Introduction

The economic landscape is changing within the EU and among its international trading partners. Boundaries between traditional manufacturing, digitisation and services are increasingly blurring and the digital solutions are progressively integrated into global industrial value chains. In the face of these challenges, the Commission should translate this economic reality into its standardisation priorities for European policies and legislations, together with the inter-institutional partners. In the Communication "European standards for 21st century" (hereinafter "the Communication")[[1]](#footnote-2), in June 2016, the Commission presented a new vision for European Standardisation System (ESS) to meet these challenges.

The new vision, spelled out in the Communication goes beyond the traditional way of dealing with standards at EU level which in the past was limited to technical support for EU harmonisation needs. The new vision focuses on the contribution of standardisation to societal challenges and European policies such as promoting innovation, increasing quality and safety, boosting jobs and growth, supporting global value chains and the development of the Single Market.

Besides such expanded policy support, the Communication also introduced new initiatives to achieve these objectives within the ESS. This includes in particular the Joint Initiative on Standardisation[[2]](#footnote-3) (JIS) and the proposal[[3]](#footnote-4) to launch an inter-institutional dialogue with the co-legislators. In addition, in April 2016 the Commission set up priorities for ICT standardisation, and proposed concrete actions in its Communication on ICT Standardisation Priorities for the Digital Single Market (hereinafter the "ICT Communication")[[4]](#footnote-5) on the basis of a strategic two-pillar approach. In the first pillar the Commission identified five priority areas where action is deemed more urgent. In the second pillar, the Commission proposed a high-level process to achieve the actions, take stock of progress on the deliverables – and where necessary – adapt the priorities[[5]](#footnote-6).

One of the most important principles of standardisation is transparency which requires establishing tools for communicating and sharing information with the interested parties. In European standardisation, this has hitherto been achieved through the annual Union work programme for European standardisation[[6]](#footnote-7) (AUWP) and the Rolling Plan[[7]](#footnote-8) for ICT Standardisation[[8]](#footnote-9).

This report aims to explain how the individual actions and actors of the previous AUWPs, the Communication on ICT Standardisation Priorities for the Digital Single Market (hereinafter the "ICT Communication")[[9]](#footnote-10) and the JIS have so far contributed to the objectives set by the Communication. It is divided into two parts; one covering the policy elements of this new vision and one concerning cooperation with stakeholders. It is accompanied by a Staff Working Document detailing the progress on the different actions of the aforementioned AUWPs and other ongoing activities. This report is intended to support the inter-institutional dialogue envisaged in the Communication, which the Commission will pursue with the co-legislators during the months following it with a view to laying the foundations for the work on the 2019 AUWP.

Policy elements of the new vision

# Promoting innovation

Standards are a recognised driver for innovation[[10]](#footnote-11). A key instrument of innovation in the standardisation process is the elaboration of the relevant scientific and technical data, better known as pre-normative research, which leads to the drafting of a standard. The Regulation EU No 1025/2012[[11]](#footnote-12) (hereinafter "the Regulation") established the framework following the increased contribution of standardisation to innovation in Europe. Since 2016, together with other stakeholders within the framework of the JIS action, the Commission has intensified its focus towards this objective by linking research and innovation to standardisation[[12]](#footnote-13).

Ensuring a close and timely interaction between research and development (R&D) and standardisation is a key factor in helping innovative goods reach the market. Horizon 2020 has also renewed its focus on the relationship between its research projects and the standardisation process, specifically by integrating standardisation activities in research projects and by acknowledging their potential to boost the impact of the research and R&D results. A number of pre-normative activities supporting medical devices, environmental protection, decarbonisation, energy efficiency and metrology are being elaborated under Horizon 2020 projects for Cooperative Intelligent Transport Systems (C-ITS), cybersecurity and digital privacy[[13]](#footnote-14),Nanotechnologies, Advanced Materials, Biotechnology, Energy including Fuel Cells and Hydrogen, Secure societies and Advanced Manufacturing and Processing.

Ongoing pre-normative research is also contributing to harmonised certification schemes of security products and systems.

