



Brussels, 31.7.2013
COM(2013) 561 final

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL AND THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE**

The annual Union work programme for European standardisation

(Text with EEA relevance)

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1. INTRODUCTION

Europe's goal is to create growth and jobs in a smart, sustainable and inclusive way through the Europe 2020 strategy¹ and its flagship initiatives. The importance of standardisation for jobs, growth and economic recovery was reiterated most recently in the Commission's Industrial Policy Update "A Stronger European Industry for Growth and Economic Recovery" adopted in October 2012².

From research to production, from producer to consumer, from Europe to the rest of the world, European standards remove barriers, safeguard users, protect the environment, ensure interoperability, reduce costs and encourage competition. Studies show that standardisation adds between 0.3% and 1% to GDP³ thereby helping industry towards the target of contributing 20% of the EU's GDP by 2020⁴.

In order to ensure that Europe's standardisation system can meet today's challenges of rapid innovation, sustainability, convergence of technologies and fierce global competition, the Commission proposed a reform package in 2011⁵ including a new Regulation which took effect from 1 January 2013⁶. This reform aimed at increasing the system's inclusiveness, responsiveness, transparency, flexibility and scope.

One innovation of the reform is the obligation for the Commission to adopt an annual Union work programme for European standardisation. This work programme identifies strategic priorities for European standardisation taking into account the Union's long-term strategies for growth and sets out the objectives for the international dimension of European standardisation in support of Union legislation and policies.

It indicates the European standards and other standardisation deliverables that the Commission intends to request from the European standardisation organisations (ESOs) – CEN, CENELEC and ETSI – in the coming year and the specific objectives and policies they support. This primarily concerns standards providing a presumption of conformity with the requirements of Union harmonisation legislation.

The Commission also supports European standardisation activities which help to achieve other EU policy objectives and this work programme invites the ESOs to initiate activities in all priority domains, including those without the legal provisions needed to underpin a formal Commission standardisation request (mandate).

¹ COM(2010) 2020 final

² COM(2012) 582 final

³ Swann G.M.P., "The Economics of Standardisation: An Update", Report for the UK Department of Business, Innovation and Skills, 2010

⁴ Target set in the Industrial Policy Communication of October 2012

⁵ COM(2011) 311 final

⁶ Regulation (EU) No 1025/2012

European standards developed by the ESOs at the initiative of undertakings, national standardisation bodies or other stakeholders which are not linked to EU policies, are not covered in this work programme.

This annual work programme anticipates future orientations and actions as accurately as possible. These orientations have no budgetary impact beyond that already foreseen and support for work items depends on the availability of funding, the submission of quality proposals and agreement with the relevant ESOs, national standards bodies or other bodies foreseen in the Regulation. In cases of urgency, e.g. after formal objections to harmonised standards, the Commission may issue mandates not foreseen in this work programme.

The transparency brought about by the publication of this Union work programme is expected to increase efficiency and a better forward planning of work.

At the same time, the Commission will:

- Seek improvements to the Framework Partnership Agreements with the ESOs which expire this year, in order to maintain the highest possible quality while also continuing to reduce the average time needed to develop standardisation deliverables;
- Organise calls for proposals in relation to European representation of SMEs, consumers and environmental and social stakeholder organisations in standardisation work. While this will facilitate SME participation by providing financing, the Commission will also continue to support specific projects facilitating SME access and participation in standardisation;
- Continue its work on ICT standardisation via the multi-stakeholder platform⁷ another of the innovations in the 2011 standardisation package. The permanent dialogue between public authorities, stakeholders and standards development organisations, including global fora and consortia, has proven, in the short time since it was set-up to be able to respond to the fast nature of developments in this field. A detailed rolling plan for ICT standardisation has been developed and is updated allowing the Union to respond to the rapidly evolving digital world.

Before the end of 2013, the Commission will launch an independent review of the governance of the standardisation system to evaluate whether the strategic objectives of the reform have been achieved. It will assess if, in a longer term perspective, the European standardisation system is able to adapt to the quickly evolving environment and to contribute to Europe's strategic internal and external objectives, in particular in the field of industrial policy, innovation and technological development. It will also examine if the European standardisation system is adequate from the point of view of market needs, of inclusiveness and of representativeness.

The results of the independent review will be assessed by the Commission to identify options which could further improve the European standardisation system and its capacity to support Europe's strategic policy objectives.

⁷ Commission Decision of 28.11.2011, OJ C 349 of 30.11.2011. First met on 26/03/2012

2. STRATEGIC PRIORITIES FOR EUROPEAN STANDARDISATION

2.1. A Stronger European Industry for Growth and Economic Recovery

The Commission's recent Industrial Policy Communication update noted the need to develop standards for new technologies before their first introduction on the market. It identified six fast-growing areas for priority action: advanced manufacturing technologies, key enabling technologies, bio-based products, sustainable industrial and construction policy and raw materials, clean vehicles, and smart grids.

2.1.1. Advanced manufacturing technologies

The Commission-led Task Force for Advanced Manufacturing Technologies for Clean Production will identify where further standardisation could contribute to market uptake. Later, the Commission expects to launch a feasibility study for European and international standardisation activities in this area.

