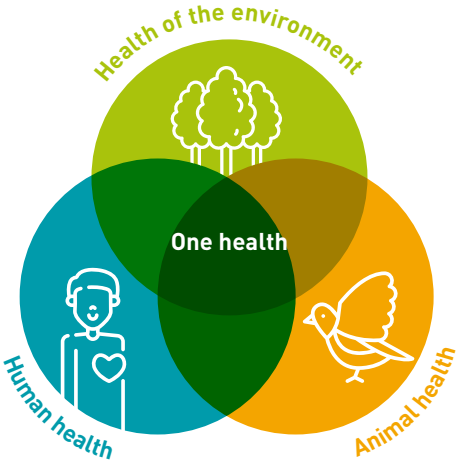


Annual emissions
of the building sector since 1990,
then
2050 carbon neutrality pathway
from the National Low Carbon Strategy
(source SNBC, April 2020)

2. RADICALLY CHANGE APPROACHES TOWARDS THE ENVIRONMENT

The crisis that we are experiencing once again underlines the urgent necessity of addressing the collapse in the quality of our environment.

Climate change generates a higher risk of flooding and major climate events such as typhoons and droughts. According to a report by the French foundation for research and biodiversity, “Science is increasingly showing correlations between global environmental change, loss of biodiversity and the associated regulatory services, and the emergence or increase in the prevalence of infectious diseases.” The inevitable but disorderly development of growing urbanisation as practised or endured today causes a deterioration in air quality, an increase in noise pollution, an increase in industrial accidents at the heart of cities, a deterioration in the living environment, etc. This damage has a major impact on the health of the population.



“One Health” approach

The issues of climate change and biodiversity are intimately linked. Climate change entails a modification of temperatures, ocean acidity and the distribution of freshwater, leading to altered ecosystems and the disappearance of many species. When biodiversity deteriorates, the entire living world collapses. Some scientists speak of a sixth mass extinction. Following those caused by the ice age, volcanoes or even a meteorite, this one would be caused by the actions of mankind.

What are the causes behind this? Intensive farming methods, pesticides, the proliferation of waste and various pollutants and the spread of urbanisation through the artificialisation of soils which destroys and fragments the habitat of living species.

In concrete terms, quick wins can be achieved by incorporating into all construction or planning projects, from the earliest design phases, the following goals:

Counteract the harmful effects on biodiversity:

- provide alternative habitats for various species to encourage proliferation
- boost the carrying capacity for wildlife in an urban environment
- include the benefits delivered by these natural species in social and economic impact assessments
- exploit urban wasteland to limit the artificialisation of land.

Pre-empt environmental problems relating to landscaping projects by factoring in operating constraints and soil characteristics

Mitigate the impact of climate change in the urban environment, with trees and plants performing several vital functions for the city: temperature regulation, carbon sequestration, regulation of rainwater, particle filtration, etc.

- provide carbon sequestration solutions
- optimise mobility and modes of travel
- promote the reuse of materials and the circular economy.