The Commission is working with European Standards Organisations (ESOs) and other Standards Developing Organisations (SDOs), fora and consortia and relevant stakeholders regarding possible measures that will improve the ICT standardisation ecosystem. This includes the promotion of interaction between open source and standardisation communities and the definition of a balanced, clear and predictable European licensing framework for Standard Essential Patents (SEP). The Commission published a Communication on the latter in November 2017[[14]](#footnote-15).

The Commission widely uses Horizon 2020 to fund research and innovation projects contributing to standardisation and is working with the ESOs concerning actions that will bridge the gap between research, innovation and standardisation. Horizon 2020 public-private partnerships (PPPs) are essential for developing key digital technology building blocks. Large scale pilot projects prepare broad deployment through test beds, experimentation facilities and pilot lines, generating knowledge and feeding into standardisation processes. Based on preliminary inputs from Member States and industry, industrial platform initiatives have been identified for ‘connected smart factory’, ‘health and care’, ‘smart agriculture’, 'connected and automated mobility', ‘smart energy', as well as for cross-cutting industrial data and ‘Internet of Things’ platforms.

The Communication on Union strategy for low-emission mobility[[15]](#footnote-16) states that ‘Standardisation and interoperability are crucial to make the most of the scale of the internal market, especially for electro-mobility and barriers to charging of electric vehicles across the EU need to be eliminated’. The Commission is about to adopt the first of a number of Commission Delegated Regulations to supplement and/or update the references to the standards referred to in the technical specifications, set out in Annex II of Directive 2014/94/EU "on the deployment of alternative fuels infrastructure"

# Increasing quality, safety, security and sustainability of goods and services

An efficient standardisation policy contributes to the fulfilment of the legal safety requirements by developing relevant state-of–the-art technical specifications and providing commonly accepted test methods to measure the compliance of goods and services with the prescribed values for quality, safety, security, energy, and material efficiency. The objectives of quality, safety, security and sustainability are generally complementary, but in some cases may also conflict. Pursuing the objectives of the standardisation work as much as possible in a balanced and mutually reinforcing manner is an on-going challenge.

## Quality

To help improve quality of services, the Commission has asked the European Standardisation Organisations (ESOs)[[16]](#footnote-17) to develop European standards in areas such as postal services, where standards have contributed to the development of the parcel delivery sector, as well as horizontal service standards that CEN is developing to help service providers, e.g. measuring their performance.

In metrology, recently requested European standards[[17]](#footnote-18) are expected to improve quality of measurement particularly for metering water and thermal energy specifically, as well as decentralised production of renewable electricity and transmission of power to and from electrical vehicles.

## Safety

Safety is a core area for European standardisation. It corresponds to around 60% of the Commission standardisation requests, reflecting the impact of safety on the daily lives of EU citizens. The EU harmonised legislation, as well as the General Product Safety Directive[[18]](#footnote-19), which ensure the safety of hundreds of products in EU markets, rely on harmonised standards and other standards supporting EU legislation[[19]](#footnote-20) to ensure compliance with the legislation's safety requirements.

Recently delivered standards support harmonisation in a wide range of areas such as child safety and personal protective equipment. A recently adopted European standard on child safety specifies safety requirements for lighters, which prevent children from successfully operating the ignition mechanism. Furthermore, newly adopted standards regarding baby carriers ensure that children cannot grip components. Lastly, standardisation has set technical requirements for laser eye-protectors to protect workers against accidental exposure to laser radiation in personal protective equipment

## Security

In light of both technological and international political developments, security is becoming an increasingly prioritised EU policy area. In the context of security, since 2016 the Commission has identified standardisation needs in the fields of crisis management area and in the chemical, biological, radiological and nuclear defence, and has requested the CEN to develop relevant standards. In addition, pre-normative research has been initiated through H2020 in a number of areas involving security threats, such as radiological and nuclear threats to critical infrastructures. In ICT, the Commission has also launched a standardisation request for privacy by design to help manufacturers in accounting for data protection issues in a consistent manner.