2.1.2. Key enabling technologies (KETs)

During the coming year, the Commission will examine where further standardisation in the KETs area could help ensure the timely development of the Internal Market for KETs-based products, one of the aspects covered in the Commission initiative to review of the internal market legislation for industrial products⁸.

Through its research facilities and funding programmes, the Commission will support the development of European standards for characterisation methodologies of nanomaterials in manufactured form necessary for toxicity and eco-toxicity testing, sampling and measurement methods of exposure, and methods to simulate exposures to nanomaterials. A coherent approach with activities in the OECD is needed and the ESOs should collaborate closely with international standardisation bodies.

2.1.3. Bio-based products

Establishing an Internal Market for bio-based products requires standards development and updated regulations. The Commission expects the ESOs to continue working on mandates for bio-fuels and bio-based products, including bio-fuels in general, as well as on specific mandates for bio-polymers, lubricants, solvents and surfactants. Pre-normative research for the development of test methods applicable to the measurement of bio-based content, functionalities and sustainability criteria of innovative bio-based products e.g. bio-polymers, lubricants, solvents and surfactants, is also to be considered. Pyrolysis oils and algae could also be areas for standardisation linked to bio-fuels products.

2.1.4. Sustainable industrial policy, construction and raw materials

2.1.4.1. Construction products

European standards should adapt to new requirements taking account of sustainability aspects of construction products, processes and works, as well as innovative products in order to strengthen the Internal Market.

The Commission has provided technical expertise to the preparation of the draft horizontal standard for the determination of emissions of regulated dangerous substances in construction products.

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http://ec.europa.eu/governance/impact/planned_ia/docs/2013_entr_003_industrial_products_en.pdf

To enhance the competitiveness of EU building services the Commission will promote the international uptake of Eurocodes structural design standards under the Action Plan on Sustainable Competitiveness of the Construction Sector⁹.

In the Commission's TOP-10 survey¹⁰ in late 2012, some respondents said that for them the full benefit of the simplification resulting from the last revision of the construction product regulation depended on updating the European Standard on execution of steel and aluminium structures. The Commission will consult stakeholders and may request the rapid updating of the standard.

2.1.4.2. Steel

European standards could promote sustainable production of steel construction products. The steel industry is already developing the Steel Construction Products Mark – SustSteel. The Commission will examine the potential of SustSteel to boost the market share of European sustainable steel construction products and may request specific standardisation activities.

2.1.4.3. Ecodesign/Energy-related products

Different products have been covered under the Ecodesign Directive¹¹, including motors, pumps, fans, lighting products and household goods. So far energy use has been the focus however the Directive addresses all environmental aspects, including material and resource efficiency. In this respect, standards related to resource efficiency such as recyclability indexes or durability of components or other environmental parameters (e.g. emissions of pollutants to air) will be developed, so as to facilitate the characterisation of potential ecodesign requirements in additional areas.

The Commission will prepare technical amendments to the existing mandate relating to harmonised standards in the field of Ecodesign¹² in support of the following Ecodesign product regulations:

- small, medium and large power transformers;
- professional storage cabinets, blast cabinets, process chillers, condensing units and walk-in cold rooms;
- ventilation systems;
- lighting products;
- space and water heaters.

Depending on the development of further implementing measures, additional technical updates might be prepared for products covered by the existing mandate.

Under the Ecodesign Working Plan 2012-14¹³, possible ecodesign and/or energy labelling requirements will be considered for new product groups. The priority list includes window products, smart appliances/meters, wine storage appliances, steam boilers, enterprise servers, power cables and water-related products. The

⁹ COM(2012) 433 final

¹⁰ COM(2013)122 final and SWD(2013)60 final

¹¹ Directive 2009/125/EC

¹² M/495

¹³ SWD(2012) 434 final

Commission will update the ecodesign mandate so that technical amendments for specific products can be issued as necessary.

2.1.4.4. Waste recycling

New European standards for graded qualities of recycled materials (e.g. metals, wood and textiles) would foster market development. The Commission expects new standardisation work to develop and validate (inter-laboratory comparison) methods for:

- waste characterisation for hazardous property H 12 – release of an acute toxic gas category 1, 2 or 3;
- determining elements and substances in waste relevant for health and environmental hazards (hazardous properties H 4, 5, 6, 7, 8, 10, 11, 13, 14);
- sustainability and toxicity standards for recycled bio-wastes or agricultural by-products (others than fertilisers).

2.1.4.5. Non-energy, non-agricultural, raw materials

The European Innovation Partnership on Raw Materials¹⁴ brings together stakeholders to accelerate the market uptake of technological and other solutions. The Commission is preparing a Strategic Implementation Plan with input from stakeholders, which could foresee standardisation work.

2.1.5. *Clean vehicles and vessels*

The CARS 2020 Communication¹⁵ foresees coordinated policy actions supporting the market introduction of clean vehicles, including the deployment of plug-in electric and hybrid vehicles requiring timely standards or requirements for recharging infrastructure. The Clean Power for Transport package¹⁶ will require the development of new European standards to be requested by the Commission.