CITIES

PROPOSAL

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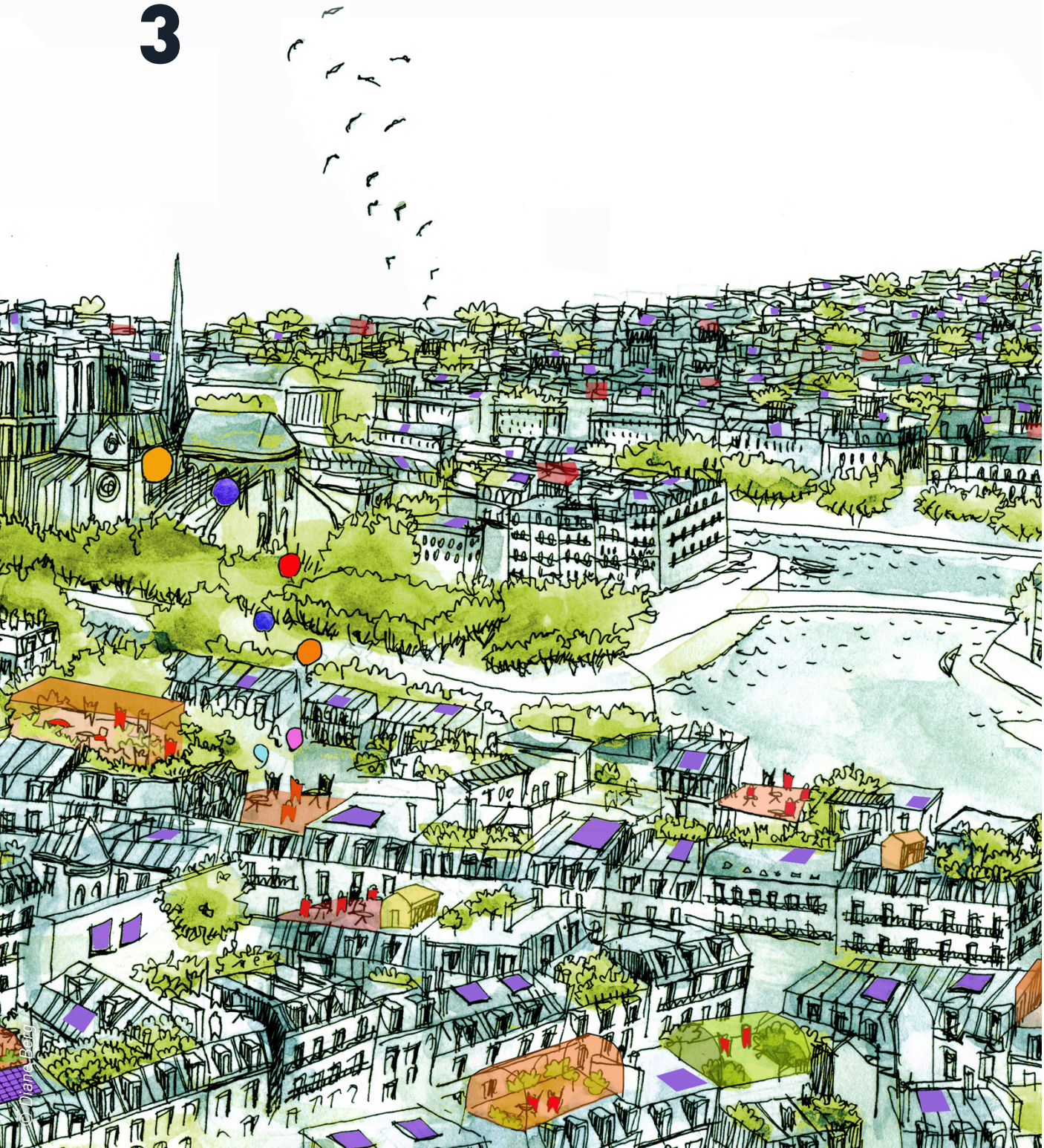

3. LAUNCH AN EXTENSIVE PROGRAMME TO REDESIGN CITIES THAT RISES TO THE CHALLENGE OF CLIMATE CHANGE AND IN THE CONTEXT OF LESSONS LEARNED FROM THE PUBLIC HEALTH CRISIS

Concentrating more than 70% of carbon dioxide emissions and home to more than 55% of the world population, cities are a key place where the sustainable future will be decided. Cities represent not only the promise of freedom, meetings and urban life but are also places where inequality abounds, a factor in soil artificialisation or sealing, and hotbeds for the spread of viruses, as we have seen in recent weeks. They are complex and strategically important places that we must recast to make them sustainable, peaceful and attractive.

Today, all over the world, we are faced with a number of challenges: population growth, increasing urbanisation, longer life expectancy, changing family structures and growing income disparities, in particular in large cities. These challenges are exacerbated by social distancing, a key measure to fight the spread of epidemics. Public spaces such as stations, interchange hubs, squares, streets and avenues are the places where exchanges, services and commerce continue to happen. These are also the places where social distancing imperatives are the most complex to implement.

Aiming for carbon neutrality is a rational, reasonable, possible, attractive and accessible imperative that must be pursued at every level of society.*

**See learnings from the report Paris, an air of change*

This positive vision of a carbon neutral city is more relevant than ever in the wake of the summer of 2018 which was the second hottest since 1900. This challenge involves:

- Putting the user-inhabitant back at the centre of urban thinking
- Designing districts as the basic cell of the sustainable city
- Encouraging the return of production activities to cities
- Designing and networking eco-friendly buildings (see below)
- Designing the city taking into account microclimate effects created by urbanisation (heat islands intensified by global warming).

