Standards in the Digital Single Market: setting priorities and ensuring delivery (EN)

General information on respondents

INFO

Do you wish your contribution to be published?

Please indicate clearly if you do not wish your contribution to be published.

YES
NO

Submissions that are sent anonymously will neither be published nor taken into account.

The Commission may contact you in case a clarification regarding your submission is needed. If you do not wish to be contacted, please state this clearly in your reply.

I wish to be contacted:
YES
NO

I'm responding as:
An individual in my personal capacity
The representative of an organisation/company/institution

What is your nationality?
Austria
Belgium
Bulgaria
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Italy
Ireland
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden
United Kingdom
Other

Please specify:

What is your place of residence?
Austria
Belgium
Bulgaria
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Italy
Ireland
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden
United Kingdom
Other
Please specify:

What is your name?

What is your surname?

Please enter your email address:

Please enter your telephone number:

Please enter the name of your institution/organisation/business:

Is your organisation registered in the Transparency Register of the European Commission and the European Parliament?
Yes
No
Please indicate your organisation's registration number in the Transparency Register.

Please register in the Transparency Register before answering this questionnaire. If your organisation/institution responds without being registered, the Commission will consider its input as that of an individual and as such, will publish it separately.
Please enter the address of your organisation:

My institution/organisation/business operates in:

X EU
Austria
Belgium
Bulgaria
Czech Republic
Croatia
Cyprus
Denmark
Estonia
France
Finland
Germany
Greece
Hungary
Italy
Ireland
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Spain
Slovenia
Slovakia
Sweden
United Kingdom
Other

Please specify:

What is the primary place of establishment of the entity you represent?

Please indicate your main field of business activity and the field of activity related to the consultation's topic (if not identical to the overall business activity).

Please select the description that applies to your organisation.
Public authority
European Standardisation Organisation (CEN, CENELEC, ETSI)
International Standardisation Organisation (ISO, IEC, ITU)
Other Standard Setting Organisation
Research Center
X Industrial Association, Forum & Consortium
Other Stakeholders Association (e.g. Users, Consumers...)
Enterprise (not SME)
SME
Other

Please specify:

Indicate the size of your company.
In accordance with the European Commission Recommendation 2003/361.See also Online help

Medium sized enterprise (independent companies that have less than 250 employees, and either whose turnover is ≤ 50M€, or balance sheet ≤ 43M€)
Small enterprise (independent companies with less than 50 employees, and either turnover or balance sheet ≤ 10M€)

Micro enterprise (independent companies with less than 10 employees, and either turnover or balance sheet ≤ 2M€)

Is your organisation active in ICT standardisation?
 Yes
No

Please indicate the Standard Setting Organisations in which you are active:

And if possible:

- The approximate number of person-months devoted to standardisation related activities.
P/M

- The percentage this means to the total of your resources.
%

Questions
Questions

II.1 Questions on general framework and problem statement
New Section

It is of particular interest to understand if the standards currently under development effectively match interoperability and successfully creating a Digital Single Market. In addition, it is especially interesting to identify those actions in standards development that could act as a solution for wider industry and public needs, not limited to the specific technologies that have been standardized.

Please indicate whether you agree to the following statements and explain your answer briefly.

Q1.1 - Do you share the Commission's analysis in Part 2 of [this document](#)?
YES
PARTLY **X**
NO
NO OPINION

Please explain:

The digital transformation towards a digital economy will, indeed, have broad impact on sectors and the way processes work, developments take place and technologies get used and integrated. It is, therefore, not easy to prioritise on sectors, technologies or applications. Any prioritisations runs the risk of excluding others, be it technologies or sectors, which are equally effected and may be equally important, perhaps on some smaller scale.

Regarding a horizontal prioritisation, at the current point in time the following six areas seem to be of critical relevance for the digital transformation and for adoption of the new technologies in key areas for the digital economy in Europe: 5G, Cyber Security, Cloud, Internet of Things, Digitisation of European Industry.