International agreements on common standards and regulations, notably in the UNECE framework, will save costs and speed up market growth. The Commission has also launched a joint initiative with the US, China and Japan, to explore further common regulatory approaches for electric vehicles on safety and environmental issues.

The Commission will conduct pre-normative research on battery safety and hydrogen storage for automotive application. This will provide a scientific and technological basis for safety related issues of electrical components of rechargeable energy storage systems.

It will also – in the framework of international collaboration, particularly with the US – perform pre-normative research into measurement and testing methodologies to characterise the performance of hydrogen and fuel cell technologies. It will also provide technical input to the development of worldwide standardised/harmonised test cycles and procedures for all light-duty vehicles and electrified vehicles.

2.1.6. *Smart grids*

Adequate infrastructure, including storage and capacity balancing solutions, is needed to integrate renewable energy into the electricity system, contribute to energy

¹⁴ COM(2012) 082 final

¹⁵ COM(2012) 636 final

¹⁶ COM(2013) 17 final

efficiency, and accommodate new demands. Standards ensuring the interoperability of smart grids across borders and a common minimum set of standards are needed.

In December 2012 the steering committee of the Smart Grids Task Force set up by the Commission in 2009¹⁷, endorsed an iteration of the mandate¹⁸ to support European Smart Grid deployment for 2013-14 to address two main topics:

- system interoperability testing methods and a conformance testing map,
- implementation of the methodologies developed and a second set of standards.

The Commission will contribute to this work in the light of the European policies and the Transatlantic Economic Council work programme on smart-grid/e-vehicle interoperability.

2.2. Strengthening the internal market in goods and services

The Internal Market is a vital motor of growth and jobs. European standards boost competitiveness by reducing production costs, assuring quality and performance, and ensuring that innovative technologies can come to market. Harmonised standards go further: compliance also guarantees the required safety level of products.

2.2.1. Child safety

The Commission will request the development of European standards for baby slings, soft and framed carriers, baby bouncers, swings and similar articles in support of the General Product Safety Directive¹⁹ (GPSD). Standards on playgrounds and playing field equipment may also be requested.

2.2.2. Safety of other consumer products

While the rapid alert system for dangerous non-food products – RAPEX – ensures that dangerous products are now more readily identified and removed from the EU market, safety at source is still the key focus. Under the GPSD, the Commission expects to issue requests for European standards covering alcohol-powered flueless fireplaces, candles, barbecues and outdoor furniture. The importance of these issues was again highlighted in the Commission's February 2013 market surveillance and product safety package²⁰ which contains a proposal for a new regulation on consumer product safety (GPSR).

2.2.3. Feed and food quality and safety

New or improved globally-accepted food safety and quality standards are needed to address the effects of globalisation on food production, trade and consumption, including for organic food products which are increasingly present in international trade exchanges. This requires high level research in the area of food safety standards and new methodologies and/or reference material which will have to be validated and certified to be used in official controls of food and feed.

The improvement of existing methods, the development of further standardised methods of analysis and the validation of existing standards to new food matrices is

¹⁷ http://ec.europa.eu/energy/gas_electricity/smartgrids/taskforce_en.htm

¹⁸ M/490

¹⁹ Directive 2001/95/EC

²⁰ COM(2013) 78 final

required to guarantee a uniform and effective enforcement of EU legislation²¹ in all Member States and to ensure a high level of safety.

The Commission will contribute to the provision of technical expertise and the submission of collaboratively validated methods for the detection and determination of undesired substances in food and feed.

2.2.4. *Cosmetics*

In the framework of the Cosmetics Regulation²², the Commission may request standardisation activities with regard to good manufacturing practices and sampling and analysis of cosmetic products.

2.2.5. *Fibre composition of textile products*

Under the Textile Regulation²³ the Commission expects to issue a standardisation mandate on the quantitative analysis of textile fibre mixtures since current quantification methods of EN ISO standards differ from those described in the Regulation.

2.2.6. *Fertilisers*

The main objective of the future proposal to revise the Fertilisers Regulation²⁴ is to extend its scope from only inorganic fertilisers to other categories of products currently covered by national rules. The Commission is likely to request new standards to cover terminology, a list of types per specific product category, further clarification of labelling requirements, requirements for chemical composition and agricultural efficacy as well as test methods.

The ESOs will be asked to verify that the horizontal analytical standards developed for sludge, biodegradable waste and soil are also applicable to organic fertilisers and organic soil improvers. Specific methods for plant biostimulants and specific fertiliser additives need to be developed and validated.

2.2.7. *Safety of offshore machinery*

Standardisation is necessary to improve the safety of equipment for the offshore oil and gas industry. Following the rejection of the mandate²⁵ in the field of equipment used in the offshore oil and gas industry by the ESOs, the Commission will request standardisation for certain specific items of safety-critical equipment.