The learnings from the public health crisis lead to the identification of other requirements

- Welcoming and safe public spaces: the notion of security, generally associated with the risk of accidents and violence towards people, must include health safety requirements such as social distancing during an epidemic.
- Mixed use districts and those guaranteeing the performance of urban flows: lockdown periods create pressure on the supplies of food and certain manufactured products. More than ever, the issues of autonomy and short selling channels enabled by mixed use districts are crucial.
- Compact urban forms, construction of the city on the city: many voices express reservations about city density in view of the Covid-19 crisis, but urban sprawl cannot be a solution. Density must be compensated by specific developments: returning the lost square metres through public spaces with multiple uses (leisure, rest, sport, culture, even disconnection) and getting rid of single function spaces which are used for several hours a day at the most. Density and health security must be combined with great care, in connection with mixed and multi-use districts and the performance of urban flows. The impact of the growth of home office working on regional planning and urban concentration must also be examined.
- The social and economic inclusion of all populations: the Covid-19 public health crisis is leading onto an economic and social crisis on a huge scale. The city of the future must be able to provide everyone with the means to satisfy their basic needs, fight poverty and reduce inequality often already exacerbated by extreme weather events.

BUILDINGS

PROPOSALS

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4. ACCELERATE ENERGY EFFICIENT BUILDING RENOVATION ACCORDING TO A SYSTEMIC LOGIC: INSULATION, MATERIALS AND TECHNOLOGY

All over the world, stimulus plans pumping out thousands of billions of dollars or euros offer a unique opportunity to build a better future together. Massive funding of the energy and ecological transition would make it possible to combine the public health crisis, economic salvation and a way out of the crisis, and make our world more resilient.

A large number of 'green' rating systems have been established to encourage, measure and recognize sustainability performance of buildings: BCA Green Mark Scheme (Singapore), Passivhaux in Germany, Green globes in USA and Canada,and many other...

To take the example of France, the new version of the national low carbon strategy was adopted by ministerial decree on 21 April 2020, with the building sector tasked with reaching neutrality between now and 2050. One of the priority levers is accelerating the pace and improving the quality of renovations. For housing, the short term target is to reach 370,000 “high performance” renovations per year by 2022.

The momentum has been set in motion: a tertiary decree, a new heat energy regulation (R2020) for new buildings in 2021, energy efficient renovation labels (e.g. the BBCA Renovation label brought out in 2018), but real change in practices has been slow to happen. At the beginning of 2020, only four renovation operations had received the BBCA label* (three of which in collective housing). The aim therefore is to move up a gear by supporting investment in the most effective practices and solutions. Energy performance in renovation must be considered in a global and long-term perspective. It involves not only taking into account the efficiency, maintainability and durability of fittings and the improvement in the building’s thermal performances (insulation), but also the choice of low carbon materials (use of wood and reuse, see below); the development of “smart” technologies enabling better control of demand and the development of self consumption systems, (e.g. solar power), an increase in the proportion of renewable energy in energy purchases - the connection to heating networks, the consideration of resilience issues to anticipate the effects of climate change (heatwave, rainfall, etc.); finally the mobilisation of users and the guarantee of providing optimised living conditions.

Article in Le Moniteur, 14/02/2020, “Logement - Le label bas carbone se hisse en rénovation”

5. ACCELERATE MEASURES TO PROMOTE MATERIAL REUSE

Reuse and the circular economy appear to be a serious option for economic stimulus in the construction sector. Reuse generates savings, contributes to creating local jobs, promotes short supply circuits and therefore reduces the need for transport and therefore constitutes a significant lever for low carbon practices.

The transition from a linear production and consumption model to a circular resource management model is struggling to develop, and this is particularly true for the reuse of construction materials, which in France make up more than 70% of total waste.

