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# FINAL DRAFT

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## Contribution to the Rolling plan for ICT standardisation

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**Disclaimer: This is the final draft only. This final draft is presented by the Task Force on the Rolling Plan (TFRP) to the ICT Multi-Stakeholder Platform (MSP). It is not an official document, but a working document that shall be endorsed by the European Commission.**

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## 18 Executive introduction to the EU Rolling Plan for ICT Standardisation

19 This EU Rolling Plan for ICT Standardisation, henceforth called the Rolling Plan (RP), is  
20 a document drafted by the European Commission, in collaboration with the European  
21 Multi-Stakeholder Platform on ICT Standardisation, henceforth called “Multi-  
22 Stakeholder Platform” or “MSP”. The MSP is an advisory group to the European  
23 Commission on matters of ICT standardisation policy.

24 This Rolling Plan provides a multi-annual overview of the needs for preliminary or  
25 complimentary ICT standardisation activities to undertake in support of the EU policy  
26 activities. It is addressed to all ICT Stakeholders and gives a transparent view on how  
27 the policies are planned to be practically supported. As such, it is the successor of the  
28 2010-2013 ICT Standardisation Work Programme, and it is a non-binding document..

29 The Rolling Plan comprises several chapters. The first two chapters provide an  
30 introduction to the Rolling Plan, the importance of standardisation and standards in the  
31 context of policy making and the instruments that are available for working with  
32 standardisation, standards and technical specifications and promoting their uptake.

33 Chapter 3 is at the heart of this Rolling Plan. It lists all topic areas identified as EU policy  
34 priorities where standardisation, standards or ICT technical specifications may play a key  
35 role in the implementation of the respective policy. Each policy area is listed in a separate  
36 sub-section of chapter 3. Via the table of contents below an easy overview and fast access  
37 to the respective sub-sections is given.

38 All topic areas listed in the sub-sections of chapter 3 are structured in the same way. They  
39 provide an overview of the rationale for identifying the respective topic as policy priority.  
40 The comments coming from the various stakeholders of the ICT Standardisation Multi-  
41 Stakeholder Platform, including the EU Member States, have been integrated into these  
42 sub-sections. This also applies to the recommendations for actions which reflect the input  
43 from the Commission and the respective stakeholder advice.

44 Chapter 4 covers technologies of horizontal importance in the contexts of ICT  
45 infrastructures and ICT standardisation. It provides an overview of relevant basic  
46 horizontal standards and ongoing standardisation activities in various technology areas  
47 with relevance across the specific topic areas.

48

49 *Questions or suggestions to this Rolling Plan may be directed to the Task Force on*  
50 *Rolling Plan Secretariat at [ec-ict-std-rolling-plan@ec.europa.eu](mailto:ec-ict-std-rolling-plan@ec.europa.eu).*

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125 1. THE STRATEGIC ROLE OF ICT STANDARDISATION IN THE CONTEXT OF EU POLICY MAKING

126 1.1. Terms, Definitions and Acronyms

<i>Terms</i>	<i>Definition</i>
European Standards Organisations (ESO)	The three European Standards Organisations are the organisations listed in the Annex I of the regulation 1025/2012/EC, i.e., CEN, CENELEC and ETSI. Among other activities, they adopt the European standards.
European Multi-Stakeholder Platform on ICT Standardisation (MSP)	The MSP is an advisory group to the Commission on matters relating to the implementation of ICT Standardisation policy, including its work programme, priority-setting in support of legislation and policies, and identification of specifications developed by global ICT standard development organisations. It is composed of members of the national authorities of Member States and EFTA countries, industry associations, societal stakeholders and organisations representing ICT standardisation stakeholders.
Annual Union Work Programme on European Standardisation (AUWP)	The AUWP is a formal document adopted by the Commission identifying the strategic priorities for European Standardisation, taking into account Union long-term strategies for growth.

127

128 1.2. Legal Basis

129 **Regulation 1025/2012/EC**

130 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:316:0012:0033:EN:PDF>

131 This regulation sets up the general frame for the standardisation. It defines  
132 what is a standard, the stakeholder participation in its elaboration, the link to  
133 the Annual Union Work Programme for ICT Standardisation and the  
134 financial arrangements.

