

## *ISO TC22's draft business plan for year 2001*

Transmitted by the representative of ISO

### **1 INTRODUCTION.**

#### **1.1 ISO technical committees and business planning.**

The extension of formal business planning to ISO Technical Committees (ISO/TCs) is an important measure which forms part of a major review of business. The aim is to align the ISO work program with expressed business environment needs and trends and to allow ISO/TCs to prioritise among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development. Your role in the implementation of the Business Planning concept will contribute significantly to the overall effectiveness of international standardization.

We express our sincere appreciation and thanks for your time in reviewing this Business Plan.

#### **1.2 International standardization and the role of ISO.**

The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development and adoption of International Standards: ISO (International Organization for Standardization) is responsible for all sectors excluding Electrotechnical, which is the responsibility of IEC (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of ITU (International Telecommunication Union).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 130 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

The principal deliverable of ISO is the International Standard.

An International Standard embodies the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry). ISO and its Technical Committees are also able to offer the ISO Technical Specification (ISO/TS), the ISO Public Available Specification (ISO/PAS) and the ISO Technical Report (ISO/TR) as solutions to market needs. These ISO products represent lower levels of consensus and have therefore not the same status as an International Standard.

ISO offers also the Industry Technical Agreement (ITA) as a deliverable which aims to bridge the gap between the activities of consortia and the formal process of standardization represented by ISO and its national members. An important distinction is that the ITA is developed by ISO workshops and fora, comprising only participants with direct interest, and so it is not accorded the status of an International Standard.

## **2 BUSINESS ENVIRONMENT OF THE ISO/TC 22.**

### **2.1 Description of the Business Environment.**

The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this ISO/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

The road vehicle has known since it was born an interrupted advance in technology to improve the performances of the product and offer to its various clients a mobility package as efficient as possible at the lowest cost possible. Since the 80's though, 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 twenty 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.

The major trends of today are:

- the gradual integration of telecommunications and information technologies on board the road vehicle, which begun some years ago and has not reached its full extension yet. This integration in the vehicle is complemented by wider scale networks and systems dealt with by other standardization bodies.
- the coming to the market of alternative fuels or new modes of propulsion such as the electric motor, using a battery or a fuel cell.
- the development of new tools to evaluate and plan the crashworthiness of road vehicles, which in turn lead to finding new passive safety devices to improve the performance.
- the growing need to care for indirect environment impacts of road vehicles during their life cycle, that is their energy consumption and their ability to be recycled.

Not only vehicle producers are interested in this process. Its is obviously also true for an industry as close as the suppliers of parts and subsystems for the vehicle producers, the body builders for those vehicles that are built in several stages from a base vehicle, the maintenance and repair services enterprises, and indirectly the producers of testing, control, repair and dismantling equipment or tools.

Commercial vehicles' buyers, i.e. the road transport service providers, for goods or passengers, have also an interest on some subjects.

Governmental central authorities are looking after the consequences of the use of road vehicles ever since the latter appeared: this may encompass various departments in charge , in any case, of transportation, but also in some instances of police forces, industry, environment or else.

Public interest is also important in the field, mainly from three different kinds of representation: automobile clubs, which express shared interests and concerns within the community of motorists; customers associations, whose goal is to establish a dialogue with the producer and communicate a deeper knowledge of the product; environmentalist associations, concerned with the environmental negative impact of human activity, including the use of road vehicles.

Being an industry that takes advantage of many technologies, road vehicles standards are also indirectly addressed or influenced by many other standards groups in ISO, in IEC for the electrotechnical aspects, in CEN, in SAE, to quote the most relevant works. The definition on the boundaries of each work and the competence of the various groups has to be resolved each time a problem appears. It must be underlined that the number and frequency of such boundary problems increases.

Standardization in the field can also appear through a joint work by the vehicle producers of one region or the whole world, outside a formal organization. This is especially true for latest technologies or recent concerns. Eventually, the result of such an effort can turn into an ISO deliverable.

Of a very different nature, but not less relevant, test procedures can be standardised between several countries for the use of media/consumers comparison tests; this standard procedure does not usually constitute an international standard.

Regulatory and legal issues represent a major challenge for road vehicle standards. Design regulations have been implemented since the very beginning of the 20<sup>th</sup> century to care for the crucial safety aspects of the use of vehicles, in every industrialised country. In the 1950s international discussions to harmonise these national regulations began.