## Sustainability

Sustainability is a prominent long-standing objective of European standardisation. Standards are required for the implementation of key EU priorities such as, the Energy Union policy, and its research and innovation strategy – Accelerating Clean Energy Innovation[[20]](#footnote-21) - which covers actions to address mitigation of and adaptation to climate change, decarbonisation of the energy system,. In 2016[[21]](#footnote-22) and 2017[[22]](#footnote-23) the Commission asked the ESOs to elaborate standards in relation to: environmental management systems, packaging & packaging waste, poly-aromatic hydrocarbons, environmental management, eco-design and energy labelling, water framework directive, greenhouse gas emissions, pesticide application, vapour recovery equipment, batteries, green hydrogen, volatile organic compounds, pyrolysis oils, algae, increasing energy performance of buildings, deployment of green infrastructure, quality of air and reduction of emissions. These requests have been based on the existing legal and policy frameworks, and adhere to the criteria established in those frameworks. In order to remove barriers to climate-friendly technologies in the refrigeration, air conditioning, heat pumps and foam sectors, the Commission has requested that CEN and CENELEC develop the relevant European standards.

# Enabling jobs and growth

Standardisation is a bottom-up process that enables the bringing together of representatives from industrial, governmental, scientific and other stakeholders, thus leading to a high level of acceptance of standards among these stakeholders. For the EU, standards and standardisation are clear, strategic assets for securing EU competiveness and are key tools for promoting innovation and progress in the Single Market. It is commonly accepted that standards and standardisation play a vital part in supporting economic growth through their role in boosting productivity and competitiveness and encouraging innovation and prosperity. They also provide means for the EU to maintain its leadership in technical development and global trade.

While national studies carried out by France, Germany the UK and others[[23]](#footnote-24) point towards the contribution of standards and standardisation to the competitiveness of EU businesses, the effects of standards and standardisation remain indiscernible on a broader European scale. This was an issue that returned to the table during the discussion in the context of the JIS to enhance the evidence base of the annual governance cycle on EU's standardisation policy.

The Commission has recognised the importance of a deeper understanding of the economic and societal impacts of standards and standardisation and sets out its intention to launch a study in the AUWP for 2017[[24]](#footnote-25). The subject is vast and there are methodological challenges in measuring the (economic) impacts of standards and standardisation, as well as capturing the data that would allow the monetisation of impacts of standards and standardisation and their externalities at macroeconomic, sectoral and company levels. Given these considerations, a feasibility study by the Commission has been launched this year in co-operation with National Standards Bodies and other participants to the respected JIS action covering this study[[25]](#footnote-26). Its purpose is to evaluate the further assessment of undertaking the eventual study.

# Supporting global value chains

The ESS has a key role in helping European businesses and SMEs to expand their activities beyond Europe and in assuring the quality and safety of imported products and services. This is exemplified by agreements between ESOs and international standardisation organisations such as the ISO[[26]](#footnote-27), IEC[[27]](#footnote-28) as well as global partnerships like the 3rd Generation Partnership Project (3GPP)[[28]](#footnote-29) and oneM2M[[29]](#footnote-30) organisation. Since 2016, the Commission has also been working on promoting the European regulatory model supported by voluntary standards and its close link to international standardisation in third countries, following the framework of the JIS.[[30]](#footnote-31) The Commission has also started to engage in direct dialogues with the ISO and IEC with the aim of maximising adoption of identical European and international standards whilst assuring the highest protection for European consumers.

Standardisation is a key component of EU Free Trade Agreement (FTA) negotiations with third countries. The Commission seeks the commitment of its partners to use state-of-the art international standards as a basis for regulations affecting key products and services, in order to guarantee the safety and security of EU citizens as well as improve the international competitiveness of EU businesses. Recently concluded Free Trade Agreement negotiations where standardisation has reached a place of prominence include the agreements of the EU with Canada (CETA, which entered into force provisionally on 21 September 2017), Singapore and Vietnam (negotiations have been concluded) and Japan (an agreement in principle on the main elements has been reached).

In order to better capture the opportunities afforded by the largest emerging markets, two EU standardisation experts (jointly financed by the Commission, the EFTA and the three ESOs) seconded to China and India have conducted awareness- raising activities concerning the respective standardisation systems and delivered market and regulatory intelligence in specific market relevant areas. As the current phase of the Seconded European Standardisation Expert in China (SESEC) project comes to an end in December 2017, the Commission is working together with its project partners from the project on its renewal commencing in 2018.

Regarding the international outreach of European Standardisation in ICT, a Horizon 2020 cooperation and support action combined with the Foreign Policy Instrument actions will help reinforce the EU's presence by setting up an observatory of global ICT standardisation activities and a funding facility to support the participation of European experts on international ICT standardisation and promoting European standardisation in other regions.