135 **Commission Decision of the 28.11.2011 setting up the European Multi-**  
136 **Stakeholder Platform on ICT Standardisation**

137 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:349:0004:0006:EN:PDF>

138 This decision describes the role of the European MSP.

139 **Communication from the commission to the European Parliament, the**  
140 **Council and the European Economic and Social Committee of the**  
141 **1.6.2011. COM(2011) 311. A strategic vision for European Standards:**  
142 **Moving forward to enhance and accelerate the sustainable growth**

### 145 **1.3. EU Policy Making and the Rolling Plan for ICT Standardisation**

#### 146 **1.3.1. Why The Rolling Plan ?**

147 Innovation and technology adoption are of high importance for Europe. They  
 148 drive technology progress and make sure that state-of-the-art technologies  
 149 get implemented and optimally used. Also, innovation and technology  
 150 adoption provide critical support for Europe to face the challenges of a  
 151 global market place, of society and economies. Information and  
 152 Communication Technologies (ICT) play a focal role in supporting and  
 153 facilitating innovation not only in ICT specific areas but also as horizontal  
 154 technologies.

155 Policy making in Europe makes use of standards and technical specifications  
 156 in order to reap the benefits of broader, more interoperable markets and  
 157 systems, and greater network effects for technology that they can bring. The  
 158 standards adopted by a recognised standards body after a public enquiry  
 159 procedure can be international, European or national standards, when  
 160 adopted by international, European or national standardisation bodies. The  
 161 three European Standards Organisations (ESO) entitled to produce European  
 162 standards are CEN, CENELEC and ETSI. The ESOs also produce other  
 163 technical specifications, so-called European standardisation deliverables,  
 164 which undergo different development and consensus building processes.

165 Relevant ICT technical specifications, however, are also developed by global  
 166 industry-driven ICT fora and consortia. When their development processes  
 167 meet requirements as laid down in Annex II of the Regulation on European  
 168 standardisation (1025/2012)<sup>1</sup> they may become common technical  
 169 specification to be referenced by the public sector in their public  
 170 procurements. This is in accordance with Articles 13 and 14 of the  
 171 Regulation on European standardisation.

172 **The term "standards" is used in this document in a generic way** for all  
 173 such deliverables from both recognised standards organisations and from  
 174 standardisation fora and consortia – or the terms “standards and technical  
 175 specifications” are used. Yet, whenever required in this document the terms  
 176 are specified in a more detailed way drawing on the definitions given in the  
 177 Regulation on European standardisation (1025/2012/EC).

#### 179 **1.3.2. What is the Rolling Plan and what does it provide?**

180 This Rolling Plan identifies EU policy priorities where ICT standardisation  
 181 and ICT standards should be considered as part of policy making. The  
 182 Rolling Plan is a strategic document focussing on the support those

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1 <sup>1</sup> The exact definition and scope of the terms ‘standard’ and ‘ICT technical specification’ are detailed in  
 2 article 2 of Regulation 1025/2012 (see legal basis). Additional information can be found in public  
 3 procurement legislation (Directives 2004/17/EC, 2004/18/EC and 2009/81/EC, and Regulation  
 4 2342/2002, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:134:0001:0113:en:PDF>)

183 standards, technical specifications, and standardisation in general can  
184 provide in the context of EU policy priorities, in particular to ensure  
185 interoperability (including avoidance of technology lock-in) in the ICT  
186 domain.

187 The Rolling Plan looks at the standardisation landscape in relation to the EU  
188 policy priorities. It identifies possible areas for action and may go into  
189 suggesting a plan or roadmap regarding effective standardisation support.  
190 The **detailed recommendations** are addressed in relation to each policy  
191 priority individually in chapter 3 of this Rolling Plan.

192 The Rolling Plan is a living document and does not claim completeness. It  
193 aims at covering as much as possible the broad range of standardisation  
194 activities, technical specifications and standards relevant for the respective  
195 policy objectives and topic areas, but there is no systematic search. The  
196 Rolling Plan has been written down on the basis of input from the EU  
197 Services and from the EU ICT Standardisation Multi-Stakeholder Platform<sup>2</sup>,

198 The Rolling Plan is regularly reviewed in a collaborative process with the  
199 MSP and, on an annual or by-need basis, updated by the Commission.  
200 Activities that are missing may be notified to the European Commission  
201 which holds the secretariat of the ICT Multi-Stakeholder Platform, at [ec-ict-std-rolling-plan@ec.europa.eu](mailto:ec-ict-std-rolling-plan@ec.europa.eu).  
202

203 The Rolling Plan complements the **Annual Union Work Programme for**  
204 **European Standardisation** in the field of ICT.