In 1953 a subgroup of the Economy and Social Council of the United Nations Organization was created, named Working Party (WP) 29, to deal with road motor vehicles and their trailers. WP29 drafted an international harmonization agreement, later referred to as the 1958 Agreement. Regulations on several aspects of the design of road vehicles have been internationally adopted and annexed to the 1958 Agreement, implemented in various countries of the world, and updated according to technical progress and political demand. The number of regulations exceeds now a hundred and ten, in three fields: safety, environment, and security.

On a regional basis, in 1957 the European community decided by the Treaty of Rome to ensure the free circulation of goods, and especially to harmonise design requirements of goods, including road vehicles. A European framework directive on harmonised approval of road vehicles was published in 1970, under the reference 70/156/EEC. This framework directive governs today more than fifty separate directives for design requirements of road vehicles, some of them close to corresponding regulations of the 1958 Agreement. Conformity to these requirements allows a vehicle to be sold in the 15 States of the Community. In 1998, these design requirements became mandatory for passenger cars in the Community.

In the field of periodical testing of vehicles in use, WP29 decided upon an international agreement to harmonise testing procedures and requirements, referred as the 1997 Agreement. This agreement entered into force in 2000 and will result in harmonised regulations, of which two drafts already exist.

A new harmonization agreement, named the 1998 Agreement, entered into force in 2000 and will also result in international regulations on the design of vehicles. It must be noted that the United States of America have signed this 1998 Agreement only.

In conclusion there is a long-standing effort to regulate on an international level road vehicles. The first consequence is that the presence of technical barriers to trade on the most important markets has been extremely reduced and between some countries totally eliminated. It must be noted though that, for now, most of the international regulations of the 1958 Agreement are not recognised in North America. The second consequence for the TC 22 is that an important number, if not all, of essential characteristics of the vehicles are already cared for by the international regulating authorities: to alter these essential requirements in an international standard is not desirable, or would be pointless if decided. This being said, many standards of the TC 22 have been implemented by the international regulation authorities, which in some cases had specifically asked for ISO's help.

## 2.2 Quantitative Indicators of the Business Environment.

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the ISO/TC 22:

- Total international trade in the road vehicles sector (in billions US\$) over 1996-1998:

1996	1997	1998
470	496	525

- Imports and exports of road vehicles products (in billions US\$) by major countries over 1996-1998:

	EXP. 96	IMP. 96	EXP. 97	IMP. 97	EXP. 98	IMP. 98
<b>USA</b>	55.0	112.0	61.5	120.7	61.1	129.8
<b>Canada</b>	44.7	34.1	47.9	39.4	49.9	40.0
<b>EU*</b>	243.0*	202.6*	245.7*	206.0*	267.7*	232.1*
<b>Germany</b>	87.3	46.5	88.3	45.0	99.6	48.3
<b>France</b>	34.1	28.6	34.5	23.5	38.7	28.5
<b>UK</b>	24.2	32.9	26.1	36.3	26.2	38.3
<b>Italy</b>	19.1	20.3	17.8	22.6	18.8	25.0

	EXP. 96	IMP. 96	EXP. 97	IMP. 97	EXP. 98	IMP. 98
<b>Spain</b>	25.3	18.4	24.4	18.6	27.1	22.5
<b>Sweden</b>	10.1	5.6	9.4	6.0	10.4	6.6
<b>Japan</b>	75.0	12.5	79.9	10.2	77.6	7.8
<b>S. Korea</b>	11.6	2.3	12.2	1.9	11.4	0.9

\*The EU figures take into account international trade within the Union. Trade within the Union represents 71% of the EU exports in 1998.

Over 1996-1998, Germany is the biggest worldwide exporter of automotive products, Japan the second biggest, USA the biggest importer.

- Exports of complete vehicles from countries other than EU, North American, Japan and South Korea (share of total world-wide exports, in numbers of vehicles)

1997	1998	1999
18.5%	17.5%	17.4%

- 25 groups/companies produce 96.5% of the worldwide production of road vehicles in 1999. Of these, 10 groups/companies produce each more than 4% of the total worldwide production.
- International Labour Organization estimates that in 1997, the transport equipment manufacturing industry (all vehicles) has directly employed between 7 and 7.5 million workers worldwide. For the motor vehicle sector, no such global figure exists. It has to be underlined that direct manufacturing employment is very much outnumbered by indirect employment: in France in 1999, 315 000 are employed in direct motor vehicle manufacturing; taking into account all employment induced by road vehicle manufacturing and usage, this figure goes up to 2 514 000, 8 times more.
- In most of the Working Party 29 Regulations, some references are made to ISO standards. In such a way, 75 different ISO Standards are used and some of them are referenced in several Regulations. The same situation does exist in the European Union Directives. Consequently as a lot of countries around the world transpose the UN/ECE Regulations, those countries are effectively using the ISO Standards.