Selecting these technologies and areas as priorities for standardisation, however, does not mean that there is a huge gap in standardisation activities. Far from that, standardisation activities are manifold and well under way for all of these priorities. In fact, the availability of the most relevant and innovative IT global standards has made the innovation in the prioritised areas possible. The challenge is on the integration of technologies and on the implementation of the available global standards rather than on the need to close functional gaps or standardisation gaps.

Therefore, it may in many cases be primarily important to make use of available global standards, ensure that these global IT standards and specifications can be used in Europe, promote collaboration, facilitate dialogue and promote the uptake of new technologies, e.g. in pilot projects. Starting new standardisation work should only be done if there is a clear market need and if respective functional gaps have clearly been identified. Moreover, for new standardisation activities there needs to be a critical mass of industry and other stakeholders and the focus should be on global and international standards rather than regional or national activities.

Q1.2 - ICT is assuming a greater role in sectors of the economy which were not previously significant users of ICT. How do you see *the role of ICT standards* for the economy, in particular beyond the ICT sector?

Very Important **X**
Important
Modest importance
Not important
No opinion

Your comment, indicating a specific sector:

ICT technologies and ICT standards have become a driver and key enabler for innovation. The availability of ICT standards has made new areas of innovation possible where IT layers are integrated with physical layers in order to optimise processes and value chains. These global ICT standards are the foundation of the internet and the web and they underpin systems like smart grid, smart cities, intelligent transportation, internet of things, advanced manufacturing, etc. It is, therefore, important to build on the strengths of these standards and the global standardisation processes for further progress and innovation across sectors.

Q1.3 - Do you agree that setting priorities for ICT standards at EU level, accompanied by clear time-tables, could help standard-setting organisations in better organising their work and support the Digital Single Market?

YES
PARTLY **X**
NO
NO OPINION

Please explain why:

In all priority areas industry and other stakeholders have, over the past years, taken major investments for driving innovation in the area of standardisation and beyond. Therefore, many developments are already under way and well advanced. This ranges from basic technology standards to higher levels in the standardisation value chain like process standards, reference architectures, use cases, standards landscapings and roadmaps. All of this well addressed and organised by a global ICT standardisation ecosystem that is well connected for collaboration and complementary work.

The DSM should leverage on this ongoing work and identify areas where public policy may further facilitate cooperation or may promote the uptake of available standards and specifications, through outreach and education, via implementations in open source or in pilot projects or via plug-test/plug-fests, just to name a few examples.

Governments should be reluctant in driving the development of new standards if work in the area is already under way. Rather governments should analyse the ongoing activities with respect to government requirements and determine whether further or new requirements need to be raised and brought up with the respective global standardisation activities to make sure that such requirements are well addressed. Global standards are of key importance for the success of the new systems and technologies and for competitiveness of European industry on the global market place.

Q1.4. - What other steps should be considered to ensure that any such prioritisation would enjoy broad support of key stakeholders?

What is most important is market need and stakeholder support. All areas listed in the DSM are high priority areas for industry and industry has already made a lot of investment in standardisation in these areas over the past years. Therefore, successful prioritisation and subsequent actions will depend on a clear market need and on avoiding any duplication with work that may already be ongoing either in Europe or globally.

Moreover, prioritisation needs to take into account the highly effective and innovative processes the ICT industry is using for developing timely, market ready standards with the direct involvement of the key experts. Global, industry-driven standards development organisations (sometimes also referred to as fora/consortia) are in many areas the leading

bodies for successful standards development in the ICT sector. This includes organisations like W3C, OASIS, IETF, Ecma International, etc. These organisations operate with highly open and transparent processes, have a broad membership including governments, have clear consensus and appeal process in place and deliver global standards that are widely implemented and used and are critical for ICT infrastructures, interoperability and functionality. It is of vital importance that the work of these organisations is considered but that also the organisations themselves are included in planning and execution of critical new work in support of EU policy objectives. They successfully collaborate in the context of the Rolling Plan. Strengthening of possibilities for direct interaction between policy makers and these global organisations would be of value add for fast and effective actions in support of the prioritisations.