2.2.8. *Air transport*

The Interoperability Regulation²⁶ addresses the modernisation of the European air traffic management network. In March 2013 a mandate²⁷ was issued requesting the ESOs to develop, in cooperation with the European Organisation for Civil Aviation Equipment (EUROCAE), and in close coordination with the European Aviation Safety Agency (EASA), a list of European standards identified in the roadmap of the European ATM Master Plan and already under development at EUROCAE. The

²¹ Regulation (EC) No 882/2004

²² Regulation (EC) No 1223/2009

²³ Regulation (EU) No 1007/2011

²⁴ Regulation (EC) No 2003/2003

²⁵ M/501

²⁶ Regulation (EC) No 552/2004

²⁷ M/524

detailed list of standards is provided as an Annex to the Mandate, but will be amended according to the periodic ATM Master Plan update.

The GNSS (EGNOS and GALILEO related) standards for aviation of the ATM Master plan for Step 2 and 3 Essential Operational Changes are covered in section 2.2.13.2 and some specific security standards for aviation are covered in section 2.2.14 of this work programme.

These European standards should also be promoted worldwide, mainly through the International Civil Aviation Organisation (ICAO), to ensure global interoperability.

A global market for remotely piloted aircraft systems (RPAS) is emerging with a considerable growth and employment potential. To help materialise this potential, standards are needed for the progressive integration of RPAS into the European air traffic management system. These will be considered into the revised standardisation roadmap of the ATM Master plan.

2.2.9. *Rail transport*

To take full advantage of establishing an area without internal borders, the interlinking and interoperability of the national rail networks and access thereto must be improved. New European standards are required in support of the following:

- Fire spread prevention measures;
- European ticketless and ticket on departure for rail;

The Commission will make a proposal to revise the technical specification for interoperability relating to persons with reduced mobility to simplify its content and facilitate its application.

The Commission is also currently preparing an initiative to accelerate the penetration of innovative solutions to achieve a fully integrated and interoperable European railway system. It will include how European research and innovation activities, covering the whole innovation cycle, can be better coordinated and focused to support both the Single European Railway Area (SERA) and the competitiveness of the European rail industry.

2.2.10. *Alternative fuels*

Standardisation will be needed to implement the Clean Power for Transport package, including the European Alternative Fuels Strategy and the proposal for a directive on the deployment of alternative fuels infrastructure²⁸.

Technical specifications for interoperability of recharging and refuelling points for electricity, hydrogen, LNG and CNG as detailed in the proposed directive should be specified in European standards which are fully compatible with relevant international standards.

While the ESOs are already working on a mandate for injection of biomethane into the natural gas grid and on higher FAME blends into diesel fuel for heavy duty vehicles, for biofuels, standards for higher ethanol blends into gasoline fuel should also be developed.

The Commission will support standardisation work addressing natural gas pipeline injection of biomethane, biomethane use as a vehicle fuel and methods for measuring

²⁸ COM(2013)18

the biomethane content in the natural gas grid. It will also support faster market introduction of advanced concepts by harmonisation and development of standards for photovoltaic technology.

2.2.11. *Safety of infrastructure*²⁹

The Commission will run a network of stakeholders from critical infrastructure protection in nine thematic areas (aviation security, explosives, resistance of structures, chemical, biological threats in water, radiological and nuclear threats, earthquakes, video surveillance and biometric). The work on testing guidelines, common test protocols, testing standards and recommendations for certification and policy requirements will also support existing and future mandates.

The Commission may also consult stakeholders on the Directive on road safety infrastructure management³⁰ and this could lead to a mandate for a common certification system of safety performances for roads. In a second step requirements may be established to guarantee a minimum level of safety across the whole Trans European Road Network, without prejudice to the requirements of the Regulation on construction products³¹.

2.2.12. *Wireless communications*

The development and updating of harmonised standards under existing mandates is essential. The Commission may prepare new mandates on:

- (1) development and maintenance of mobile communications standards (UMTS, LTE, LTE advanced...) in the framework of the 3rd Generation Partnership Project (3GPP),
- (2) efficient use of radio spectrum for coexistence of mobile communication services and the operation of radio equipment and broadcast receivers in adjacent frequency bands.

2.2.13. *Space at the service of citizens*³²

2.2.13.1. Standards for upstream and downstream space industry

Space standardisation addresses the priorities set out in the EU space strategy and in the European space industrial policy. The needs are defined in a mandate to develop standardisation regarding space industry³³ which covers the period 2011-13 however, if appropriate, the Commission could extend this to 2014-15.

Under this mandate, the ESOs should address a range of topics including navigation and positioning receivers, integration of navigation and positioning with telecommunications, information exchange, data formats, integration of mobile, fixed and global navigation satellite systems, planetary protection, space situational awareness monitoring, dual-use ground segment interfaces and payload interfaces.