### 3 BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC 22.

The vehicle industry is a worldwide industry and the implementation of international standards should limit the cost of producing vehicles and their parts. In every country the construction of the vehicles is widely regulated but the harmonization of the regulation is under way at the UN/ECE WP29 whose 1958 agreement is open to every country and paved the way for the 1998 agreement. Some major countries have already signed this agreement and WP29 is preparing worldwide Regulations. Those international Regulations often need the support of international standards that are prepared and issued by ISO.

In accordance with this statement the Automotive industry contributed through the ISO Standards to the development of new fuel systems as Compressed Natural Gas (CNG), Liquefied petroleum Gas (LPG) and in the future Hydrogen without forgetting the electrically propelled vehicles.

The ISO/TC 22 standards have also contributed to attaining /maintaining a high level of safety and protection of the environment according to the scope of its sub committees. Some examples can be given with the crash testing methods, hold handling ability testing methods, emissions testing methods and so on.

In all participating countries there is a general tendency to transfer the ISO/TC 22 Standards as national Standards following the harmonization of the Regulations. Cost saving is at stake, as well as the removal of unjustified barriers to trade.

### 4 REPRESENTATION AND PARTICIPATION IN THE ISO/TC 22.

There are 19 participating countries and 44 observer countries.

19 P-countries are Belgium, Brazil, China, France, Germany, , India, Iran, Italy, Japan, Korea Republic of, Netherlands, Philippines, Russian Federation, Spain, Sweden, Switzerland, Turkey, United Kingdom, and USA. Among these 19 P members there are 12 developed countries. The relative importance of developed countries is explained by the fact ISO/TC 22 is a TC specific to an industrial sector, for which technical design decisions are mostly centralised in developed countries. Almost all Participating countries have a strong automotive industry that is either vehicle manufacturing or part manufacturing or both. As a result, all the main vehicle manufacturers of the world, and most part manufacturers, are present in the subcommittees and in the working groups depending of the availability of their experts.

44 O-members are from Africa: 4, from the Americas: 9, from Asia: 9, from Europe:20 (7 from the European community) and from Oceania: 2.

The discrepancy between the various world regions is explained by the same factors as above.

On the whole, no major country or region known to have significant business, trade or experience in road vehicles is absent from participation to the ISO/TC 22. The exception of Canada might be explained historically by the close links between the industries of USA and Canada, which could have resulted in USA alone being a P-member.

At TC 22 or TC22/SC level the international organizations of vehicle manufacturers, and of parts manufacturers, or Regulatory bodies or users' organizations are consulted through an external liaison. (See in annex the participation to the TC 22 and the Sub committees as a liaison).

## **5 OBJECTIVES OF THE ISO/TC 22 AND STRATEGIES FOR THEIR ACHIEVEMENT.**

### **5.1 Defined objectives of the ISO/TC22**

The main TC 22 objectives are as follows :

#### **Generic objectives:**

Take full responsibility and ensure a worldwide involvement for handling items relating to road vehicles and their equipment.

Produce cost effective standards, which correspond to user and market needs, in due time

Support the technical progress of the sector.

Maintain the collection of 493 published standards and adapt them to technical progress through the 5-year review.

Increase the recognition of the work of the ISO/TC 22.

### **Specific objectives:**

On piston rings and pins, the aim of the work is to adapt the standards to the modern technologies in revising them.

On accessibility of vehicles to the disabled, due to the increasing needs to help these people, some items should be introduced and an inquiry showed a large majority of TC22 P-members for replacing this working group by a sub-committee.

A new activity on recyclability and recoverability is progressing quickly. This is in addition to the Regulations applicable to passenger cars.

On ignition equipment (SC1), the activity is reactivated with the adaptation to the new engine technologies (i.e. new types of spark plugs).

On braking (SC2), the aim is to clarify the test procedures applied in the Regulation 13 of the 1958 Geneva Agreement and provide some specifications on the brake linings in order to propose test methods to be used by the vehicle and/or brake manufacturers and the brake linings suppliers.