Q1.5 - What would be the most effective instrument at EU level to ensure that any such prioritisation is taken up by relevant standard-setting organisations? (please select and rank up to 3 instrument

	1	2	3
A Commission Communication			X
A Commission Recommendation		X	
Standardization requests issued to EU standard-setting organisations and included in the Annual Union Work Programme for European standardisation			
Regulation			
Priorities stated in the Rolling Plan for ICT Standardisation	**X**		
No opinion			
None of them			

Your comment:
At this point in time, with new technologies emerging and evolving at a rapid, regulation would not be appropriate. The EU Rolling Plan for ICT Standardisation is a powerful tool for policy makers to bring forward their requests and requirements and to align and drive global collaboration on the respective standardisation developments amongst all relevant global stakeholders.

Q1.6 - What would be the impact of a priority ICT standards plan defined at the level of the EU on Europe's effort *to pursue leadership in global standard-setting*?
POSITIVE
NEUTRAL **X**
NEGATIVE
NO OPINION

Please explain:
The role of Europe in global standardisation should not be underestimated. Europe does have a leading role in many respect. There is strong membership of European stakeholders in global and international SDOs. A large number of industry experts are European, including in leading roles in technical committees and technical bodies. Much of this is based on the high level of expertise of European technicians within their companies and corporations.

Regarding the priority areas, as already mentioned above, these have been a priority in industry and industry experts are working on standards for ensuring interoperability and meeting stakeholder needs. The impact of the EU priority plan will largely be in confirming Europe's commitment in promoting the uptake of the respective new and innovative technologies and of confirming the high importance of standardisation in the respective areas.

Q1.7 - What would be the impact of a priority ICT standards plan defined at the level of the EU on the ability of European companies *to capture new global market opportunities*?
POSITIVE
NEUTRAL **X**
NEGATIVE
NO OPINION

Please explain:

Q1.8 - Besides establishing a priority ICT standards plan, what other measures could the Commission (or other EU institutions) take to ensure that standardisation plays its role in achieving a Digital Single Market?

Standardisation is already high on the agenda of poiicy makers and all other stakeholders in Europe in the ICT field. The ICT Standardisation Rolling Plan is a meanwhile well established instrument for planning and collaboration. It translates strategy and policy objectives to concrete actions and provides an overview of currently ongoing standardisation developments and related activities with relevance in supporting policy objectives and their implementation.

Furthermore the ICT Standardisation Multi-Stakeholder Platform (MSP) provides a forum, unique in the world, that brings all stakeholders together to exchange and agree on actions for supporting EU policy making.

The European Commission should keep up the strong level of commitment and collaboration as present in the MSP and further leverage by seeking broad advice from the MSP and by bringing up concrete requests for action, e.g. collaboration in certain areas, with the MSP. This will help to promote global cooperation and will strengthen Europe's role in the global ICT standardisation ecosystem with positive effects for the European marketplace as a key user of global ICT standards, as well.

Q1.9 - How should standard-setting organisations best respond to the increasing speed of technological development and the integration of technologies in business processes across all industrial sectors?

A - Regarding the *adaptation of existing standards to new developments:*

SSOs usually have a proper mechanism for maintenance in place. The respective processes should be capable of dealing with necessary updates and the integration of innovative new functionality into standards.

Moreover, SSOs usually revise their processes integrating results from lessons learned. This may include the introduction of project based standardisation rather than the usual Technical Committee based standardisation, e.g. by applying modern project management methods. Several SSOs are in the process already of investigating on such changes. This also has impact on B below.

B - Regarding the *introduction of new standards for new technologies/products*:

Apart from the possible introduction of new methods of standards development as described under A above, many SSOs are seeing the need to improve collaboration with open source communities and foundations in order to better leverage open source in the context of standardisation. This process, already under way, will certainly have impact on the development of new standards, especially in innovative new areas in ICT.

