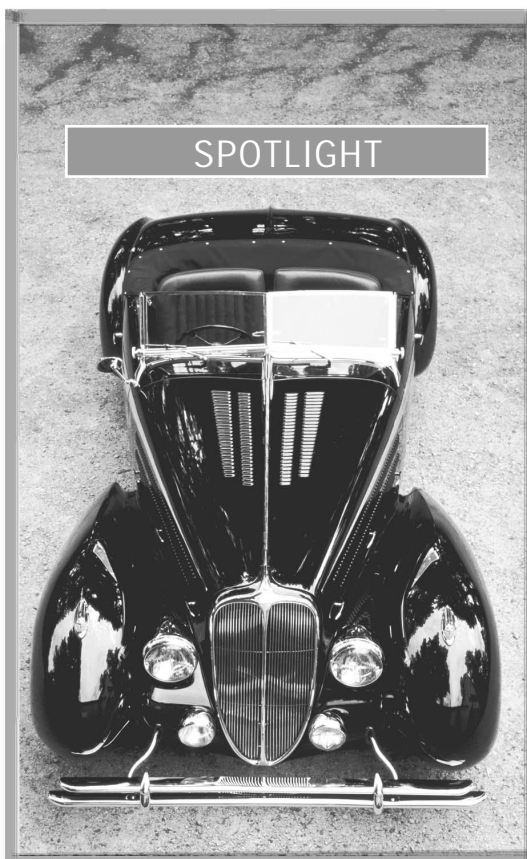


# Portrait of ISO/TC 22, Road vehicles, as a young concept car

*As TC 22, Road vehicles, undertakes for the very first time to draft its business plan and, at the same time, reaches the symbolic threshold of 500 published standards, I should like to share with the ISO Bulletin readers my enthusiasm in chairing such a venerable and, at the same time, such a young committee as ISO/TC 22.*

*Let me first say, though, that the importance of the international standards and the influence of TC 22 go well beyond the mere quantity of standards developed, however impressive. A standard*

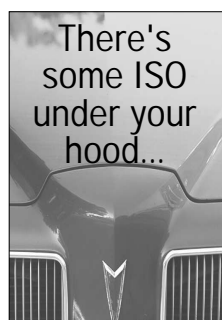


By Paul Serre, Chairman of ISO/TC 22, Road vehicles

*has, for sure, a technical content – that reflects a consensus on the state of the art – but it also has a political aspect, as it is*

*adopted by a majority of official national bodies, working according to recognized practices. Legitimacy is thus conferred on a standard (which the legislators of the WTO/TBT Agreement – World Trade Organization Agreement on Technical Barriers to Trade – have recognized), and that give it a value justifying industry's investment.*

*Without such democratic backing, the standard would remain just a document for internal use within firms, and governments would have no reason to attach any value to it.*

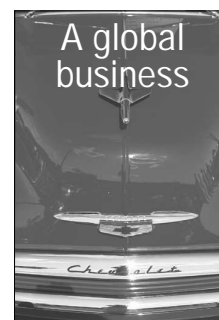


There's  
some ISO  
under your  
hood...

Brussels 1952 working group on lighting) have operated under its directives, and 25 subcommittees have been created, each usu-

Venerable it certainly is. Born the same year as ISO itself, it is now running into its 54th year of work. Over the years, 11 directly linked working groups (including the important

ally including several working groups. Today, this extensive and protracted activity is materialized through about 85 working groups (including those of the subcommittees) and 22 active subcommittees, and, above all, a collection of almost exactly 500 standards, which makes TC 22 one of the most prolific structures within ISO (see box page 25).



have been entered into with several of them. It also maintains external liaisons with the major players involved in international

The TC has many liaisons with other international standardization bodies within ISO and IEC (International Electrotechnical Commission). Formal agreements

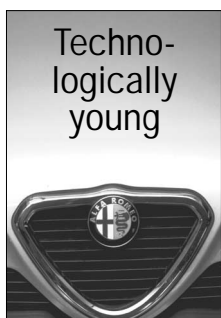
discussions on road vehicles such as, for example, the United Nations Economic Commission for Europe (UN/ECE), the World Health Organization (WHO), the International Organization of Motor Vehicle Manufacturers (OICA) or the Commission of the European Union. Thus, for more than half a century now, TC 22 has been debating everything with everyone in its field, its role gradually shifting from that of wise old man to that of a lofty guardian figure. Such a degree of success could have left little to look forward to in the future. Fortunately, however, the automotive industry certainly does not look back and does not go in for self-congratulation. There is a permanent drive at work within the TC which continues as before, if not even more so, to provide a high performance tool for innovation worldwide.

