



MANIFESTO

for a **Decarbonised mobility**



setec
Engineers & Citizens



A matter of urgency

The Secretary General António Guterres opened COP27 with this dilemma: «Humanity has a choice: cooperate or perish».

This global directive requires significant actions to be taken. For example, concerning France, the National Low Carbon Strategy (SNBC in French) states the objective of achieving carbon neutrality by 2050, dividing by 5.8 the emissions on the French territory compared to 2015, and multiplying by 2 carbon pools.

Mobility of people or goods in general is a central issue, as it is at the heart of all our economic and social activities. **Transport** represents about a third of CO² emissions in France and a quarter worldwide.

This sector, which is heavily dependent on oil, is also responsible for a **number of impacts**: air pollution, soil artificialisation, fragmentation of land, and their consequences on human health, biodiversity, water management, etc.

The urgency of climate change requires a swift and ambitious evolution in our means of transport, whereas the time required to create or transform transport systems is by nature long, whether for technical, political or administrative reasons. France and Europe have committed to **decarbonising** transport **by 2050**.

GLOBAL OBJECTIVE



2°C
or even 1,5°C
by 2100

OBJECTIVE FRANCE



Carbon neutrality
2050

TRANSPORT FRANCE



Decarbonisation
almost complete
2050

An ambition to be useful

It should be noted that one third of **setec's** activities concerns transport infrastructures. We intervene in all modes, all types of territories, we conceive, evaluate and accompany the realisation of projects.

Historically anchored in regional planning and the design/construction of related infrastructures, **our group has now made low-carbon mobility a key pillar of our societal commitments**, in a manner that is consistent with and complementary to territorial resilience, low-carbon construction and energy transition.

The impact of actions on projects is far greater than the numerous actions we can take on an individual basis. **setec** acknowledges the impact of its missions on mobility and is committed to proposing alternatives or developing specific expertise to achieve the objective of decarbonisation.

This is the meaning of our “Engineers and Citizens approach. Our ambition is **to accompany public decision-makers in order to inform them objectively** in their choices through our technical expertise and our pragmatic approach to projects, by operating in all areas within the engineering market.

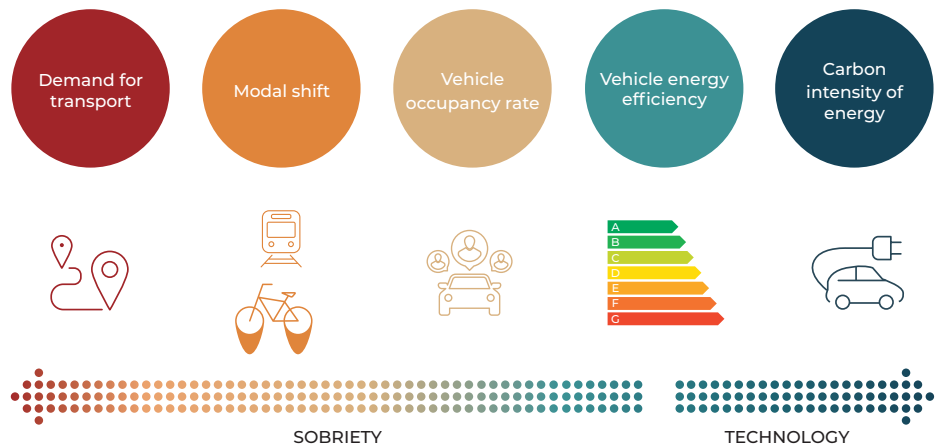
We want to go further and tackle mobility over the long-term. To act beforehand, to gather, to convince, to find solutions, to go beyond barriers to approach mobility with a holistic vision; the guideline is to contribute to rethinking technologies and uses by encouraging the connection of all the essential stakeholders of sustainable mobility.



5 levers for action

The objectives will not be achieved through technological progress or sobriety alone. Engaged in development, energy transition projects and digital services to commuters, **setec** wishes to contribute in activating each of these levers.

CO₂ =





Training our employees

setec's strength has always been both in the high level of expertise of the Group's engineers and in the ability to bring together multidisciplinary teams. Our model for developing skills has now been enriched by the strengthening of other values within the group. This includes the **freedom to dare**, to dare to change our approach to travel, to dare to change our design patterns and to innovate. We want to accompany everyone through this change, adapt our tools, identify the practical levers to be applied and share the meaning of **setec's** actions to face climate challenges.

In addition to the training courses provided via the internal Campus, a guide to low-carbon mobility has been

produced by and for **setec** engineers. The aim is to shed light on the challenges linked to the decarbonisation of mobility and the related levers for action, in practical terms, by phase or by type of project. We work on the five main factors of mobility decarbonisation: Transport demand, modal shift, vehicle occupancy rate, vehicle energy efficiency and carbon intensity of energy.

Beyond our missions, we are also committed **to controlling our own travel**, with the deployment of an ambitious mobility plan declined by site and a proactive travel policy.

The decarbonised mobility guidebook

- > To provide our engineers with guidelines and methods for an understanding of these issues.
- > Addresses in addition to our guide to low-carbon design, the decarbonisation of both mobility and the construction methods of our transport projects.