Q1.10 - How do you see the involvement of European ICT Standardization experts in international standardisation organisations (ITU, ISO, IEC) and global standard setting organizations (i.e. IEEE, IETF, OASIS, W3C, ECMA international)?

A - The *SCOPE (or LEVEL?) of involvement*:

Is appropriate **X**
Should be increased
Should be decreased
No opinion

Please explain:

Experts coming from Europe as members of European companies or of international companies with a strong technology base in Europe assume many leadership positions in international and global standardisation, including roles on boards and in management committees, and chairing technical committees. This applies both to international standardisation organisations and to global SSOs.

In the international standardisation organisations, European national bodies also hold a number of secretariats in key technology areas.

B - The *QUALITY of involvement*:
Is appropriate **X**
Should be improved
No opinion

Please explain:
In globally integrated economies it is important that the best available experts can participate in the respective standardisation projects. Especially within the SSOs as well as in ETSI these experts can participate directly and contribute their expertise and know-how.

II.2 Questions on priority domains for standardisation in the Digital Single Market

Priority domains for standardisation in the DSM

In this section, the Commission invites survey participants to express opinions and ideas on setting priorities for ICT standardisation.

The Commission has identified 10 domains set out below, as well as a set of sub-domains within each domain. Please note that domains and subdomains are interrelated and that overlaps are possible and desirable in particular with respect to synergies between different sectors. Some domains are horizontal and may benefit a large number of sectorial applications; some other domains are more sectorial and were identified as areas where ICT standardisation would bring important benefits.

First check whether the list of domains is complete and relevant. If the list is considered incomplete, please complement it with additional domains that you consider priority.

Q2.1 - Please identify and rank the domains (up to 5) and subsequently subdomains (up to 3 per domain) within each domain that you consider a priority. If specific domains or subdomains are missing please add them.

	1	2	3	4	5
Domain 1: 5G communications					
Domain 2: Cloud computing					**X**
Domain 3: Cybersecurity					**X**
Domain 4: Data driven services and applications					
Domain 5: Digitisation of European Industry					**X**
Domain 6: eHealth and aging					
Domain 7: Intelligent Transport Systems (ITS)					
Domain 8: Internet of Things					**X**
Domain 9: Smart Cities					
Domain 10: Smart and Efficient Energy Use					
Others					

Others Domain(s) and subdomain(s):

Subdomains of Domain 1: 5G communicatiᵒ

	1	2	3
Architecture definition			
Channel model characterisation for innovative usages (e.g. V2V)			
Converged control plane (fixed mobile)			
Evolved Packet Core (EPC)			

Multi domain SDN interoperability			
Multi tenancy and multi technology C-RAN			
Network slicing			
New radio access technologies and waveforms, including backhaul/front haul integration			
Resource identification			
SDN Northbound interface			
Others			

Other(s) subdomain(s):

Domain 2: Cloud computing

	1	2	3
Application portability			x
As a service solutions (IaaS, PaaS, SaaS)			
Cloud networking infrastructures			
Cloud platforms			
Moving non-personal data between service providers		X	
Service Level Agreements (SLAs)			
Process Computation Integrity			
Others Promote implementation of SIG results	X		

Other(s) subdomain(s):

Domain 3: Cybersecurɪ

	1	2	3
Cyber security design requirements		X	
Process standard for incident reporting			
Process standard for cyber risk management			
Process standard for vulnerability disclosure			
Technical standards for encryption			
Technical standards for public key infrastructure			
Technical standard for security and privacy by design		**X**	
Others Raise awareness of existing standards, and security awareness education is required	X		

Other(s) subdomain(s):

Domain 4: Data driven services and applications

	1	2	3
APIs for simplified data sharing and reuse between data-driven services and applications			
Big Data technologies (such as interoperability of Big Data technologies in software stacks)			
Data licensing conditions			
Data related processes (such as data collection, data curation, data management)			
Data representation formats (such as XML)			
Data service protocols			
Entity identifiers for the sector			
Metadata schemata			
Others			

Other(s) subdomain(s):