On electrical and electronic equipment (SC3), there are 3 main tasks :

- the standardization of components of the electric equipment ;
- the standardization of electromagnetic compatibility test methods ;
- the standardization of data transmission

On engine tests (SC5), test methods on exhaust gas and particulate measurements under a mandate of GRPE are to be validated. A new request from OIML (International organisation for metrology) to develop a new standard has been accepted by SC5. This deals with the definition of a test report model on the gas analysis type approval.

Some new work items have recently been accepted, dealing with the crankcase gas pressure performance evaluation of road vehicles running resistance and its reproduction on chassis dynamometers.

On dimensions and masses (SC6), the standard 3833, dealing with terminology of the vehicle, will be revised, and a new work item proposal on the terms, definitions, abbreviations and dimensions for commercial trucks will be examined.

On injection equipment and filters, SC7 continues to work on the revision of the existing standards dealing with the injection for road vehicles (recent new activities on common rail systems) and filters (recent new activities on passenger car compartment air filters).

On lighting and signalling, SC8 has activities on lighting and signalling devices and recent new activity on environmental endurance and holding test of coloured coatings on coloured light sources. It will publish in 2001 the revision of the generic standard on lighting and light signalling devices' specifications and installation on road vehicles.

On vehicle dynamics and road handling, SC9 is very active with the revision of some existing standards, like test track for a severe lane change and with work items like free steer behaviour, steering release, open loop test method and steering pulse open-loop test method.

On passive safety, SC10 and SC12 are very active on developing new impact test methods and a dummy for lateral impact in a world harmonization context and the collision between vehicles and pedestrians. Moreover one of the main goals is to publish a complete set of standards in 3 parts on specific attachments of child restraint seats to remedy misuse from the end users.

The ergonomics (SC13) are focused on the human machine interface and on the symbols for which the ISO 2575 8<sup>th</sup> revision was published in 2000 and some amendments are still to be published in a near future.

The SC13 works in active cooperation with the ISO/TC204 on the TICS.

On exterior fittings (SC14) the main subjects deal with the roof and the rear load carrier devices. Special magnetic devices are included as well as bicycle carriers.

SC15 has new work items dealing with the adaptation of existing standards to the new configurations of vehicle combinations requested by the transporters through the motor vehicles and trailers manufacturers.

SC21, dealing with the electric vehicles, having achieved the standards for purely electric vehicles and envisaging hybrid vehicles, is now involved in the integration of fuel cells on electric vehicles in collaboration with ISO/TC197 and IEC/TC105 (see the agreement SC21 – IEC/TC105 in annex).

On electric vehicles, it will:

- Publish in 2001 the standard on the safety specifications, and specifically part 3 on the protection of users against electric hazards.
- Publish in 2001 a standard on terminology.
- Publish in 2001 the first part of a standard on reference energy consumption and range concentrating on light vehicles only, as common use of heavy electrical vehicles is not anticipated soon.

SC22 & SC23 dealing with the two wheelers (motorcycles and mopeds) continues to consider items such as fuel consumption, lighting, location of the centre of gravity for mopeds and test and analysis in collisions between motorcycles and four wheels vehicles.

JWG TC43/SC1 – TC22 (JWG28 42)

Main activities deal with the development of running vehicles noise measurement method : stationary vehicle noise measurement method, noise measurement test track and noise measurement in the passenger compartment;

On work items related to the production process:

- Assess the need that ISO/TC 22 tackles this field in addition to vehicle design specifications, and especially with regard to the failure mode analysis already used in the sector.

## **5.2 Identified strategies to achieve the ISO/TC's defined objectives.**

Adapt ISO/TC 22's structure by creating, maintaining or disbanding working groups and subcommittees that bring together experts competent in the various technical fields. If several work items of TC 22 duplicate and lead to diverging solutions to one problem, designate a lead sub-committee and organise co-operation between the sub-committees involved, for example with the creation of a joint group.