Targeting the relevance of projects in terms of their eventual impact

Our ambition does not stop at ensuring the successful achievement of our missions. We focus our activity on projects that have a positive impact and where we have an environmental added value.

This starts in the **preliminary reflection and planning phases**, which enable the functionality of projects to be analysed, challenged and evaluated on the basis of decarbonisation criteria.

We make a point of accompanying decision-makers in their choices, analysing, evaluating and comparing solutions, with objective arguments. It is also a question of redefining the need, re-examining the solutions and developing alternative proposals.

The construction of new infrastructures, in countries where networks are already established, should be approached pragmatically with a view to sobriety. The priority objective is to improve the use of existing infrastructures and to ensure the transition of their use: **Create**

value through more rehabilitation, modernisation or transformation of existing infrastructures.

The improvement of existing services involves the energy transition of vehicle fleets, and the coordination between production, distribution and use of energy. It also means improving the attractiveness of decarbonised services for passengers and freight companies.

A number of our teams are specialised in these exploratory phases, which provide objective arguments to guide choices towards greater decarbonisation. These teams are also experienced in assisting operations and mobility services in order to guide the adaptation choices that organising authorities and users are constantly faced with.



Activate all decarbonisation levers in our projects

It is important to place at the heart of each assignment **the expected functionality**, the solution to the need for mobility and the objective of reducing the environmental impact not only **in the construction phase**, but also in the operation phase. The proposed alternatives should not only be financial or related to the mode of realisation but should guarantee the appropriate adaptation to the mobility needs of the territory.

Our approach requires that we interact with a wide panel of stakeholders, including mobilising parties associated directly with our clients in order to propose **a comprehensive 360° vision of decarbonised mobility** that covers

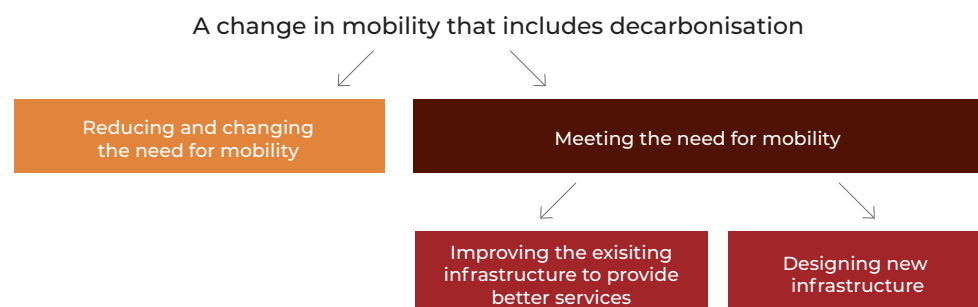
issues such as intramodality, urban development, all-distance travel, etc.

The transport sector is still heavily dominated by oil. Yet the «carbon intensity» of energy is one of the five main levers on which we can act. We should therefore systematically encourage and examine the use of **alternative energies** (electricity, hydrogen, biogas or biofuels), ensuring that their production is as decarbonised and sustainable as possible over the entire life cycle of the project.

In order to identify the most suitable options, **setec** aims to act **as an intermediary** between the production and use of energy, as well as between energy providers and mobility operators.

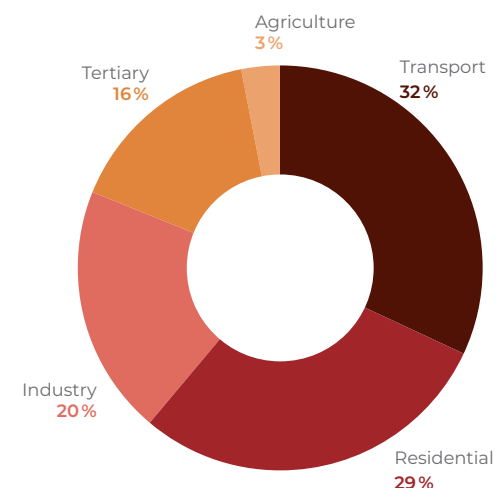
Changing from an investment logic to an operational logic

Modifying transport demand and improving existing infrastructure are among the alternatives and elements necessary for the design of new infrastructure.



Mobility at the heart of the energy debate

One third of energy consumption in France is currently used for transport. The energy transition in mobility requires an approach adapted to the different modes, needs and territories, closely linked to the problems of production and distribution.



Think bigger

Our responsibility as engineers is to find the right balance between technology and economy.

Engineering is a trusted partner that can activate several levers, contribute to the expected breakthrough in mobility and link the entire ecosystem. We are aware that this new role goes far beyond the scope of traditional know-how alone.

We therefore need to develop new skills in order to fulfill this task. Integrating the vision of sociologists, planners, climatologists etc. into our projects and promoting the cooperation of transport stakeholders at all decision-making levels in order to federate skills towards the shared objective of reducing carbon emissions.

“Less is more” declared the director of Bauhaus in order to orient the architectural form towards a minimalism that combines both functionality and aesthetics. Perhaps we should also accept the concept of a certain «demobility», or even the absence of mobility: not forcing people to go faster, to move further and more often.