Domain 5: Digitisation of European Industry

	1	2	3
Product Planning, Product design, Product identification, Product tracing and Product life cycle management			
Manufacturing equipment, Production process (including maintenance and supervision)			
Human Machine Interfaces and Human Machine Interaction	X		
Modelling, Simulation, Testing and Verification of products and processes			
Integration of the value chain (including supply chain, marketing, distribution, sales and support, ERP (Enterprise Resource Planning))		X	
Models for different areas of digitisation of industry, terminology, reference architectures, use cases and interoperability profiles			X
Security, IT Security, Information security			
Safety of persons and environment			
Reliability and robustness of systems including real time considerations			
Communication platforms, Coexistence of wireless applications in a factory			
Others			

Other(s) subdomain(s):

Domain 6: eHealth and aging

	1	2	3
Drug identifiers for medical prescriptions			
ICT infrastructure for the implementation and delivery of services for independent living in age-friendly buildings			
Interoperability profiles for independent living (Interoperability profiles describe specific solutions to interoperability in a specific use case scenario. A profile documents how standards will be used in order to achieve interoperability. Profiles ensure implementers and users that they are talking about the same solution without having to restate all the technical details that establish actual interoperability.)			
Interoperability profiles for mHealth apps			
Quality criteria for health and wellness apps			
Security and Safety of mHealth apps			
Semantic interoperability of Electronic Health Records			
Telemedicine			
Others			

Other(s) subdomain(s):

Domain 7: Intelligent Transport Systems (ITS)

	1	2	3
Access to in-vehicle resources and data			
Connected and/or automated driving (Connectivity, Data-Handling, Cybersecurity)			
Connected vehicles applications (e.g. Emergency vehicle notification)			
eFreight			
Service Platforms (for mobility and in-vehicle services) Smart charging solutions for electric vehicles			
Multimodal passenger transport systems			
European Electronic Toll Service			
Others			

Other(s) subdomain(s):

Domain 8: Internet of Things

	1	2	3
Advanced Manufacturing / M2M			X
Building and Home automation			

	1	2	3
Energy / Environment monitoring			
Medical and health care systems			
Reference architectures and related standardised interfaces			
Smart cities and communities		X	
Smart living environment for ageing well			
Smart farming and food security			
Transportation (including ITS, C2C, C2I, automated driving)		X	
Wearables			
Others			

Other(s) subdomain(s):

Domain 9: Smart Cities

	1	2	3
Application Programming Interfaces for urban platforms			
Urban Indicators			
Urban Management System (city planning)			
Urban Ontologies (for specific domains (including city objects, geometric elements and themes) or cross-domain)			
Urban Platforms			
Urban transactions (payments, identification, etc.)			
Others			

Other(s) subdomain(s):

Domain 10: Smart and Efficient Energy Use

	1	2	3
BIM – Building Information Modelling			
Building automation and smart appliances			
Electrical vehicles integration with smart grid and home management systems			
Energy efficiency indicators			
Heating/Cooling networks including heat supply from waste			
Interconnection of electricity, gas and heating networks			
Interfaces to Storage systems			
Lighting			
Power electronics			
Smart grids, smart metering			
Others			

Other(s) subdomain(s):

Please answer to Q2.2 to Q2.6 <u>for each of the domains selected</u>. In your answer please specify if applicable the subdomains that you have selected.

Q2.2 - For the *Domain 1: 5G communications* and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them. We copy the criteria for your convenience.

- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in

achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the **Domain 1: 5G communications** and sub-domains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the **Domain 1: 5G communications** and sub-domains which you have selected.? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities									
• Support Research & Innovation projects to contribute to standardisation									
• Community Building									
• Support creation of public-private partnerships - PPP									
• Increase strategic coordination of ICT standardisation at EU level.									
• Ensure consistent application of existing standards									
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement									
• Other									
• No opinion									

Please explain:

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the **Domain 1: 5G communications** and sub-domains which you have selected., and who in the standardisation landscape would be best placed to lead on these initiatives:

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.
YES
YES, provided some conditions are met
NO
No opinion
Please explain your choice and specify conditions:

Q2.2 - For the **Domain 2: Cloud computing** and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them.
We copy the criteria for your convenience:
- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the **Domain 2: Cloud computing** and sub-domains which you have selected.. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the **Domain 2: Cloud computing** and the subdomains which you have selected? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities							**X**		
• Support Research & Innovation projects to contribute to standardisation									
• Community Building							**X**		
• Support creation of public-private partnerships - PPP									
• Increase strategic coordination of ICT standardisation at EU level.									
• Ensure consistent application of existing standards									**X**
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement									**X**
• Other Promote the results from the Cloud SIGs									X
• No opinion									

Please explain:
A lot of activities are already ongoing in Europe and globally on Cloud. Further new work is not needed, but promoting the use of global standards and making them available for use in Europe is critical.

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the **Domain 2: Cloud computing** and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.
YES
YES, provided some conditions are met **X**
NO
No opinion

Please explain your choice and specify conditions:
There needs to be a clear market need for new activities in addition to the already ongoing or available work.

Q2.2 - For the **Domain 3: Cybersecurity** and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them.
We copy the criteria for your convenience:

- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the **Domain 3: Cybersecurity** and the subdomains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the **Domain 3: Cybersecurity** and the subdomains which you have selected? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities				X					
• Support Research & Innovation projects to contribute to standardisation		X							
• Community Building								X	
• Support creation of public-private partnerships - PPP									
• Increase strategic coordination of ICT standardisation at EU level.									
• Ensure consistent application of existing standards									X
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement									X
• Other									
• No opinion									

Please explain:
In Cybersecurity there is no lack of standards but a need for consistent implementation of available global standards. These must include relevant specifications from global SSOs which are available for use in Europe. With the relevant global standards implemented competitive security technologies are offered on top of the respective standards.

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the **Domain 3: Cybersecurity** and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

The overall objective of a coordinated approach towards Cybersecurity standardisation should therefore meet the following individual objectives:

- Recognised bodies should make their development work programme public and coordinate with other recognised bodies to eliminate duplication and to minimise overlap.

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.
YES
YES, provided some conditions are met **X**
NO
No opinion

Please explain your choice and specify conditions:
There would have to be a clear market need for new work to be started in addition to the already ongoing or available standards and standards developments.

Q2.2 - For the *Domain 4: Data driven services and applications* and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them.
We copy the criteria for your convenience:
- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the *Domain 4: Data driven services and applications* and the subdomains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the *Domain 4: Data driven services and applications* and the subdomains which you have selected? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities									
• Support Research & Innovation projects to contribute to standardisation									
• Community Building									
• Support creation of public-private partnerships - PPP									
• Increase strategic coordination of ICT standardisation at EU level.									

	1	2	3	4	5	6	7	8	9
• Ensure consistent application of existing standards									
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement									
• Other									
• No opinion									

Please explain:

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the **Domain 4: Data driven services and applications** and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.
YES
YES, provided some conditions are met
NO
No opinion

Please explain your choice and specify conditions:

Q2.2 - For the **Domain 5: Digitisation of European Industry** and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them. *We copy the criteria for your convenience*:
- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the **Domain 5: Digitisation of European Industry** and the subdomains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the **Domain 5: Digitisation of European Industry** and the subdomains which you have selected? Please rank thlist below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities								X	

• Support Research & Innovation projects to contribute to standardisation								
• Community Building							**X**	
• Support creation of public-private partnerships - PPP								
• Increase strategic coordination of ICT standardisation at EU level.								
• Ensure consistent application of existing standards								**X**
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement								**X**
• Other								
• No opinion								

Please explain:

Digitisation of European Industry is a major growth area. The basic technology standards are available and are, in fact, enablers for the digital transformation of Industry. On the vertical-level sector specific standards and standardisation deliverables like process standards, reference architectures or use case are under way. This includes work on semantics which is addressed in W3C.
The European Commission should leverage the MSP for promoting coordination amongst SSOs and the international and the European standardisation organisations. Moreover, pilot projects and plug-fests should be promoted for actual implementation of the technologies which, in turn, will provide valuable feedback to standardisation regarding possible functional gaps.
For non-ICT vertical sectors it is imperative that they do not re-invent horizontal ICT technologies and should re-use the many building block specifications that exist. This will require education and close cooperation.