and to ensure maximum efficiency, TC 22 subcommittees enjoy broad autonomy under the responsibility of their secretariat: the responsiveness of the structure depends on it. Another example: Subcommittee 3 on electrical and electronic equipment set up a working group that was already dealing with 42 volt onboard electrical circuits (instead of the existing 12 volt or 24 volt), thereby responding to future needs for increased electrical power. Yet a third example: the initiation of work worldwide on liquefied petroleum gas vehicles, on the basis of completed European preliminary work. LPG vehicles are one potential way of solving urban pollution problems due to road transport. The recycling of end-of-life (ELV) vehicles and the analysis of design or production defects are other new subjects that have been addressed recently.



Our methods benefit from the responsiveness applied in industry as regards just-in-time and shorter turnaround times. The speeding up of our work therefore involves

easier and more systematic use of preliminary projects, the relevance of which it is up to each subcommittee to decide. Voting and commenting deadlines are closely followed, and we convey to the ISO Technical Management Board any suggestions for improvement that our experience has brought to us. Finally, discussions are about to start

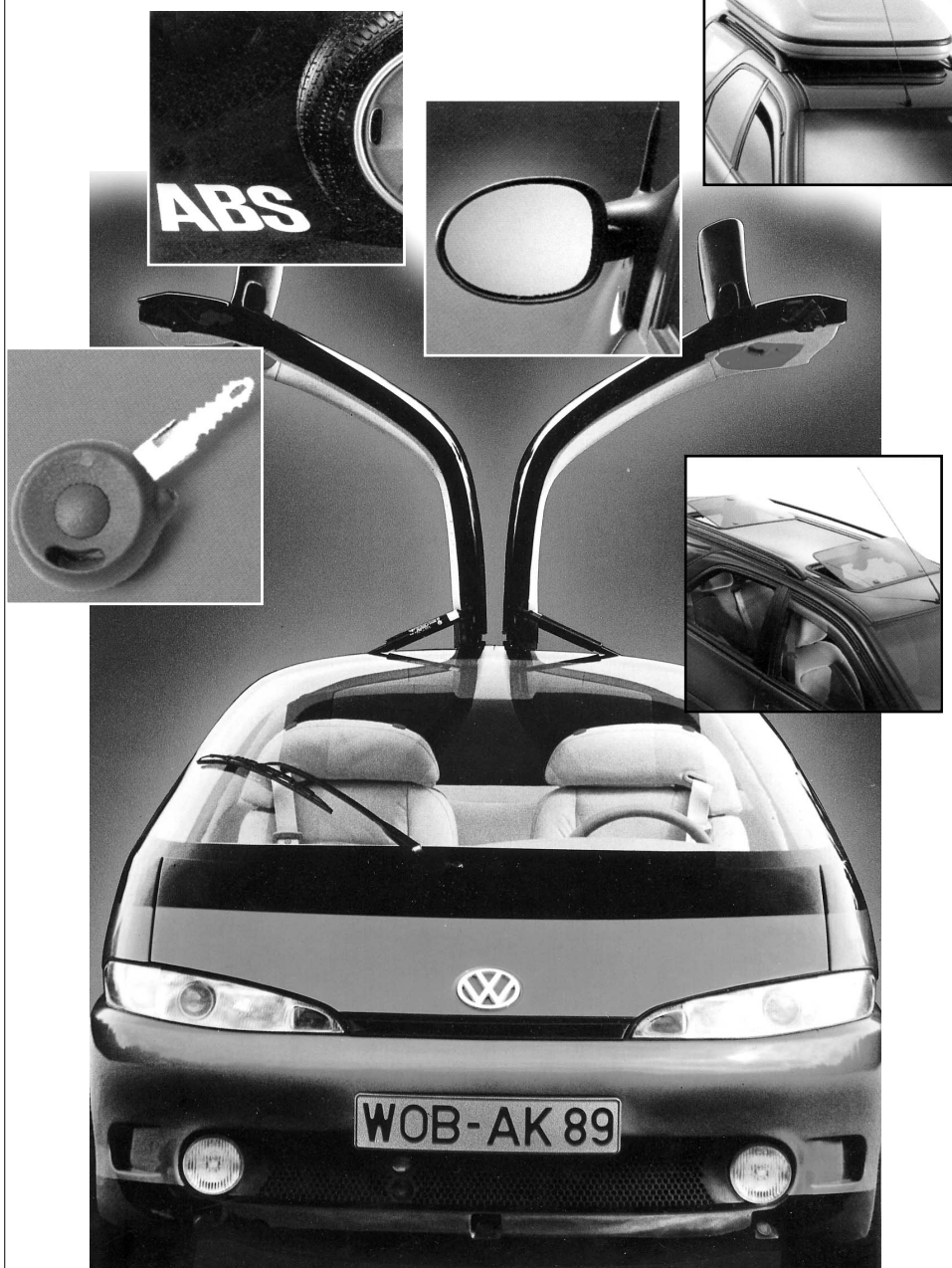


TC 22's youth can be seen unmistakably in the business plan we are about to finalize and which includes some 200 current work items. Compare this with the 500 standards

already produced.

It is young especially because the technology is young, too, and is constantly being renewed, even, probably, at an increasing pace in the last ten years. Innovation in all areas – materials, engines, performance and safety devices, automation, telecommunications – is there to meet a growing demand from customers of all kinds in industry, whether it be in terms of comfort or of environmental impact. Aside from the competitive innovations peculiar to each manufacturer, this activity generates new needs with respect to standardization, interchangeability, definition of these new products, or test methods, to which ISO/TC 22 is expected to respond with the utmost effectiveness.

Our structure and working methods are put under constant pressure that helps us to regenerate ourselves. Recently, for instance, the committee decided to devote greater attention to people with disabilities by upgrading an existing working group within the TC into a new subcommittee. We should stress that, in accordance with the ISO rules



regarding the use of the new ISO deliverables (TS – Technical Specification, PAS – Publicly Available Specification) which we have not made use of so far. It is worth signalling an experimental project that DIN-FAKRA (*Automotive Standards Committee in the German Institute for Standardization – FAKRA*), our German member, has carried out with regard to deadlines. Contrary to the commonly held idea that the development of standards is slow and cumbersome, Germany has succeeded, for two subjects, in publishing a document within a year. There is clearly room, therefore, for a dramatic acceleration of the work. With one proviso, however: this result was made possible by a significant