Since the company was founded more than 65 years ago, **setec** has always adapted to the changes in our society, bouncing back when theories are in decline and contexts change. Since the transition also involves the development of more sober lifestyles, **the setec group is committed to broadening its outlook in order to accompany, imagine and develop sustainable and inclusive mobility.**



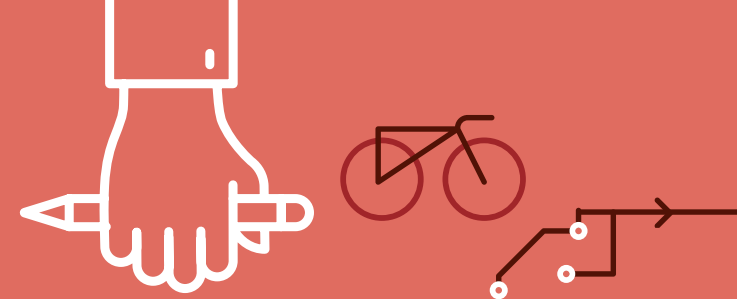
setec's

10 KEY COMMITMENTS

for the decarbonisation of mobility

1. **Provide our clients, at each phase of our assignments, with a holistic vision that goes beyond organisational** barriers and includes the complete cycle of energy production and use, as well as mobility habits and attitudes
2. **Focus our development** on activities where we have the greatest impact
3. **Include the criterion of project relevance by analysing their functionality** and carbon footprint in our choice of assignments

4. **Dare to challenge the program of our mobility projects** to accelerate their decarbonisation
5. **Systematically propose the integration of carbon impact** in multi-criteria analyses
6. **Continuously invest in research and innovation,** supporting the ideas of our employees and partners
7. **Develop tools** for a strategic assessment of the impacts of our projects
8. **Train all our employees** working in the field of transport and mobility
9. **Promoting our guide** to low-carbon mobility amongst our employees
10. **To take action in controlling** our own mobility



And finally :

Join us in the Engineers & Citizens adventure

The consequences of global warming are now a reality that we witness every day. The fight against this phenomenon, which has been proven and is becoming increasingly prevalent, is everyone's business. Conscious of the urgent need to act against climate change, the employees of the **setec** Group have rallied around an «Engineers and Citizens» initiative.

This is reflected in everyday actions related to our own activity, but especially in the choices and solutions we propose in our projects.

This is why we have divided the eco-design themes into challenges for engineering in the coming years: low-carbon design, carbon-free mobility, resilience of territories, increased competence of our employees on climate and environmental issues are the challenges we have decided to tackle.

With regard to carbon-free mobility, the stakes are high since France and Europe have set themselves a joint objective of almost complete decarbonisation

transport by 2050. The subject is all the more sensitive and important because it relates to an individual act, but above all essential social and economic: getting from A to B.

We know that we are only a small part of the process of organising and developing transport and that the objective of decarbonisation can only be achieved with the help of everyone in the ecosystem: mobility authorities, project owners and infrastructure managers, town planners, landscape architects, engineering colleagues, manufacturers, rolling stock manufacturers, operators, suppliers and, of course, all of us, the citizens.

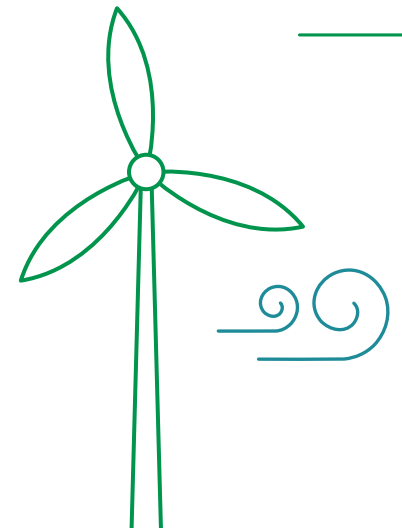
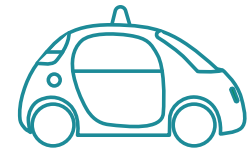
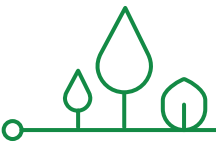
Our role remains no less important and we must, on the one hand, clarify and accompany project owners in their programming choices and, on the other hand, propose to them solutions that are best suited to this major challenge.

Reducing our travel, favouring modes of transport with low greenhouse gas emissions, rethinking the use of existing infrastructures in favour of these modes, adapting the urban fabric so as to limit travel, promoting more low-carbon behaviour, or seeking innovative technical solutions for vehicles and the energies that propel them: we believe that all these levers must be activated, whether they are part of a logic of sobriety or technological innovation, to control the impact of human activity on current global warming.

Our profound and abiding conviction is that, while intentions are easier to write than to achieve, any collective movement begins with the will of a few. We therefore have no doubt that, if they are shared by all of the stakeholders involved in the mobility ecosystem, these commitments will be part of an overall movement and will eventually bear fruit.

I invite our clients as well as our partners to help and to encourage us in this direction and to join the adventure.

Michel Kahan,
President of the **setec** groupe



ENGINEERS & CITIZENS