2.2.13.2. Standards for European GNSS Programmes

Standardisation is required to support the deployment and implementation of the European satellite navigation systems (EGNOS and Galileo). Although their exact level of maturity for a given year is difficult to predict, the standardisation needs to

²⁹ COM(2010)560

³⁰ Directive 2008/96/EC

³¹ Regulation (EU) No 305/2011

³² Regulation (EC) No 683/2008

³³ M/496

be covered include mass-market receivers for terrestrial applications, next generation Satellite Based Augmentation Systems, civil aviation user equipment with EUROCAE, Galileo signals and services in the ICAO context, the introduction of Galileo for the positioning of mobile devices and a roadmap for the “EGNOS Enabled” label.

2.2.14. *Security*

Standardisation actions have been launched as set out in the “Security Industrial Policy – Action Plan for an innovative and competitive Security Industry”³⁴. On the basis of the outcome of the on-going mandate, the Commission foresees the following:

- Minimum detection standards and sampling standards for chemical, biological, radioactive, nuclear and explosive substances (CBRNE), including in the area of aviation security,
- Common technical and interoperability standards for Automated Border Control (ABC) systems and for biometric identifiers,
- Standards for communication, command and control as well as organisational interoperability in the area of crisis management / civil protection, including for mass notification of the population.

Moreover, other actions are expected to result in further standardisation, namely on:

- ‘Hybrid’ standards applicable both to civil security and defence technologies, e.g. on CBRNE and sense and avoid technologies,
- Privacy by design/default standards for the implementation of privacy management issues during the development and production of security technologies and products.

2.2.15. *Nuclear Safety and Security*

The EU aims to ensure that the peaceful uses of nuclear energy take place with the highest standards of nuclear safety, security and non- proliferation. The international initiative on a holistic Safety, Security and Safeguards (“3S”) concept for nuclear energy was launched with the Nuclear Safety and Security Group (NSSG) at the G8 summit in 2008, and is converging on the idea of internationally binding security and safety standards.

The Commission contributes to the major nuclear safety and security standardisation activities which include:

- Interoperability of Engineering Materials Data (ELSSI-EMD),
- Illicit Trafficking Radiation Assessment Programme for an evaluation and performance comparison of radiation detection equipment,
- Standardisation of data formats, reference materials for nuclear safeguards, forensics,
- Radiological/Nuclear Information Exchange in Europe,
- Nuclear power plant instrumentation and control systems important for safety and security.

³⁴ COM(2012) 417

The Commission will also contribute to the development of standard formats for engineering materials data and use these data formats for efficient storage and transfer of nuclear materials information.

2.2.16. *Chemicals*

Standards contribute to a harmonised approach towards enforcement of the Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)³⁵ in Member States. Currently, the ESOs need to address the development of (further) analytical methods:

- aimed at determining the presence/concentration of lead (expressed as metal) in consumer articles in different matrices,
- for the migration of lead compounds from consumer articles taking into consideration different matrices,
- for determining the presence/concentration of eight polycyclic-aromatic hydrocarbons (BaP, BeP, BaA, CHR, BbFA, BbFA, BkFA, DBAhA) in consumer articles,
- for determining the concentration of chromium VI compounds in leather articles,
- for the migration from consumer articles of the above substances (eight polycyclic-aromatic hydrocarbons and chromium VI compounds) under reasonably foreseeable conditions of use.

The generation of standard data on chemicals will also improve its acceptance by all stakeholders and reduce the cost of assessment of chemicals for industry.

2.2.17. *Horizontal services standards*³⁶

In order to facilitate completion of the Internal Market for services, the Commission issued a mandate³⁷ for the programming and development of horizontal service standards in 2013.

2.2.18. *Safety of specific services*

This work item is subject to the outcome of a broad consultation of stakeholders provisionally scheduled for the second half of 2013. If input from stakeholders leads to the conclusion that service safety standardisation, e.g. on hotel fire safety, would receive wide support, this option should be kept open.

2.2.19. *Healthcare services*³⁸

An important function of standards for services is to establish a common benchmark for essential services. This holds for the growing sector of healthcare services particularly for chronic, non-communicable diseases. As regards standardisation, specific areas for ESO mandates might be foreseen for horizontal aspects like patient safety and registration, for disease-specific accreditation schemes like breast cancer care services, and for stage-specific services like rehabilitation services.

³⁵ Regulation (EC) No 1907/2006

³⁶ Directive 2006/123/EC

³⁷ M/517

³⁸ Directive 2011/24/EU, Council Recommendation 2009/C 151/01

The Commission will launch a feasibility study to identify existing international and national standards and examine the extent to which they are used and meet health system needs. It will also define conditions under which standards for health services could be developed, including in relation with clinical standards and the participation of relevant stakeholders in standard development.

2.2.20. *Accessibility*

The Commission is preparing a European Accessibility Act and is considering requesting standardisation work to cover certain goods and services where there are no EU level accessibility standards. The Commission will also consider the need for additional work in relevant areas covered by the UN Convention on the Rights of Persons with disabilities.

Further, the Commission recently adopted a proposal for a Directive on the accessibility of public sector bodies' websites. The Commission is considering whether additional standardisation work is required in support of both legal acts in light of the ongoing work under mandates in support of European accessibility requirements for public procurement in the ICT domain³⁹ and in the built environment⁴⁰ and the mandate to include "Design for All" in relevant standardisation initiatives⁴¹.