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the *Domain 5: Digitisation of European Industry* and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.
YES
YES, provided some conditions are met **X**
NO
No opinion

Please explain your choice and specify conditions:
A lot of work is already going on, therefore a clear market need for new activities needs to be given.

Q2.2 - For the *Domain 6: eHealth and aging* and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them.
We copy the criteria for your convenience:
- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the **Domain 6: eHealth and aging** and the subdomains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the **Domain 6: eHealth and aging** and the subdomains which you have selected? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities									
• Support Research & Innovation projects to contribute to standardisation									
• Community Building									
• Support creation of public-private partnerships - PPP									
• Increase strategic coordination of ICT standardisation at EU level.									
• Ensure consistent application of existing standards									
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement									
• Other									
• No opinion									

Please explain:

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the **Domain 6: eHealth and aging** and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.
YES
YES, provided some conditions are met
NO
No opinion
Please explain your choice and specify conditions:

Q2.2 - For the **Domain 7: Intelligent Transport Systems (ITS)** and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them. *We copy the criteria for your convenience*:
  • Link to DSM objectives and other EU policies

- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the *Domain 7: Intelligent Transport Systems (ITS)* and the subdomains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the *Domain 7: Intelligent Transport Systems (ITS)* and the subdomains which you have selected? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities									
• Support Research & Innovation projects to contribute to standardisation									
• Community Building									
• Support creation of public-private partnerships - PPP									
• Increase strategic coordination of ICT standardisation at EU level.									
• Ensure consistent application of existing standards									
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement									
• Other									
• No opinion									

Please explain:

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the *Domain 7: Intelligent Transport Systems (ITS)* and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.

YES
YES, provided some conditions are met
NO
No opinion

Please explain your choice and specify conditions:

Q2.2 - For the **Domain 8: Internet of Things** and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them.
We copy the criteria for your convenience:

- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the **Domain 8: Internet of Things** and the subdomains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the **Domain 8: Internet of Things** and the subdomains which you have selected? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities							X		
• Support Research & Innovation projects to contribute to standardisation									
• Community Building							X		
• Support creation of public-private partnerships - PPP									
• Increase strategic coordination of ICT standardisation at EU level.									
• Ensure consistent application of existing standards								X	
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement								X	
• Other Make best use of AIOTI and refrain from founding other PPPs								X	
• No opinion									

Please explain:
A lot of investment has already been made in IoT standardisation and many relevant activities are ongoing globally. This work affects all levels of activities, from base technology standards (which are largely available for IoT) to process standards, semantics, reference architectures and use cases, landscapings and roadmaps.
The European Commission has initiated key initiatives with AIOTI, has tasked ETSI to conduct a standards landscaping exercise, and it is foreseen will launch Large Scale Pilots (LSP) in 2016.
The results of all of these initiatives should be awaited before further actions are being planned.

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the **Domain 8: Internet of Things** and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

There are standards under development for security and privacy with respect to Internet of Things (IoT) and allied applications, including but not limited to 'Smart Cities':

- Multilateral SDOs (Standards Development Organisations) like ITU & ISO/IEC
  - In May 2015, ITU published a report on security in the context of the Smart and Sustainable Cities (SC&C) Focus Group
  - ITU also has a newly-created Study Group 20 on IoT and its applications
- Professional bodies such as IEEE, IETF, ETSI, etc.
  - In particular, do see IEEE P 2413, a standard for an Architectural Framework for the Internet of Things
- Industry consortia such as OneM2M; Allseen, IIC, IPSO, LoRa, OIC, Thread, Zigbee, ZWave, etc.

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.