When different standardisation bodies cover the same subject, clarify the division (sharing) of responsibilities while observing the prevalence of the vehicle aspect. Share the information and ensure that the works shared with other TC(s) are complementary, not redundant and do not lead to divergent solutions:

- arrive to a balanced agreement on hydrogen issues with ISO/TC197, like the one obtained with IEC/TC105 on fuel cells.
- maintain the cooperation with TC204 on intelligent transport;
- maintain the cooperation with IEC ( see the general agreement, Doc N 1646, the addendum 1, doc N 1921 and the agreement with IEC/TC105, doc N 2239)

Speed up the rate at which international standards are prepared in order to meet the requirements of the international regulatory authorities, as well as the main economic players:

- Pay particular attention to the selection of new subjects and to commitments to participate in new work.
- Resort to a preliminary stage (coded « 00 »), which provides for a preliminary study before including a new study in the program of work. The role a of a WG includes carrying out this preliminary study, which once ratified by the sub-committee can be the subject of an introductory enquiry in the program of work.

- Examine at each subcommittee meeting the status of the SC's work program in order to cancel (or re-launch, if necessary), all "no progress items" and provide the TC 22 Secretariat and the Central Secretariat with an updated work program.
- At the time of the creation of a new working group, break its scope down into specific subjects with realistic target dates that take into account the constraints of standardisation processes.
- Make use of telecommunication technologies as much as desirable, for the circulation of information between meetings or to replace them.

Improve the recognition of ISO/TC 22 within the major manufacturers, as well as their ability to give directly an opinion on the work program and the TC's results.

Decide upon an ISO/TC 22 policy with regard to new ISO deliverables, with the understanding that they might not be granted the same level of recognition as an international standard.

Maintain a good co-operation with the external stakeholders not involved in standards elaboration. Special attention has to be paid to the requests of regulatory bodies as ECE/WP 29 by undertaking new tasks from them and providing them with new deliverables so as to be able to contribute to the establishment of globally harmonized regulations. Respect the set of guidelines decided by the TC 22 on external representation of ISO/TC 22, especially with WP29 world forum for harmonization of Regulations.

Set requirements for results based on test procedures rather than impose specific means. Nonetheless the standardisation of components plays a role in controlling the costs by promoting interchangeability.

## **6 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE ISO/TC 22 WORK PROGRAMME**

The ISO Directives provide the rules that have to be followed for the development of an ISO Standard, particularly describing the different stages. Some delay slowing down the process is due to the heavy administrative and rigid procedures applied by the ISO Central Secretariat, especially with regard to the editorial work.

It is also true that the most important participation to the Working Groups comes from the industry and the time devoted to the standardisation work by the experts is obviously limited. This affects the development of the work program in a very arbitrary way: decisions to stop or to delay contribution to the TC's work are usually not taken in relation to the interest of the ISO work item. Rather, this happens on totally autonomous grounds.

Although care is taken by TC 22 to co-operate with every body involved in an item, lack of willingness can be encountered within the other bodies. In this case efforts can be vain. The number where this occurs is not getting smaller, rather the opposite.

Consequences are essentially a delay in the implementation of the program and more costs involved, due for example to the necessity for the experts to follow several activities instead of one.

One of the main causes is the lack of control of the ISO Central Secretariat and Management Board at several stages: when a TC is created, the possible overlapping of its scope with the scope of existing TCs is not looked after; when several work items are similar or identical, there is no general rule or discipline to give the lead of the work to the body which is the closest to the end user, which is the most important.

## **7 STRUCTURE, SCOPES AND WORK PROGRAMME OF THE ISO/TC.**

This section gives an overview of ISO/TC's structure, scopes of the ISO/TCs and any existing subcommittees and information on existing and planned standardisation projects, including resources needed for their completion. The aim of this section is to demonstrate the adequacy of the proposed program of work in relation to the business environment and/or stakeholders' needs. Only structures directly responsible for standardisation projects are listed. Therefore, no co-ordination or advisory groups are included.



## ISO/TC 22 (ROAD VEHICLES)

**Responsible ISO Member: AFNOR**

**Chairperson: Paul SERRE**

**Secretary: Jean-Pierre CHEYNET**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:** *All questions of standardisation concerning compatibility, interchangeability and safety, with particular reference to terminology and test procedures (including the characteristics of instrumentation) for evaluating the performance of the following types of road vehicles and their equipment as defined in the relevant items of Article 1 of the convention on Road Traffic, Vienna (concluded in 1968 under the auspices of the United Nations) :*

- motor cycles (item n) ;
- motor vehicles (item p) ;
- trailers (item q) ;
- semi-trailers (item r) ;
- light trailers (item s) ;
- vehicles combination (item t) ;
- articulated vehicles (item u).