In addition, further to the Commission Communication 'Europe, the world's No 1 tourist destination'⁴² the use of standardisation deliverables is being considered to identify commonly agreed specifications for the universal design of tourism services and to address training requirements to ensure that tourism services are more accessible.

2.3. **Innovation**

By codifying information on the state of the art of a particular technology, standards enable dissemination of knowledge, interoperability between new products, services and digital content and provide a platform for innovation.

In high technology areas, standards assist growth through internationally agreed terminology, measurement and characterisation methods. Protocols for health and safety evaluation can also remove a barrier to innovation in areas such as nanotechnology and these may be the subject of future mandates.

Scientific activities make a key contribution to the standardisation process. The methodologies, processes and materials that lead to standards are defined, partly or wholly, by available scientific knowledge. For example, the Commission can help identify future technology developments where early standardisation could help European industry.

In the context of eco-innovation, the Commission could also favour a system where the next benchmark in terms of resource efficiency would be known in advance, therefore allowing front-runner businesses to enhance their global competitiveness.

³⁹ M/376
⁴⁰ M/420
⁴¹ M/473
⁴² COM(2010) 352 final

2.3.1. *Innovation Partnerships*

European Innovation Partnerships (EIPs) act across the whole research and innovation chain, bringing together all relevant actors at EU, national and regional levels to help anticipate and fast-track any necessary regulation and standards.

The EIP on Active and Healthy Ageing⁴³ aims to ensure interoperability and tackle possible market access obstacles through standards and reference specifications for new equipment and services for integrated care and independent living. Standards should also play an important role within other EIPs, e.g. on Agricultural Sustainability and Productivity⁴⁴, on Smart Cities and Communities⁴⁵, and on Water⁴⁶.

2.3.2. *Science in Standards*

The CEN/CENELEC working group to address standardisation, innovation and research (STAIR) is an example of how the ESOs maintain regular communication with the science community however such links need to be extended. The Commission will therefore create a forum to improve communication between science and standards, jointly convened by the European Association of Research and Technology Organisations (EARTO), the ESOs and the Commission.

2.3.3. *System of Systems*

Looking ahead, the increasing technological interpenetration needed to address societal challenges should be reflected in a systems approach to certain standardisation activities. For cases referred to elsewhere (smart cities, smart grid, electric vehicles, etc.) the ESOs have set up dedicated coordination groups that bring together and steer the activities of the technical bodies involved.

More such groups are expected in coming years, in particular to support horizontal mandates. These could foresee the setting up of specific System Groups e.g. evaluation groups for setting boundaries, groups working at the system level or resource groups delivering specialised tools and software.

2.4. **Digital Agenda for Europe**⁴⁷

Standards are indispensable for interoperability between ICT products, services, applications and digital content which is crucial for building an effective digital society. Given the global nature of the ICT market, cooperation between the ESOs and relevant fora and consortia is needed to cope with the ever-growing demand for standards to support interoperability in this fast evolving domain.

The rolling plan for ICT standardisation⁴⁸ identifies in greater detail the areas where standards could help achieve ICT-related policy objectives including through complementary interoperability testing and awareness actions to ensure the effective uptake of standards.

⁴³ COM(2012) 083 final

⁴⁴ COM(2012) 79 final

⁴⁵ COM(2012) 4701 final

⁴⁶ COM(2012) 216 final

⁴⁷ COM(2010) 245

⁴⁸ http://ec.europa.eu/enterprise/sectors/ict/files/ict-policies/2010-2013_ict_standardisation_work_programme_2nd_update_en.pdf

2.4.1. *eHealth*

Interoperability, in particular cross-border, is crucial for the widespread use of ICT in the health sector as stipulated in the directive on patients' rights in cross border healthcare⁴⁹. At the same time data protection issues must be addressed if new products and services are to be fully exploited. The objective is to make better use of available standards and develop new ones if necessary.

Studies show that European and international standards are often not specific enough to ensure interoperability of ICT solutions in eHealth⁵⁰. With advice from the eHealth Network, more detailed specifications, e.g. for public procurement, will be identified to contribute to the eHealth Interoperability Framework. The Commission proposes to boost interoperability by further developing and validating specifications and components and also through standardisation mandates if necessary.

2.4.2. *Radio frequency identification (RFID)*

Data protection, privacy and information security aspects are being addressed in response to the mandate in the field of ICT applied to RFID⁵¹. The objective of the first phase was to prepare a complete framework for the development of future RFID standards and the work in the second phase which is ongoing, will produce a set of European standards, technical specifications and reports by early 2014.

2.4.3. *eSkills and eLearning*

As noted in the Commission Communication on "eSkills for the 21st Century"⁵², pan-European competences frameworks, tools, and efficient and interoperable eLearning solutions foster the development of ICT-related skills and promote lifelong learning. New standardisation actions are foreseen in the following fields:

- eCompetences frameworks for ICT users, ICT practitioners and e-leaders,
- Recommendations and guidelines on new curriculum development for ICT practitioners and e-leaders,
- European eLearning quality standards to ensure harmonisation, usage and implementation,
- eLearning courses, content repositories and exchange mechanisms,
- Interoperability standards for interactive eBooks and other digital educational materials.