### The automobile industry a few facts

The figures below were given in TC 22's business plan, and serve to show the extraordinarily international spread of vehicle production

*Total international trade* in the road vehicles sector (in billion USD) over 1996-1998:



1996	1997	1998
470	496	525

25 groups/companies produced 96,5 % of the worldwide production of road vehicles in 1999. Of these, 10 groups/companies each produce more than 4 % of the total worldwide production.

investment. Meetings were held at a rhythm of about one a month, the experts involved were actually assigned for most of their working time to the project. This amounts – should one say, unfortunately – to quite exceptionally favourable circumstances for standardization. A lesson can be drawn from this: that the measurement of standards development times can only be at best a rough guess. No measurement will show the generous amounts or alternatively the scantiness of the means devoted by the experts to the standardization work and, over and above

them, by their employers, while it is precisely these resources that, in fact, dictate the amount of time required for completing the job. Speedy standardization is possible, but it costs money, and it is hopeless to expect to speed up the work significantly while maintaining a low level of investment – and vainly still if that level is reduced.

TC 22 is doing fine, one way and another, and is not about to give up meeting the demands of the industry. Its success depends on its ability to face a number of challenges from its immediate setting.



The **first** of these lies in the existence, for about 40 years already, of an international effort to harmonize vehicle design regulations. Within the United Nations in Geneva,

the World Forum for the Harmonization of Vehicle Regulations (in short, WP 29) has been involved in unifying the requirements of several dozen governments (see box p. 26). More than a hundred vehicle functions are thus covered by the International regulations contained in annex to the "Agreement concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts and the conditions for reciprocal recognition of approvals" (also known as the 1958 Agreement). ISO/TC 22 has contributed, and will continue to contribute, to this crucial governmental forum for the global definition of vehicles. In fact, many of the TC's publications are quoted or endorsed as reference documents in the decisions of WP 29. At the same time, the forum regularly proposes work to the TC on a number of technical aspects of regulations calling for clarification. TC 22 endeavours to respond diligently to these requests. From that point of view, it operates as a technical knowledge supplier to governments who meet within that forum.