YES
YES, provided some conditions are met **X**
NO
No opinion

Please explain your choice and specify conditions:
A clear and strong market need must be given.

Q2.2 - For the **Domain 9: Smart Cities** and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them.
We copy the criteria for your convenience:
- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the **Domain 9: Smart Cities** and the subdomains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the **Domain 9: Smart Cities** and the subdomains which you have selected? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities									

• Support Research & Innovation projects to contribute to standardisation								
• Community Building								
• Support creation of public-private partnerships - PPP								
• Increase strategic coordination of ICT standardisation at EU level.								
• Ensure consistent application of existing standards								
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement								
• Other								
• No opinion								

Please explain:

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the **Domain 9: Smart Cities** and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.
YES
YES, provided some conditions are met
NO
No opinion
Please explain your choice and specify conditions:

Q2.2 - For the **Domain 10: Smart and Efficient Energy Use** and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them.
We copy the criteria for your convenience:
- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the **Domain 10: Smart and Efficient Energy Use** and the subdomains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the **Domain 10: Smart and Efficient Energy Use** and the subdomains which you have selected? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities									
• Support Research & Innovation projects to contribute to standardisation									
• Community Building									
• Support creation of public-private partnerships - PPP									
• Increase strategic coordination of ICT standardisation at EU level.									
• Ensure consistent application of existing standards									
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement									
• Other									
• No opinion									

Please explain:

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the **Domain 10: Smart and Efficient Energy Use** and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.
YES
YES, provided some conditions are met
NO
No opinion
Please explain your choice and specify conditions:

Q2.2 - For the **Other(s) Domain(s)** and the subdomains which you have selected, please explain briefly how the criteria indicated in Box I apply to them.
We copy the criteria for your convenience:
- Link to DSM objectives and other EU policies
- Competitiveness of the European industry
- Clear and achievable targets
- Evidence of market relevance and stakeholders needs
- Domains where standard setting has direct benefits for consumers

Q2.3 - The Priority ICT standards plan should lead to the production of technical specifications, standards or architectures where there is a need/gap, but could also propose

any other type of standardisation action such as landscape analysis, gap finding, roadmaps or, ecosystem building that could contribute to ensure that standardisation plays its role in achieving a Digital Single Market. Please explain if a standardisation need/gap exists in the **Other(s) Domain(s)** and the subdomains which you have selected. Please also indicate within which time-frame such need could be addressed. Please limit to a maximum of five needs/gaps per domain or sub-domain:

Q2.4 - Among those below, which action could be a priority in the **Other(s) Domain(s)** and the subdomains which you have selected? Please rank the list below and explain your choice.

	1	2	3	4	5	6	7	8	9
• Mandating European Standardisation Organisations (ESOs) for fast delivery of standards/technical specifications.									
• Foster cooperation among standards development organisations for ICT priorities									
• Support Research & Innovation projects to contribute to standardisation									
• Community Building									
• Support creation of public-private partnerships - PPP									
• Increase strategic coordination of ICT standardisation at EU level.									
• Ensure consistent application of existing standards									
• Accelerate the identification of ICT technical specifications most commonly used for their reference in public procurement									
• Other									
• No opinion									

Please explain:

Q2.5 - Please indicate any other standardisation initiatives which would help achieving the Digital Single Market in the **Other(s) Domain(s)** and the subdomains which you have selected, and who in the standardisation landscape would be best placed to lead on these initiatives:

Q2.6 - Would your organisation be prepared to invest resources in standard-setting to achieve the priority standards within the proposed time-frames?
Please answer this question only if you are responding as the representative of an organisation/company/institution.
YES
YES, provided some conditions are met
NO
No opinion
Please explain your choice and specify conditions:

II.3 Other Comments
Other Comments

Other comments:
For many, if not all, of the domains open source has an increasing role in providing open platforms and solutions including APIs and open source communities and foundations have lead role in innovation. Therefore, the relation between open source and standardisation is of increasing relevance and open source should be considered in the context of standardisation.