2.4.4. *eProcurement/eCatalogues*

The Commission aims to make eProcurement straightforward by facilitating the emergence of an interoperable European framework, building where possible on European standards. Standardisation work already under way may need to be reinforced or completed. Standards should help to make eProcurement more efficient by taking account of the results of EU projects such as the Pan-European Public Procurement Online (PEPPOL) project and the work undertaken by CEN.

The lack of a common definition of eCatalogue across the EU and multiple classification schemes for products and services are among the obstacles that

⁴⁹ Directive 2011/24/EU
⁵⁰ <http://www.ehealth-strategies.eu/>
⁵¹ M/436
⁵² COM(2007)496

enterprises – especially SMEs – face when trying to carry out eProcurement transactions. To ensure consistent and holistic solutions, elements of both the pre-award and post-award phases should be further addressed by CEN, including their interfaces to eInvoicing and payment solutions.

2.4.5. *Electronic invoicing (eInvoicing)*

The Commission aims to make online transactions straightforward, by ensuring the completion of the Single Euro Payments Area (SEPA) and by facilitating the emergence of an interoperable European eInvoicing framework. The European multi-stakeholder Forum on eInvoicing is advising on specific standardisation needs.

The Commission and CEN will assess the inputs to ensure that appropriate European standards are available. Standards in the area of eInvoicing need to assure a linkage with relevant standards in eProcurement and SEPA. Moreover, European and international standardisation bodies should pursue the fast development of complementary eBusiness messages to improve the ability to exchange products and services effectively.

The Commission may issue a mandate covering the definition of a semantic interoperability model and of a European eInvoice data model.

2.4.6. *Online dispute resolution (ODR) for eCommerce*

The Regulation on consumer ODR⁵³ establishes a European ODR platform. There is a need to explore and define the role of international and European standardisation for interoperability between the ODR platform and ODR schemes operated at national level. In particular, the Commission aims to encourage the development of an interoperable ODR framework for data exchange, building on United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) international standards and practices.

2.4.7. *The Internet of Things (IoT)*

The IoT refers to the invisible connection of billions of objects to the Internet to retrieve or send information to a distant system, often without direct human intervention. It is not restricted to a specific communication technology and covers several technical solutions (RFID, TCP/IP, sensors, actuators, interfaces, etc.) related to object identification and data capture, storage, processing, and transfer within physical environments and between physical and virtual contexts.

An IoT standardisation mandate will explore in a first phase (1 to 2 years) whether standards can ensure that (legal) data protection and security requirements are met and in a second phase will develop those standards.

2.4.8. *Electronic identification and trust services including electronic signatures*

In the context of the Directive on electronic signatures⁵⁴, the Commission issued a mandate⁵⁵ in early 2010 to rationalise the standards related to eSignatures and related trust services into a coherent updated framework. The rationalised framework is structured in six elements: eSignature creation and validation; devices related to their creation; cryptographic suites; trust services providing support such as issuance of

⁵³ Reference to be added after adoption in spring 2013

⁵⁴ Directive 1999/93/EC

⁵⁵ M/460r

certificates; value added services like registered mail or data preservation; and the provisioning of trust service status lists. Most results are expected in 2014 onwards.

In June 2012, the Commission proposed a Regulation on electronic identification and trust services for electronic transactions in the internal market⁵⁶ to replace the eSignature Directive and expand its scope to address electronic identification, signatures, seals, timestamps, delivery, documents or website authentication certificates. Further standardisation mandates will be needed to support its implementation.

2.4.9. *Card, internet and mobile payments*

The lack of standards and interoperability between different actors and solutions involved in the card, internet and mobile payments area is a source of market fragmentation and delays the widespread adoption of innovative pan-European payment methods.

The Commission, in cooperation with the European Central Bank, intends to facilitate the convergence of on-going standardisation activities in the area of card payments and spur the emergence of pan-European standards for m-payments and Internet payments. As a first step the Commission will invite the ESOs and other relevant bodies such as the SEPA Council to map out business and user requirements and assess existing standardisation gaps.

2.4.10. *Intelligent Transport Systems (ITS)*⁵⁷

Common European standards and technical specifications are paramount to ensure the interoperability of ITS services and applications, accelerate their introduction and maximise their impact. New standardisation actions will include:

- Co-operative systems for intelligent transport,
- Multimodal journey planner
- Open in-vehicle platform architecture,
- Digital Maps,
- Public Transport interoperability and Urban ITS environment,
- Guidelines and technical specifications to ensure a safe on-board Human-Machine Interaction,
- Electronic Fee Collection,
- International cooperation aimed at global harmonisation of standards (Agreements with the US and Japan regarding ICT applications for road transport).