The **second** standing challenge lies in the horizontal nature of automotive technology, which compels standardizers to cooperate. For as long as it has existed, the automotive industry has borrowed its know-how from a broad range of specialized fields of expertise. But there are many existing or new bodies

specializing in standardization with which it is becoming essential to cooperate. As a multi-technology committee, therefore, TC 22 depends sometimes on experts – sometimes external – that the TC or one of its subcommittees can call upon to solve the most sophisticated or innovative technical aspects. On the other hand, the knowledge of the technical and economic mix that produces an effective and viable road vehicle – a form of know-how in its own right – is the special precinct of TC 22. The latter, therefore, holds the key to the application or rejection of a particular technical choice. However, the experts in a particular field may be unaware of the global economic criteria that justify that choice. Possible rivalries between experts can then interfere in the normal development of a standard – even though it is useful to all.

**“Since the 1980’s... political demand for a greater safety in transportation and a reduced environmental impact of the use of road vehicles has deeply influenced the orientation of this technological evolution. Some major technological leaps forward have been accomplished in this period of 20 years, both in safety and environment. But political requirements are not foreseen to calm down, so that new outstanding developments are already planned and will happen in the very next years.”**

ISO/TC 22, *Road vehicles*,  
Business Plan



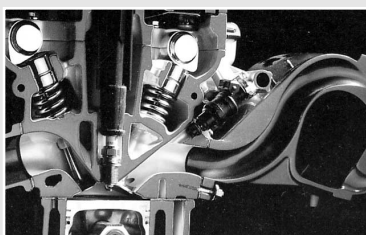
modest contribution to understanding between people and to their equal dignity. ISO provides the opportunity for each country to take part unrestrictedly in the work and to bear equally on the decisions taken.

If equal sovereignty between all the actors in the collective effort that international standardization represents seems artificial, and indeed, almost unattainable, it nevertheless remains, as Winston Churchill once said, "the least bad of systems" in that it smoothens out the very significant inequalities that exist between the countries that are members of TC 22. It precludes any small minority of countries from ever taking the decisions alone. This smoothing effect enhances the symbolical aspect of the equal voting rights principle, resulting in the credit given by governments to the work of ISO/TC 22, which in turn is of crucial importance for its usefulness.

Through this presentation of the various facets of the work of TC 22, *Road vehicles*, I hope to have sufficiently demonstrated that our old committee is still green and spry and has plenty of plans for the future. If its way of operating can now be seen more clearly and if other partners become willing to join us, I will certainly have reached my goal. We are now celebrating our 500th – useful, need I say – standard, and we look forward to moving ahead with all our partners to do just as well in the coming years. □

## Referencing

One clue to the usefulness of a technical committee's work is to see the extent to which its work is used in international regulations or in national government, regional or local legislation as a reference, whether by citing the standard or implicitly endorsing its content by using the technical content, or part of it, within the regulation. On this level, TC 22's work has manifestly proved its worth: we can say that no less than 60 % of its work is used in connection with regulatory work.



## News on the World Forum for Harmonization of Vehicle Regulations (WP 29)

WP 29 is the specialized working body dealing with regulations on the construction of vehicles of the United Nations Economic Commission for Europe, Inland Transport Committee.

Three Agreements are currently administered by WP 29:

### The 1958 Agreement

*concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions.*

The second revision of this Agreement entered into force on 16 October 1995.

It currently has 37 Contracting Parties, of which 33 are European ECE member countries. Other Contracting Parties include the European Community (regional economic integration organization), Japan, Australia and South Africa. It has 112 ECE Regulations annexed to it.

### The 1998 Global Agreement

*concerning the establishing of global technical regulations for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles.*

This Agreement entered into force on 25 August 2000. Contracting Parties are: Canada; European Community; France; Germany; Italy; Japan; Russian Federation; People's Republic of China; Republic of Korea; Republic of South Africa; United Kingdom; United States of America (Spain: the procedure is still in progress).