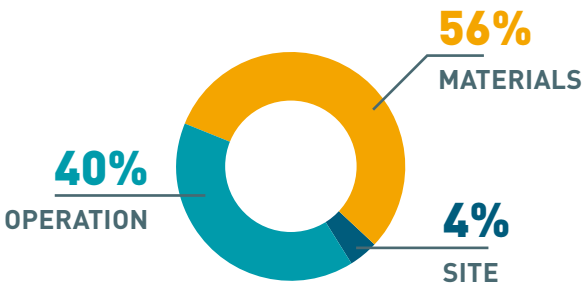
To develop the circular economy and reuse, the sector should engage in the following transformations:

- Secure and control the reservoir. To do so, diagnostics on the resources of the proposed materials must be generalised, professionalised, anticipated and facilitated by the use of BIM (Building Information Modelling)
- Support and professionalise the offering by accompanying the development of reconversion channels, the training of all players and promoting all the economic and tax incentive measures to stimulate circular resources compared with linear supply chains
- Stimulate demand and circular purchasing in public and private projects and reduce the operational and methodological regulatory obstacles.

6. ENCOURAGE THE USE OF LOW CARBON MATERIALS, IN PARTICULAR WOOD

Wood construction can help to store up to 200 kg of CO_2e/m^3.

If 50% of the entire surface area built in France every year were made from wood, the French carbon footprint could be reduced by 1% (compared with 3 to 5% of the drop in footprints caused by coronavirus).



Carbon impact of buildings
(Findings of HEQ test, performance for the 2012-13 sample)

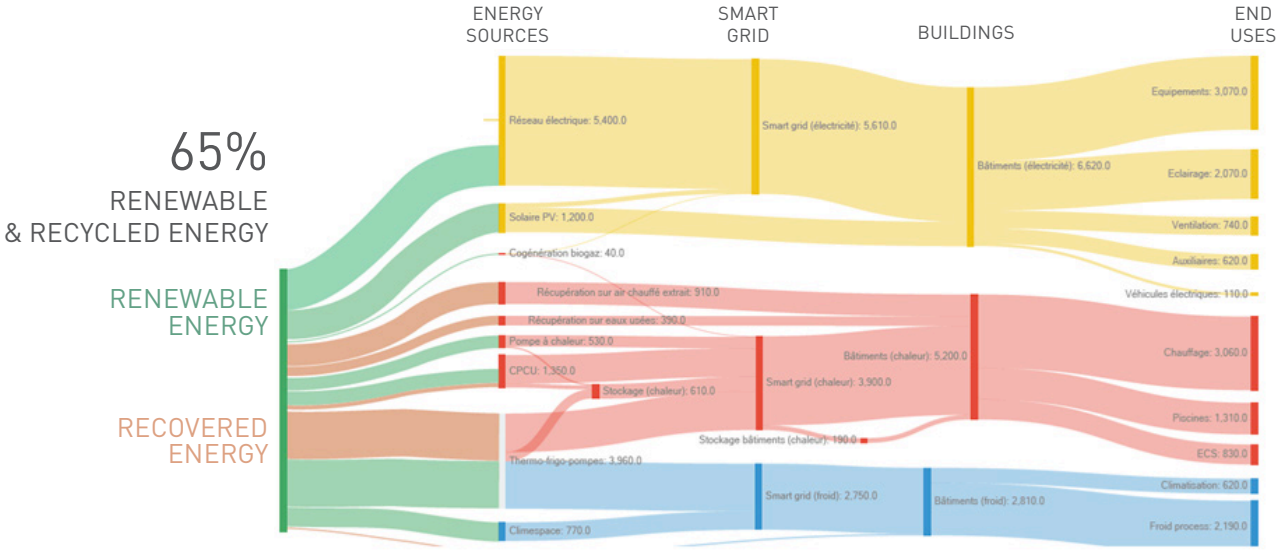
Anticipating future regulation and applying ambitious and compulsory carbon targets including sequestration and promoting bio-based materials and the circular economy are both necessary and in line with the current trends.

HEADQUARTERS OF THE FRENCH NATIONAL FORESTRY OFFICE (ONF)
ONF wished for the construction of a wooden framed building to serve as a flagship reference, promoting the technologies of wood construction and highlighting the know-how of the wood industry. Find out more about the structure and environmental design of the project on the website of Elioth, Egis group (picture: © Vincent Lavergne Architecture, WOA)

7. DECARBONISE THE ENERGY USED TO OPERATE BUILDINGS

Government policies around the world have for very many years encouraged the development of renewable energy (RE) in particular in the form of subsidies, research grants or tax incentives. This investment has paid off, since according to REN21, RE accounted for 33% of the world energy production in 2018, but only supplied 10% of heating energy and 3% of the energy required for transport.