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

## ISO/TC 22/SC 1 Ignition equipment

**Responsible ISO Member: DIN**

**Chairperson: Dr. Fritz ACKERMANN**

**Secretary: Mr Klaus EISENACHER**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Standardization of ignition equipment and test methods, such as:*

- Spark plugs
- Ignition coils with their mounting devices and secondary terminals
- High tension ignition cables, dimensions, test methods and specifications
- High tension ignition cables assemblies
- Glow plugs
- Screened and waterproof spark plugs and their connections
- Test methods for ignition systems
- Nomenclature and terminology

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 2 Braking systems and equipments**

**Responsible ISO Member: AFNOR**

**Chairperson: Mr Bernard TRIPIER**

**Secretary: Mr Jean-Pierre CHEYNET**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*ISO/TC22/SC2 is responsible for standardization of braking systems and equipment for road vehicles with the exception of caravans, light trailers, mopeds and motorcycles.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 3 Electric and electronic equipment**

**Responsible ISO Member: DIN**

**Chairperson: Dr. Fritz ACKERMANN**

**Secretary: Mr Klaus EISENACHER**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*ISO/TC 22/SC 3 is responsible for standardization work on electrical and electronic equipment of road vehicles, as delegated by ISO/TC 22. Excluded is the work being done by SC 1, SC 8 and SC 21 of ISO/TC 22.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 4 Trailer up to 3,5 t**

**Responsible ISO Member: AFNOR**

**Chairperson: Mr Jacques MICHEL**

**Secretary: Mr Philippe LEGRAND**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Standardization of all aspects related to car/trailer combinations, up to 3,5 t with exception of the aspects covered by the scope of other ISO/TC22 sub-committees.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 5 Engine tests**

**Responsible ISO Member: AFNOR**

**Chairperson: Mr Jean-François RENAUDIN**

**Secretary: Mr Philippe LEGRAND**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*All questions of standardisation with particular reference to terminology, test and measurement procedures (including the characteristics of instrumentation) for evaluating the performance of internal combustion engines or power train of road vehicles.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 6 Terms and definitions of dimensions and masses**

**Responsible ISO Member: UNI**

**Chairperson: Mr Franco FISSORE**

**Secretary: Mr Maurizio EMANUEL**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Standardization of terms and definitions of types of motor vehicles, trailers, and their components, as well as dimensions and masses of unladen vehicles and weight.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 7 Injection equipment and filters for use in road vehicles**

**Responsible ISO Member: DIN**

**Chairperson: Mr Wolfgang BREMER**

**Secretary: Mr Walter SICKS**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Standardization of injection equipment and filters such as :*  
*injection nozzles and injection nozzle holders ;*  
*high pressure connections for high pressure pipes ;*  
*high pressure pipes ;*  
*test benches for injection pumps ;*  
*test methods for fuel filters ;*  
*classification of fuel filters dues to filter characteristics ;*  
*dimensions of air and oil filter ;*  
*test methods for air filters ;*  
*calibration fluid for diesel injection equipment ;*  
*calibrating nozzles and nozzle holders*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 8 Lighting and signalling**

**Responsible ISO Member: UNI**

**Chairperson: Mr Bernard DELABROYE**

**Secretary: Mr Maurizio EMANUEL**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Lighting and signalling of road vehicles, except motorcycles and mopeds.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 9 Vehicles dynamics and road holding ability**

**Responsible ISO Member: DIN**

**Chairperson: Mr H.J.GÖRICH**

**Secretary: Mr Walter SICKS**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Make an inventory of the criteria which allow the characterisation of the road holding of the vehicle and then make a classification of order of importance*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 10 Impact Test Procedures**

**Responsible ISO Member: ANSI**

**Chairperson: Mr Robert L. JONES**

**Secretary: Mrs Penny BROWN**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*To establish standard testing methods and procedures for evaluating the performance of motor vehicles and aspects of pedestrian safety under impact test conditions which simulate vehicle collisions.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 11 Safety glazing materials**

**Responsible ISO Member: ANSI**

**Chairperson: Mr R. MORRISON**

**Secretary: Mrs Kristi HANSEN**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*The standardization of specification and test methods for vehicle safety glazing materials and their mountings. The term "safety glazing materials" covers inorganic as well as organic materials and combination thereof.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex

**ISO/TC 22/SC 12 Restraint systems**

**Responsible ISO Member: AFNOR**

**Chairperson: Mr Georges STCHERBACHEFF**

**Secretary: Mrs Michèle MAITRE**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*To be written*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 13 Ergonomics as Applicable to Road Vehicles**

**Responsible ISO Member: ANSI**

**Chairperson: Mr Gary L. RUPP**

**Secretary: Mrs Penny BROWN**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*ISO/TC 22/SC 13 is responsible for standardisation related to ergonomic issues in road vehicles as directed and approved by TC 22. Items of concern include: controls, displays, symbols, H & R point determination, controls reach, and in-vehicle TICS interfaces.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 14 Exterior fittings**

**Responsible ISO Member: AENOR**

**Chairperson: Mr M. LUNA FERNANDEZ**

**Secretary: Mr F. HERRERO HERRERO**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*The scope comprises the exterior surface of the vehicles and their exterior fittings*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 15 Interchangeability of components for commercial vehicles and buses**

**Responsible ISO Member: UNI**

**Chairperson: Mr DE MICHELIS**

**Secretary: Mr Alberto MUSSO**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*To establish a minimum of dimensional characteristics in order to allow, within some limits of functional requirements, the mounting of elements or components from various origins and to define the possible referring test procedures.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 16 Reduction of fire risks**

**Responsible ISO Member: DIN**

**Chairperson: Vacant**

**Secretary: Mr Klaus EISENACHER**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*To establish standard test procedures and specifications for motor vehicles which will reduce the risk of fire and risk of occupant injury from fire or which will control or suppress the spread of fire.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 17 Visibility**

**Responsible ISO Member: UNI**

**Chairperson: Mr Mario BRONDO**

**Secretary: Mr Maurizio EMANUEL**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Standardization of the methods of describing, measuring and testing in relation to the driver's visibility and devices for aiding visibility, excluding lighting and signalling devices and glazing.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 19 Wheels**

**Responsible ISO Member: ANSI**

**Chairperson: Vacant**

**Secretary: Mrs Kristi HANSEN**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Standardization of wheels (excluding rim profiles) and wheel mounting systems with particular reference to nomenclature, interchangeability and test procedures*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 21 Electric road vehicles**

**Responsible ISO Member: DIN**

**Chairperson: Dr. Dietrich SAHM**

**Secretary: Mr Wolfram GALLE**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*To deal with all categories of vehicles within the scope of ISO/TC 22, when they are propelled by electric motors and /or when carrying on-board a source of electrical energy for vehicle propulsion.*

*Topics that are within the scope of other ISO/TC 22 subcommittees will be addressed by SC 21 only when they involve vehicle issues specifically related to electrical propulsion.*

*The scope of SC 21 includes:*

- *vehicle operation;*
- *vehicle and component performance;*
- *vehicle safety;*
- *on-board energy storage for propulsion;*
- *safety of persons against electrical hazards;*
- *terminology and definitions.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 22 Motorcycles**

**Responsible ISO Member: JISC**

**Chairperson: Mr Ryoichi SHIGENARI**

**Secretary: Ms. Michiko YOSHIHARA**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*All questions of standardization concerning compatibility, interchangeability and safety, with particular reference to terminology and test procedures (including the characteristics of instrumentation) for evaluating the performance of motorcycles and their equipment as defined in the relevant item «N» of Article 1 of the convention on Road Traffic, Vienna in 1968 concluded under the auspices of the United Nations.*

*Having regard to the definition of «Motorcycles» in item «N», «Mopeds» are excluded from the scope of ISO/TC 22/SC 22 and the «Three-wheeled vehicles», as there defined, are included.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 23 Mopeds**

**Responsible ISO Member: UNI**

**Chairperson: Mr Fabio DADDI**

**Secretary: Mr Alberto MUSSO**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Standardization of mopeds and their components, concerning compatibility, interchangeability, safety, terminology and test procedures for evaluating the performance of mopeds and their components.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

**ISO/TC 22/SC 25 Road vehicles using natural gas**

**Responsible ISO Member: UNI**

**Chairperson: Mr Paolo VETTORI**

**Secretary: Mr Maurizio EMANUEL**

**Chairperson & Secretary Time Allocation Per Year = XX% FTE**

**Scope:**

*Design, installation, testing, marking and labelling (and safety related problems) concerning components for road vehicles propelled by natural gas.*

**Actions for alignment with the business environment:**

**Projects directly under this technical committee:**

See the complete work program in annex.