### The 1997 Agreement on Periodical Technical Inspections

*concerning the adoption of uniform conditions for periodical technical inspections of wheeled vehicles and the reciprocal recognition of such inspections.*

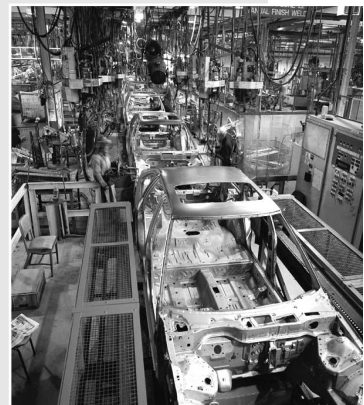
This Agreement entered into force on 2001-01-27. Contracting Parties are: Estonia; Finland; Hungary; Netherlands; Romania; Russian Federation.

Soon after its creation in 1953, WP 29 and its subsidiary expert bodies began to look beyond active safety and into addressing the reduction of the effects of accidents on the human body (passive safety). In addition, WP 29 became interested in the problems of environmental protection; air quality (threatened by pollution from exhaust gases) and the limitation of disturbances due to noise from motor vehicles. Its activities have today resulted in the establishment of 112 ECE Regulations, annexed to the 1958 Agreement.

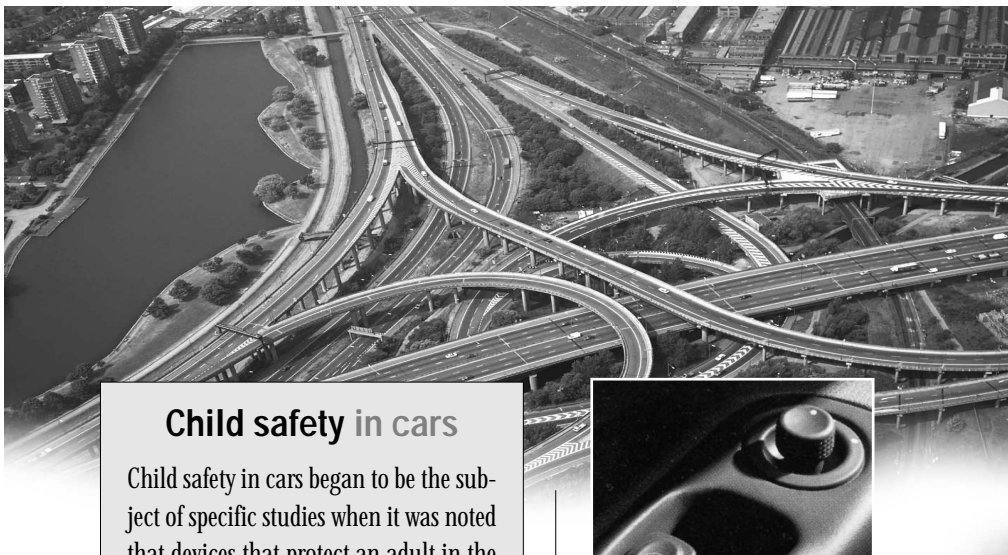
The participation in WP 29 also grew, as more European and non-European countries became interested in its work and in adherence to the 1958 Agreement. In addition to the United States of America and Canada, which have participated in WP 29 since its inception, Japan and Australia have attended the meetings regularly for over 20 years. The Republic of South Africa and the Republic of Korea have participated for a few years. The People's Republic of China, Thailand, Brazil and Argentina have also participated, but to a lesser degree. In 1998, Japan became the first non-European country to adhere to the 1958 Agreement, followed by Australia in 2000 and South Africa in 2001.

More detailed information is being compiled in a second edition of the so-called "Blue Book" due to be issued in 2001. Entitled *World Forum for Harmonization of Vehicle Regulations (WP29) – How it works – How to join it*, the publication is to describe the functions of WP 29.