Aid for the development of new RE (such as the hydrogen sector) and the inclusion in climate and development plans of the energy mix and the accounting of pooling through smart energy grids have been implemented and tested effectively on iconic operations such as the Bruneseau and Hébert districts in the Paris region.



Sankey diagram of the energy consumption of the smart grid in the Bruneseau district of Paris

Among these smart solutions, smart grids help to re-establish the link between uses and reality with networks. It is no longer a question of having a network disconnected from its uses, but of effectively optimising the investment and operation of the network based on weather data. From now on, these networks must be optimised from a carbon emission perspective, according to a long-term economic and ecological rationale.

TRANSPORT

PROPOSALS

8. INVEST IN ACTIVE URBAN MOBILITY POLICIES

In recent years, the range of public and active transport services has grown exponentially. Combined with the boom in new technology, it has revealed previously unsuspected potential. Montreal, Bogota, Helsinki and many other cities have successfully developed policies promoting active mobility.

In France, 38% of people surveyed say that they could get around more using active mobility*, according to a study by Forum Vies Mobiles conducted during lockdown. The deployment of these modes can therefore turn the tide in terms of investment priorities; they must nonetheless fall within a global and coherent vision of mobility in cities according to an approach which takes into consideration the need to rethink mobility more broadly.

*Green transportation modes such as bikes, scooters, etc., where the passenger is "active"

Policies have been ratified to introduce low emission zones in cities such as London, Brussels, Antwerp or Barcelona, as well as in France in the 15 French city regions most affected by atmospheric pollution. The social acceptability of such a measure, built around "control and enforce" is far from a given; meanwhile, incentive policies to encourage vehicle trade-up are necessary but insufficient. We think that these zones should be more considered as "alternative mode high provision zones". By recasting mobility from a general perspective in these regions, the aim is to promote electric mobility and the shift to green and active transportation modes, by investing in inter-modality: increasing the number of transportation hubs and investing in the quality of their fixtures: parking security, means of payment, etc.

9. URGENTLY REVITALISE THE USE OF URBAN PUBLIC TRANSPORT

Public transport ridership collapsed during lockdown. It is now very slowly picking up again. It has become essential to tailor the service offering to new work and mobility patterns. The consequence of the health crisis should not be a climbdown from the massive commitment of all players in recent years to the promotion of urban public transport.

If social distancing measures were to be continued in the long term, or used as a precaution in the event of new waves tackled without enforcing total lockdown, urgent investment in adaptations must be carried out to maintain the appeal and development potential of urban public transport:

- Adapting the organisation of flows in places such as stations and stops, to comply with distancing requirements
- Equipment in line with health precautions to count passengers and collect fares, but also to manage social distancing in heavily crowded zones
- Equipment to better inform passengers on their travelling conditions (train crowding, suitable service offering, etc.)
- Use of new technologies to make work easier for operators and maintainers (ridership forecasts, digitalisation of their assets by a digital twin to help them optimise maintenance tasks and reduce callouts).

Development of fleets of electric or hydrogen powered buses

To cater to the fact that mainline guided public transport is not appropriate for close-knit network situations, particularly in sparsely-populated areas, public transport by road remains necessary but can become virtually non-polluting. Specific actions at European level to help public transport authorities accelerate this conversion would also have the advantage of boosting an industrial sector of excellence.

10. ELECTRIC MOBILITY: PERMANENTLY SOLVE THE ISSUES OF VEHICLE RANGE

One of the current limitations of electric mobility remains vehicles' operating ranges for long distance trips and, more broadly, all the practical difficulties of charging. The implementation of an ambitious policy that might allow the rapid transition of the vehicle fleet and give new impetus to the automotive sector necessarily involves the mass deployment of fast charging stations, in particular for intercity journeys. The necessary investments, together with the need for top-quality service (being sure to find a charging station), and the reliability of installations over time all point to the relevance of a long-term infrastructure financing model calling on the private sector for the construction and management of this fleet. In the case of residential buildings, these operations could be connected to those of energy efficient renovation.

11. IMPLEMENT NEW URBAN LOGISTICS FORMATS

The crisis has highlighted the importance of the logistics chain and notably the benefits of short supply circuits. Hence the opportunity of developing urban goods transport using existing infrastructure, whether this be non-polluting road solutions or urban transport. The first key lies in the willpower in terms of organisation, giving a collective impulsion that takes the thinking beyond the existing scopes of all players involved.