Standardisation related to security is part of the discussions in United Nations Economic Commission for Europe aiming to strengthen the EU’s presence and engagement of European stakeholders in security related issues.

The African continent also presents new opportunities for standardisation cooperation. The Joint Africa-EU Strategy could offer a framework for developing a pan-African standardisation system as a technical contribution to pan-African market integration. In 2016 the Commission supported CEN and CENELEC cooperation with the African Standardisation Organisations (ARSO, AFSEC) aimed to make standardisation a pivotal element in the roadmap of the November 2017 EU-Africa Summit. A unified African market supported by the European standardisation model is a clear win-win for both partners.

# Preventing costly fragmentation in the single market

Each European standard replaces one standard or a group of national standards in each Member State with a single standard. This makes life easier for businesses and citizens by helping to create modern public services and reducing the administrative burden and costs of compliance. Timely national transposition of European standards and their referencing (where applicable) in the Official Journal of the European Union (OJEU) is necessary to meet the market needs. The average rate of national transposition of European standards (ENs in support of EU legislation and policies and other ENs) in EU28 is around 99% (varying from 93% to 100% per Member State).

Legislative changes introduced in 2013, in particular newly introduced obligations of the Commission relating to the verification of harmonised standards developed by the ESOs, have influenced the process of the publication of references to harmonised standards in the OJEU. This then led to an increased number of non-cited references. Various standardisation stakeholders consequently voiced criticism that the situation was creating legal uncertainty and unnecessary additional costs for European industries. The situation was reviewed in 2017 within the framework of the Commission's Regulatory Fitness and Performance (REFIT) programme with a view to addressing the current stock of non-cited harmonised standards and making the citation process more transparent and accountable. Based on the recommendations of the REFIT Platform[[31]](#footnote-32), the Commission and the European Standardisation Organisations have developed and agreed upon an action plan for the timely publication of the references of the harmonised standards in the OJEU.[[32]](#footnote-33)

Working closely with stakeholders

The Commission is well aware that it is not enough to simply set priorities. Success also depends on high-level commitment to standardisation from a broad stakeholder base which includes industry, standard-setting organisations, the research community and other EU institutions and national administrations.

A standard is the result of a voluntary cooperation between partners in a commercial relationship aiming to develop a technical specification based on the principles of transparency, openness, inclusiveness, impartiality and consensus among stakeholders. The Regulation on European standardisation[[33]](#footnote-34) recognises the need and calls for a broad consultation of all interested stakeholders, prior to the adoption of the AUWP. It also encourages the active participation of European organisations representing SMEs, consumers and environmental and social interests.

The Commission recognises that bridging the traditional boundaries between ICT, products and services requires commitment, good cooperation and mutual trust between the different stakeholders. In the ICT standardisation domain, the Commission regularly met stakeholders through Public Private Partnerships[[34]](#footnote-35)and also through the ESOs, to discuss the implementation of the various actions proposed. The Multi-stakeholders Platform on ICT Standardisation, which follows up the progress of the actions of the Communication at regular meetings, brings together Member States, European and international standardisation organisations, fora and consortia, organisations representing industry and SMEs and societal representatives.

The Commission has reinforced its relations with the various stakeholders of the ESS and is trying to improve its functionality and efficiency under the JIS. Moreover, the Commission has maintained regular contact and dialogue with other European institutions over the past year. In particular, the Commission has been closely involved in the consultations leading up to the European Parliament resolution of 4 July 2017 on European standards for the 21st century[[35]](#footnote-36). The Commission also initiated and established the practice of continuous structural dialogues with the three European Standardisation Organisations to ensure high-quality cooperation and smooth communication.

# Joint Initiative on European standardisation

To date the JIS has been signed by 104 participants which represents a high level of engagement from every segment of the ESS. Following the stakeholders' signature of the JIS on 13 June 2016 in Amsterdam and that of the Member States on 29 September 2016, the Commission organised several meetings of the JIS steering group in order to fine-tune the fifteen agreed actions[[36]](#footnote-37). The members of the steering group are mainly signatories to the JIS who were involved in its preparation. For each action, signatories to the JIS have volunteered to contribute and leaders have been assigned.