François Abram, Technical Programme Manager, Standards Department

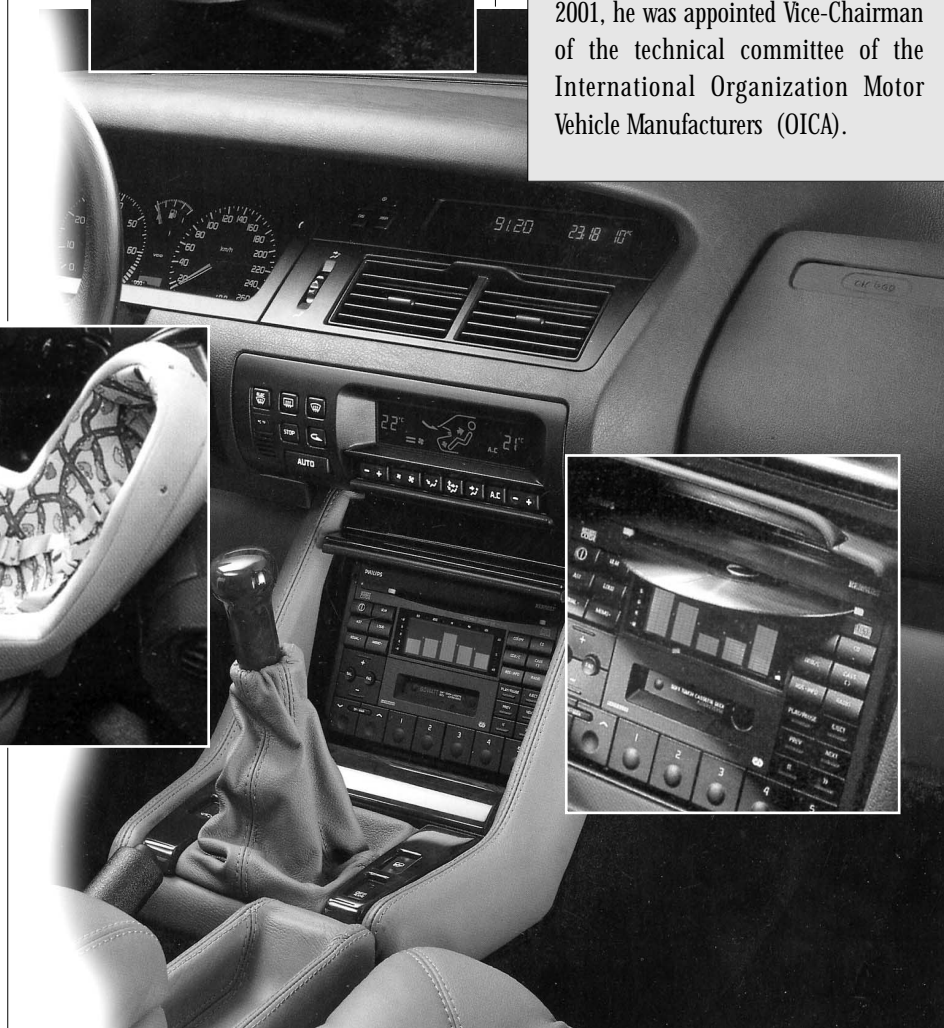






## Child safety in cars

Child safety in cars began to be the subject of specific studies when it was noted that devices that protect an adult in the event of an accident could be perfectly useless or even harmful for a child. Because their morphology, their resistance, their position, their motion in the event of a collision – all elements that can be used to plan safety – differ completely from those of an adult. This was the beginning of child restraint systems (CRS) which came in the form of cots, seats or cushions. CRSs had to be secured to the car, and the easiest solution devised was to use the adult safety belt, which was already in widespread use. All could have gone well had the CRS not proven at times to be cumbersome, complicated and, to say the least, difficult to use by some parents and poorly suited to be used with seat belts. As a result, vehicle and CRS manufacturers and consumers came together within TC 22/SC 12 to develop a more user-friendly solution to this difficult interface problem. Anchor points specifically designed in vehicles for CRSs were decided. The design of the CRS attachment to these standardized anchor points was to ensure easy and failsafe attachment. ISOFIX was born and, since then, has been spreading to new CRSs and new cars to ensure that children are always better protected.



## About the author



Paul Serre was born in 1967 at Saint-Jean-de-Luz, France. He graduated in engineering at the Paris Ecole Centrale (1990) and at the Sorbonne University's Institute of Urbanism (1991)

After a first professional assignment at ANVAR, the agency for innovation under the French Ministry of Research, P. Serre joined the "French Automobile Manufacturers' Committee" (CCFA) in 1993. In his capacity as assistant to the technical director, he carried out a number of national and international assignments, particularly to the United Nations. In 1999, he became the technical director of CCFA and was elected Chairman of the ISO Technical Committee, TC 22, *Road vehicles*. His various duties include a mandate as Administrator of AFNOR (French Standards Association) and of Cofrac (French Accreditation Committee). In 2001, he was appointed Vice-Chairman of the technical committee of the International Organization Motor Vehicle Manufacturers (OICA).