12. REVITALISE SMALL SUBURBAN TRAIN LINES AND REVIVE A TRAM TRAIN PROGRAMME

The lockdown period may have an accelerating effect on urban exodus. Many people have developed a taste for home office working and, fearing the enforcement of another lockdown, are considering going to live in "greener" places far from major urban centres. To avoid the consequent development of individual transport, an appropriate suburban public transport service should be developed without delay, such as already exists in countries such as Germany or Switzerland.

Whilst remaining frugal in investment needs, we recommend two avenues:

- Revitalising secondary lines (with rail services or other, lighter systems) for which regional councils now have investment and operational responsibility,
- Developing a tram train offer to combine service distance and urban penetration capacity without changing transport modes.

13. INVEST IN MAJOR INTERCITY TRANSPORT PROJECTS ON A GLOBAL SCALE, PROJECTS OFFERING SOLUTIONS TO THE CLIMATE CHALLENGE BY REDUCING THE USE OF INTERCITY ROAD FREIGHT FOR GOODS TRANSPORTATION

Coronavirus affects the world economy as a whole, especially logistics. Globalisation made the supply chain vulnerable. This vulnerability can be seen through the impact of COVID-19. Business continuity has been the number one priority for most government, yet looking to the future and planning strategically for the post-crisis period should be at the top of the agenda too. Europe has taken and interesting initiative in this regard : the development of the Trans-European transport network (TEN-T) engendered a financial impetus which has proven decisive for the accomplishment of structural projects which had already been ranked by priority according to their contribution to the climate challenge.

France today is an interested party in the Seine-Nord Europe Canal and Tunnel Euralpin Lyon-Turin projects, and in the deployment of ERTMS (European Rail Traffic Management System) and the "Motorways of the sea" programme. In the current circumstances, it is vital to obtain confirmation of the political and financial commitment to these different projects. A new European impetus should be given to major rail, port and waterway projects (which can help to reduce the use of polluting freight) and they should be financed under the auspices of an extensive European stimulus plan. As an illustration, let us recall the benefits of the two current infrastructure projects referred to above. Indeed, even if short supply circuits should always be given precedence for goods, long distance transportation will continue to exist, and credible alternatives must be offered to road freight.

Seine-Nord Europe Canal (SNEC)

The SNEC project is a true accelerator of the energy and ecology transition. By accommodating barges capable of carrying up to 4,400 tonnes (the equivalent of 220 trucks), it will foster the shift to low carbon and economically competitive transport modes. The Seine basin will thus be connected to the broad gauge European river network. In a network logic, the canal will fluidify the circulation of goods and thereby facilitate exchanges between Northern Europe and the ports of Dunkirk, Le Havre and Rouen. This network effect has been acknowledged by Europe which is supporting the project by financing 50% of its design studies and 40% of the works on the whole of the Seine-Escaut network. Support from Europe was reinforced on 27 June 2019 with the adoption of the Seine-Escaut Implementing Act which also sets out the delivery schedule of the different sections in France and Belgium.

Tunnel Euralpin Lyon Turin (TELT)

It should be recalled that this project, on which work has already started, will help to reduce greenhouse gas emissions by approximately 3 million tonnes of CO_2 equivalent per year thanks to the modal shift from road to rail.

A recently signed agreement secures financing up to 2022, illustrating the willingness of the stakeholders to move forward. This project can be highlighted and politically confirmed in a new major European plan on "infrastructure - solutions to the climate challenge".

ENERGY

PROPOSALS

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14. SUPPORT THE DEVELOPMENT OF URBAN HEATING AND COOLING NETWORKS

Heat accounts for approximately 45% of our final energy consumption and about half of fossil fuel consumption, and therefore CO_2 emissions (on an equivalent level to fuel). Replacing these fossil fuels by renewable and naturally local energy (biomass, waste recovery, solar power, geothermal, recovery of waste heat, etc.) has been recognised as one of the most efficient from an economic point of view, expressed in terms of €/tonne CO_2 avoided.

All around the world there are multiple possibilities to develop these resources*:

**See the proposals in the document "Mai 2020 : FEDENE_Plan de relance - Contributions des opérateurs de services énergétiques"*

- Heating and cooling networks: extension, densification, new networks
- Recovery and optimisation of waste heat in industry

This work conducted on a local scale can be launched quickly to kickstart the economy. In many cases, all that is required is to dynamize the economic balance of a model which has already proven its worth in the form of a public service delegation.