So far, the work in the individual JIS action groups has focused on the development of the substantive elements for each action. No clear timetables have been agreed at this stage. More clarity on the content of the actions will permit the development of timeframes and milestones for deliverables in each action.

# Inclusiveness

The Commission has formalised its public-private partnership with the Annex III organisations (SBS, ANEC, ETUC and ECOS)[[37]](#footnote-38) representing respectively SMEs, consumers, workers and environmental interests in standardisation by signing four different framework partnership agreements. This ensures coherence and stability in terms of financing and activity monitoring.

In addition to the financial contribution, the Commission takes actions to ensure the presence and effective participation of the Annex III organisations in important meetings and events such as the Committee on Standards (observers), the JIS (partners), the Multi Stakeholder Platform on ICT standardisation[[38]](#footnote-39) and meetings between the Commission and the ESOs.

In order to ensure a coherent approach to supporting the interests of SMEs, consumers, workers and environmental and societal interest in the standardisation process, CEN/CENELEC have established two working groups, the SME Working Group and the Societal Stakeholder Group. The members are the Annex III organisations– the SBS of the first and ANEC, ECOS and ETUC of the second. These two working groups discuss topics such as access to standards, awareness raising, training and support for participation in the standardisation work on a technical level are discussed. As a result, a number of tools have already been developed such as online toolboxes for SMEs and the opinion mechanism for the societal stakeholders.

The Standardisation Regulation puts particular emphasis[[39]](#footnote-40) on the involvement of small businesses in the standard development process, with the target of producing SME-friendly standards which can reduce costs and open up markets. With this objective in mind and as a main part of its 2017 Work Programme, the SBS has developed a long-term strategy for SMEs in standardisation for the period 2018-2021. This strategy sets out the goals and actions for SMEs in standardisation with a view to ensure that the standards developed are SME compatible, following the "think small first" principle.

Inclusiveness is one of the topics of the European Telecommunications Standards Institute (ETSI) Long Term Strategy and it is addressed in the context of its group “ETSI in the European Standardisation Landscape”. Discussions inside this group have led to the launch of the Societal Stakeholder Support and Inclusiveness programme (3SI), which envisages a set of actions designed to enhance inclusiveness and increase the visibility, awareness and involvement of the Annex III organisations inside ETSI. All Annex III organisations are full members of ETSI.

Conclusion

This report is intended to support the newly introduced inter-institutional dialogue on standardisation at the EU level, as announced in the Communication of 1 June 2016. It is meant to trigger a debate with the co-legislators, the European Parliament and the Council, as well as with the EESC and the Committee of the Regions, and provides orientations for forthcoming priorities of standardisation that will contribute to jobs, growth and the competitiveness agenda. This inter-institutional dialogue is being set-up in line with the new Inter-institutional Agreement between the European Parliament, the Council of the European Union and the European Commission on Better Law-Making[[40]](#footnote-41).

A close cooperation with the co-legislators on formulating the priorities of the 2019 AUWP will be vital for its successful implementation. Jointly set policy priorities for European standardisation will enhance the streamlining of standardisation work in future legislative processes. Achieving the targets of the EU standardisation policy requires a common understanding and the active participation of all actors of the ESS: enhancing inclusiveness, increasing awareness of the importance of standardisation in the economy and the society, improving the procedures for the assessment of the harmonised standards[[41]](#footnote-42), implementing the five ICT standardisation priorities and tackling the obstacles in the services sector.