## ANNEX - GLOSSARY OF TERMS AND ABBREVIATIONS USED IN ISO/TC BUSINESS PLANS.

NB: This glossary gives the full name and status of terms used, in abbreviated form or in full, in the above "Business Plan for ISO/TCs". The glossary also gives the source of the information provided. Glossary intends to help with the understanding of the terms used. Whenever any of these terms are used by contributors to this Business Plan, they are requested to use them coherently as foreseen in the glossary.

Term	Abbrev.	Definition
Standardization		Activity of establishing, with regard to actual or potential problems, provisions for common and repeated use, aimed at the achievement of the optimum degree of order in a given context. NOTES 1 In particular, the activity consists of the processes of formulating, issuing and implementing standards. 2 Important benefits of standardization are improvement of the suitability of products, processes and services for their intended purposes, prevention of barriers to trade and facilitation of technological co-operation.
Standard		Document, established by consensus and approved by a recognised body, that provides, for common and repeated use, rules guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context. NOTE Standards should be based on the consolidated results of science, technology and experience, and aimed at the promotion of optimum community benefits.
package of standards		A group, as small as possible, of inter-related standards in the scope of one or more ISO/TCs which are usually developed simultaneously to one another as parts of one standard, or standards that must be developed simultaneously.
Consensus		General agreement, characterised by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments. NOTE Consensus need not imply unanimity.
ISO/TC International Standardization Deliverables:		
International Standard	IS	A normative document, developed according to consensus procedures, which has been approved by the ISO membership and P-members of the responsible committee in accordance with Part 1 of the ISO/IEC Directives as a draft International Standard and/or as a final draft International Standard and which has been published by the ISO Central Secretariat.
ISO Technical Specification	ISO/TS	A normative document representing the technical consensus within an ISO committee, approved by 2/3 of the P-members of the ISO/TC or SC.
ISO Public Available Specification	ISO/PAS	A normative document representing the consensus within a working group, approved by a simple majority of the P-members of the TC/SC under which the working group operates.
ISO Technical Report	ISO/TR	An informative document containing information of a different form from that of normally published in a normative document.
Amendment	Amd	An amendment alters and/or adds to previously agreed technical provisions in an existing standard.
Technical Committee	ISO/TC	A technical body responsible for the programming and planning of technical work and the monitoring and execution of this



Term	Abbrev.	Definition
		technical work. The ISO/TC is also responsible for the consensus building process among its members for individual work items.
Subcommittee	SC	A technical body reporting to an ISO/TC which, within its scope which is covered by the scope of its parent ISO/TC, is responsible for the monitoring and execution of the technical work. The SC is also responsible for the approval and consensus building process among its members for individual work items.
ISO/TC Working group And ISO/SC Working group	WG	A technical body, appointed by the ISO/TC or ISO/SC and composed of experts, responsible for the drafting of standards, in accordance to the ISO rules and the clear specifications set by the ISO/TC or ISO/SC.
Editing Committee		A committee set up by a technical body (ISO/TC or SC) at the beginning of its work, which represents the three official languages of ISO. It is responsible for the correct formulation and presentation of the standard(s) prepared by the technical body (ISO/TC or SC) and the equivalence of the texts in the three official languages.
Participating member	P-member	A member body participating actively in the work of a TC or SC, with an obligation to vote on all questions formally submitted for voting within the TC or SC on enquiry drafts and final draft International Standards and, wherever possible, to participate in meetings.
Work Item number	WI	The identification number given to a standards project in a standards work program. It is intended that the standards project leads to the issue of a new, amended or revised standard, an ISO/PAS, ISO/TS or other ISO product.
Vienna Agreement	VA	Agreement on technical co-operation between ISO and CEN.
VA ISO lead (5.1)		Technical co-operation between ISO and CEN under the VA, where the work is done by the ISO/TC, where a formal notification of interest was received by ISO from CEN, and where parallel synchronised procedures are applied in ISO and CEN for the approval processes.
VA CEN lead (5.2)		Technical co-operation between ISO and CEN under the VA, where the work is done by the CEN/TC or SC, where a formal notification of interest was received by CEN from ISO, and where parallel synchronised procedures are applied in ISO and CEN for the approval processes.
ISO stakeholders		Individuals, institutions, organizations or enterprises who have a direct or indirect interest in the ISO System, its activities and products and who have a specific interest in the effective programming of ISO work items and their adequate resourcing.