15. CONTINUE THE TRANSFORMATION OF NUCLEAR POWER

Nuclear power is an essential component in the fight against global warming by helping to reduce the production of electricity by greenhouse gas (GHG) to zero and pending the development of alternative renewable energies combined with the ramping-up of energy efficiency to cover this production in full.

In the debate underway as to "what next?", it is patently evident that nuclear power ticks all the boxes in the aspirations and requirements born out of this crisis:

- Energy and industrial independence for countries which have already nuclear electricity in their energy mix
- Resilience of their electrical and productive system to future shocks
- Low carbon economic recovery: nuclear power squares the circle between economic activity and the fight against global warming.

16. ACCELERATE RESEARCH PROGRAMMES IN NEW FORMS OF ENERGY

With the aim of channelling economic support towards low carbon solutions, support should be given to research initiatives and experimental programmes, which should always be considered as bearing promise for the future:

- Secure financing from actors in this sector (CEA (the French Atomic Energy Agency) projects, ITER projects, etc.). The ITER programme, which since its outset has been internationally funded by the seven world powers, must be confirmed and reinforced to display the international commitment to focusing on the energy solutions of the 21st and 22nd centuries and not those of the past.
- Develop the sector of hydrogen for transport, to go beyond its current limit of equipping only public transport vehicle fleets.

SECTOR SPECIFIC ACTIONS

PROPOSALS

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Olympic and Paralympic Village ©UAPS

17. CHANGE APPROACH IN THE OVERHAUL OF HOSPITAL SPACES

The immediate return on experience from the Covid-19 crisis has led to the formulation of three recommendations to optimise the rollout of the recovery plan in the hospital sector:

Based on experience, practices and actions taken during the crisis, work in consultation with professionals to define fundamental, simple and pragmatic principles to redevelop hospital spaces:

- functional: separation of circuits, medical outposts, capacity increases, etc.
- architectural: reconfigurable sectors, quality of life in the work-place, deployment zones, etc.
- technical: confinement and air treatment, resource availability, plug and play systems, etc.

Review the sector's property strategy, including the low carbon dimension

Redesign spaces using a participative and concerted approach

This relates to the reorganisation and construction of establishments with their representatives (managers, care staff and non-care staff) by employing an approach based on an iterative and consultative programme/project comparison, on upstream dialogue between the needs and their possible translations, and on the progressive adoption of the project by everyone. This approach requires more upstream discussion with users than the way we used to do.

18 INVEST IN THE TOURISM AND HOSPITALITY SECTOR TO CONTRIBUTE TO THE IMAGE OF MANY COUNTRIES WHOSE ECONOMY IS DIRECTLY LINKED TO THESE SECTORS

Tourism accounts for 8% of greenhouse gases in the world. While the majority of this carbon footprint is to date related to air travel (20% including international and domestic flights), the rest is attributable to accommodation (air conditioning or heating), food and purchases at the destination.

Tourism accounts for 8% of greenhouse gases in the world. While the majority of this carbon footprint is to date related to air travel (20% including international and domestic flights), the rest is attributable to accommodation (air conditioning or heating), food and purchases at the destination.Tourism is an economic sector in its own right, with its own specific levers through which to reduce GHG emissions, but which today lacks clearly defined goals and ambitions for such a reduction. Recovery plans are an opportunity to define a clear direction for the development of a positive impact in tourism sector. This will necessarily entail providing support to reconversion, modernisation and innovation. A range of levers exist*: reconversion strategy, development of innovative concepts, formulation of local low carbon mobility plans, energy efficient renovation of accommodation infrastructure, support to investors or project sponsors in the definition of performance milestones and environmental returns to achieve on operations and investment; assistance to operators in adopting responsible practices (reception, operation, catering, etc.) through certification submissions, team training, defining carbon neutrality roadmaps, creating awareness and engagement among clients in favour of behaviour that respects the destination and nature; and finally contribution to the emergence of new tourism models which amalgamate proximity and change of scenery, relaxation, togetherness, nature, pleasure and responsibility.