1. [COM(2016)0358 final](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2016:358:FIN) [↑](#footnote-ref-2)
2. C(2016)3211 The JIS sets out a shared vision for European standardisation in order to better prioritise and modernise the current European standardisation system, as well as to strive for timely delivery of standardisation deliverables. It supports the relevant aspects of the ten European Commission Priorities and other policy objectives, while clearly respecting the distribution of different competences between the EU and the Member States. It should also further enable the EU to strengthen its driving force in the global [↑](#footnote-ref-3)
3. see page 4 in COM(2016)0358 final [↑](#footnote-ref-4)
4. COM (2016) 176 final [↑](#footnote-ref-5)
5. The progress is reported in the attached Staff Working Document. [↑](#footnote-ref-6)
6. published every year in July, last version COM(2017)453 [↑](#footnote-ref-7)
7. http://ec.europa.eu/growth/content/2017-rolling-plan-ict-standardisation-released-0\_en [↑](#footnote-ref-8)
8. The Rolling Plan for ICT Standardisation is published by the Commission every year to consolidate the different ICT standardisation needs in support of EU policies into a single document. It reaches out to both European Standardisation Organisations (ESOs) and international and global standards bodies that can respond to the proposed actions and support the respective policy objectives with standardisation deliverables. [↑](#footnote-ref-9)
9. COM (2016) 176 final [↑](#footnote-ref-10)
10. COM(2011) 311 final [↑](#footnote-ref-11)
11. See art.5 (2), art. 9 and art .15(1)c [↑](#footnote-ref-12)
12. JIS, Action 2 [↑](#footnote-ref-13)
13. COM(2017) 477 final/2 [↑](#footnote-ref-14)
14. COM(2017) 712 final. [↑](#footnote-ref-15)
15. COM(2016) 501 final. [↑](#footnote-ref-16)
16. CEN — European Committee for Standardisation, CENELEC — European Committee for Electrotechnical Standardisation and ETSI — European Telecommunications Standards Institute [↑](#footnote-ref-17)
17. For details, see the accompanying staff working document. [↑](#footnote-ref-18)
18. Directive 2001/95/EC [↑](#footnote-ref-19)
19. Such as standards referenced in the Official Journal EU under the Directive 2001/95/EC [↑](#footnote-ref-20)
20. COM (2016) 763 [↑](#footnote-ref-21)
21. COM(2016)357 [↑](#footnote-ref-22)
22. COM(2017)453 [↑](#footnote-ref-23)
23. DIN (2000): Economic Benefits of Standardisation, 3 volumes. Berlin: Beuth. (Update 2011), DTI (2005):

 The Empirical Economics of Standards, DTI ECONOMICS PAPER NO.12. London and AFNOR (2009)

 The Economic Impact of Standardisation – Technological Change, Standards and Long-Term Growth in France. Paris. [↑](#footnote-ref-24)
24. COM(2016)357 [↑](#footnote-ref-25)
25. Action 1: Study on the economic and societal impacts as well as access to standards in the EU and EFTA Member States [↑](#footnote-ref-26)
26. International Standardisation Organisation [↑](#footnote-ref-27)
27. International Electrotechnical Commission [↑](#footnote-ref-28)
28. http://www.3gpp.org/ [↑](#footnote-ref-29)
29. http://www.onem2m.org/ [↑](#footnote-ref-30)
30. JIS Action 13 [↑](#footnote-ref-31)
31. https://ec.europa.eu/info/law/law-making-process/overview-law-making-process/evaluating-and-improving-existing-laws/reducing-burdens-and-simplifying-law/refit-platform\_en [↑](#footnote-ref-32)
32. see action plan in the in the attached Staff Working Document. [↑](#footnote-ref-33)
33. Art 8(5) and recital 31 of EU Regulation No 1025/2012 [↑](#footnote-ref-34)
34. i.e., 5G PPP, AIOTI, BDVA, ECSO [↑](#footnote-ref-35)
35. http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P8-TA-2017-0278+0+DOC+XML+V0//EN&language=EN [↑](#footnote-ref-36)
36. The initiatives are divided into the following three categories: (I) Awareness, education and understanding about the European Standardisation System, (II) Coordination, transparency and inclusiveness, (III) Competitiveness and international dimension. [↑](#footnote-ref-37)
37. [Small Business Standards](http://sbs-sme.eu/), [the European consumer voice in standardisation](http://www.anec.eu/anec.asp) , [the European Trade Union Confederation](http://www.etuc.org/)  and [the European Environmental Citizens’ Organisation for Standardisation](http://ecostandard.org/) [↑](#footnote-ref-38)
38. https://ec.europa.eu/digital-single-market/en/european-multi-stakeholder-platform-ict-standardisation [↑](#footnote-ref-39)
39. See art. 6 of (EU) Regulation 1025/2012 [↑](#footnote-ref-40)
40. OJ L 123, 12.5.2016, p. 1–14 [↑](#footnote-ref-41)
41. and other standards supporting EU legislation [↑](#footnote-ref-42)