2.5. **Climate change and Resource Efficient Europe**⁵⁸

2.5.1. *Adaptation to climate change*

The preparation of the forthcoming EU Adaptation Strategy has identified standards as potentially important to guarantee the resilience of infrastructure in certain sectors: transport infrastructure, energy infrastructure and constructions/buildings. It could be

⁵⁶ COM(2012)238

⁵⁷ Directive 2010/40/EU, COM(2008) 886

⁵⁸ COM(2011) 21

relevant to identify which standards need to be promoted and/or amended to take better account of current and future impacts of climate change in infrastructure investment decisions.

One way to support EU climate policy and help reach the objectives of the UN Framework Convention on Climate Change is to develop European standards for assessing the greenhouse gas (GHG) emissions in energy-intensive industries.

Under the current mandate for the development of EU technical standards in the field of GHG emissions⁵⁹ for steel, cement, aluminium, lime and ferro-alloys, reports will be issued in 2013 with results of the verification tests. The Commission should ensure that these tests guarantee accuracy and reproducibility of the proposed standardised measurement methods.

2.5.2. *Regulation on ozone-depleting substances*

The Regulation on ozone-depleting substances⁶⁰ restricts the use of numerous hazardous substances including carbon tetrachloride and trichlorotrifluoroethanes, and some existing standards will have to be checked for conformity with the proposed use prohibitions.

2.5.3. *Air quality*

The Directive on ambient air quality and cleaner air for Europe⁶¹ lays down requirements to monitor ozone precursors. The Commission expects to send a new mandate to the ESOs for the development of harmonised measurement standards.

2.5.4. *Waste*

ESOs are expected, within the scope of the Directive on waste electrical and electronic equipment⁶² (WEEE), to develop one or more European standards reflecting the state of the art for the treatment of waste equipment (including recovery, recycling and preparing for re-use).

In support of the waste directive⁶³, the Commission will prepare new mandates for development of methods for determination of toxic gas production and of elements and substances in waste relevant for health hazards and environmental hazards.

2.5.5. *Sustainable food*

As part of the roadmap to a resource-efficient Europe, the Commission will adopt a Communication on sustainable food in 2013 which may lead to requests for standardisation activities.

3. INTERNATIONAL DIMENSION OF EUROPEAN STANDARDISATION

The overall objective is to strengthen the global reach and the competitiveness of European industry by reducing technical barriers to trade. The use of common or technically aligned standards supports the exchange of goods and services by increasing interoperability at global level. The objective will be pursued by:

⁵⁹ M/478
⁶⁰ Regulation (EC) No 1005/2009
⁶¹ Directive 2008/50/EC
⁶² Directive 2012/19/EU
⁶³ Directive 2008/98/EC

- Aiming for the widest possible coherence between international and European standards (primacy of international standardisation with a strong European lead in many sectors) and extending/facilitating the use of, or technical alignment with, European and/or international standards outside of the EU,
- Raising awareness and promoting the advantages of European standardisation as a coherent regional system embedded in and fully supporting international standardisation and multilateral regulation,
- Contributing to the bilateral regulatory/policy dialogues between the EU and third countries, as well as to the relevant chapters of free trade agreements negotiations. The current priorities focus on the US (working on the agreement on “Building Bridges” between the US and EU standards systems⁶⁴ and in the upcoming Transatlantic Trade and Investment Partnership negotiations), China (regulatory and industrial policy dialogue, strategic partnerships), Russia (modernisation partnership), India, Japan, Korea, ASEAN and Latin America,
- Extending the single market in particular through the process of the enlargement of the European Union, the European Neighbourhood policy, and the negotiation of Agreements on Conformity Assessment and Acceptance of industrial products with third countries adopting European product safety legislation supported by European standards.
- Strategic actions in priority countries consisting of:
 - Seconded European standardisation experts, currently in China and India (and perhaps in future in Brazil), ensuring a local presence of European standardisation and a flow of information on access to key markets;
 - Web-based standardisation information platforms, (with China⁶⁵, where the emphasis is on extending coverage beyond today’s sectors and perhaps in future with the US), mapping the respective standardisation landscapes including market access aspects directly related to standardisation.
 - Supporting the strengthening of African capacities in the area of standards, in accordance with the joint EU-Africa Action Plan, notably through a technical and policy dialogue with relevant African standardisation and regional organisations.

4. CONCLUSION

This first annual Union work programme for European standardisation adopted pursuant to the Standardisation Regulation is a key element in the Commission’s efforts to speed up standardisation processes. It allows for more efficient anticipation and planning of standardisation activities and these efforts will be further reinforced by shorter deadlines for the acceptance of proposed mandates. Its timing allows synchronisation with preparatory work in the ESOs and the Commission calls on the ESOs to take this work programme into account when elaborating their own annual work programmes later in the year.

⁶⁴ http://trade.ec.europa.eu/doclib/docs/2011/december/tradoc_148393.pdf

⁶⁵ http://ec.europa.eu/enterprise/newsroom/cf/itemdetail.cfm?item_id=6271&lang=en

The programme has been established in consultation with all stakeholders and it provides a platform to gather a wide range of inputs on future priorities for standardisation activities. Information on the standardisation activities initiated on the basis of this work programme will be included in the next Union work programme for European standardisation to ensure feedback to all interested parties.