**Proposals include those of the ATD (Sustainable Tourism Association)*

19. SUPPORT AIRPORTS' BIOSECURITY PLANS

The extremely rapid fallout of the Covid-19 crisis on new air travel standards must enable the inclusion and acceleration of the essential shift towards more environmentally friendly commercial and operational models. Current practices cannot go on as they are, and this message is easier to assert since Covid-19. This public health crisis is an opportunity to generate strong motivation to seek a new balance in the fight against climate change and to obtain the buy in and necessary engagement to achieve significant change.

Airports have the opportunity and responsibility to become a model for other sectors in the fight against Covid-19 and any future viral threat. To do so, they will need the help of regulators and other stakeholders in the aviation sector.

Airports, as gateways to countries and regions, must implement efficient measures to control the spread of viruses if they wish to remain competitive and offer reassurance to passengers and staff. Just as airports place priority on security and cyber security in their planning and implementation today, they will also from now on give priority to bio security. Biosecurity must go beyond plants and animal pests and diseases, and address those transmitted by humans. The following investment is urgent to restore the economic role of air travel when other means of transport are not available.

Improve passenger flow management

If there is no vaccine or "health passport", airports must invest in better passenger flow management. Airports can promote "safe separations" between passengers so as to maintain social distancing as far as possible. This approach, in an "end-to-end" logic, must enable passenger requirements to be dealt with as early as possible in advance of the flight not only in the terminal (by avoiding congestion through redesigned circulation) but also as far as the passenger's home by doing as much processing as possible before the flight.

Invest in automation and robotics

Airports can rely on increased automation to reduce contact between staff and passengers. Automated information desks are already a reality

in many airports and will be reinforced by more artificial intelligence and decision aid software.

Deploy contactless technology

Limiting the number of things that users must touch in an airport is an important way of reducing the spread of a virus. Both ground staff and passengers have tactile interaction with various physical objects such as doors, door handles, touch screens, elevator buttons, etc.

Guarantee the quality of interior air in airports

The quality of interior air is an important component in quality of life in the airport and obviously has a major health impact in high footfall venues. Investing in its efficient ventilation systems also helps to reduce energy consumption.

20. ACHIEVE AN UNIVERSAL AND HIGH QUALITY ACCES TO DIGITAL SERVICES

Home office working, implemented extensively during the lockdown, has reinforced the impact of inequality of access to digital technology on a nationwide scale. The existence of mobile black spots not covered by traditional telecom operators has become a genuine handicap which must be tackled by governments and local authorities in charge of these deployments.

Many governments have already announced the resumption and reinforcement of operations to accelerate the deployment of broadband for all. As this is long-term infrastructure, we recommend that financing methods such as concessions over long periods be deployed with the appropriate specifications, drawing on the example of the motorway network construction model in France.

PUBLIC PROCUREMENT MEASURES

PROPOSAL

21

TEMPORARILY RELAX THE OBLIGATIONS OF PUBLIC PROCUREMENT OFFICIALS TO CONCENTRATE ON NEW CHALLENGES

The aim is to enable services tasked with stimulating economic activity through public procurement to spend time on defining new projects - incorporating low carbon transition requirements - rather than catching up on the work often delayed by the Covid-19 crisis, which on the contrary could potentially cause contracts and therefore activity to be interrupted.

In this regard, three actions could be taken to fulfil this goal:

- The possibility of extending framework contracts for a year to deal with the difficulties of putting contracts out to tender when they expire
- Simplified treatment of Covid-19 crisis financial compensation (where they exist, allow the thresholds for the conclusion of amendments to be exceeded)
- Temporarily increase the amounts authorized for direct agreements

IMAGINE.
CREATE.
ACHIEVE.
a sustainable future

Egis is a major international group in the construction engineering and mobility services sectors whose unique global service range encompasses infrastructure consulting, engineering and operation. Through our capacity for innovation, we respond to the climate emergency and to the greatest challenges of our time by offering solutions and acknowledged know-how in the areas of transportation and mobility, sustainable cities, buildings, water, the environment and energy. A 75%-owned subsidiary of Caisse des Dépôts, with the remaining 25% held by partner executives and employees, Egis imagines a sustainable future, working for populations and social progress.

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Design & layout: Amandine Juston / **Agence BeTrue – June 2020**

egis

1,5°C
1.5°C PATHWAYS
TRAJECTOIRE 1,5°C

Caisse des Dépôts
GROUPE