205 The Rolling Plan is addressed to public authorities but also to those involved  
206 in standardisation activities and interested parties in general. It provides  
207 transparency on the policy actions in the area of standardisation and,  
208 therefore, also serves as a source of information for all stakeholders who  
209 may take up work items to contribute to the objectives outlined in the  
210 Rolling Plan. It is a guidance document without legal status.

211 The Rolling Plan is endorsed by the European Commission, after discussion  
212 with, and on the basis of the advice of the MSP.

213

#### 214 **1.4. Instruments of EU Policy Making**

215 The Rolling Plan covers the broad spectrum of policy instruments where  
216 policy makers, mostly the European Commission, may use ICT  
217 standardisation in support of EU policy priorities, i.e. it covers any technical  
218 or organisational activity related to ICT standardisation that can support  
219 policy and legislation.

220

221 As further outlined below the European Commission has different options  
222 for making use of standards and technical specifications or triggering

---

6 <sup>2</sup> Decision of 28 November 2011 setting up the European multi-stakeholder platform on ICT  
7 standardisation (2011/C 349/04) [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:349:0004:0006:EN:PDF)  
8 [uri=OJ:C:2011:349:0004:0006:EN:PDF](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:349:0004:0006:EN:PDF)

9



223 activities around standardisation. These options also depend on the level of  
224 policy making.

225 The focus of the Rolling Plan is on the role of ICT standards in supporting  
226 policies, and it may reference or complement the New Approach and New  
227 Legislative Framework. Under these processes, standards may be referenced  
228 in support of legislation, i.e. in the context of EU Regulations or Directives.  
229 Harmonised European Standards (hEN) may be used to demonstrate  
230 compliance with so-called essential requirements, and thus enable products  
231 to be placed on the European market. Standardisation requirements in  
232 respect of these issues are covered in the Annual Union Work Programme,  
233 and will be the subject of mandates.

234 Standards may be used in support of industrial or innovation policy, e.g. for  
235 driving interoperability and the uptake of new technologies. The Rolling  
236 Plan addresses specific technology areas which have been identified as  
237 policy priorities and explores the role which standards and technical  
238 specifications can play in achieving the policy objectives.

239 Standards can also play a role in EU funded Research and Innovation (R&I)  
240 projects, most notably in the context of the EU Framework Programmes for  
241 R&I. The impact of standards on R&I may be on different levels: R&I  
242 projects may contribute to standardisation work; standardisation may be a  
243 tool for adopting and exploiting new technologies; and standardisation may  
244 contribute input to R&I work or R&I activities may build on standardisation  
245 work that is available or in progress. Thus some topic areas addressed in  
246 Rolling Plan may be identified by Commission as areas with relevance for  
247 R&I and taken up in the context of the EU R&I Framework Programme.

248 Finally, standards take an important role in relation to government internal  
249 policies, i.e. such areas, where governments identify procedures for internal  
250 information exchange, infrastructure and systems design. These policies may  
251 also be addressed on A2A (administration to administration), A2B  
252 (administration to business) and A2C (administration to citizen) issues.

253 Closely linked and often a consequence resulting from government internal  
254 policies is public procurement. Where standards and common technical  
255 specifications have been identified as important in government internal  
256 policies, public procurement will –and should– reference these standards and  
257 common technical specifications in the respective calls for tenders when  
258 acquiring technologies that are needed to implement the respective policies.  
259 In other words: policy making often precedes public procurement, and thus  
260 the selection of standards and common technical specifications in policy  
261 contexts precedes the referencing of the respective standards in public  
262 procurement.

263

## 264 **1.5. The relation between the Annual Union Work Programme on European** 265 **standardisation and the Rolling Plan for ICT standardisation**

266 The European Commission formally adopts an Annual Union Work  
267 Programme (AUWP) which covers strategic priorities for European  
268 standardisation across all sectors. The AUWP primarily addresses the work  
269 where the Commission intends to request European standards and European

270 standardisation deliverables from the ESOs. It also includes objectives for  
271 the international dimension of European standardisation, in support of Union  
272 legislation and policies. It is drafted in consultation with the Member States,  
273 ESOs and stakeholder organisations. The AUWP is addressed to the other  
274 Institutions, the ESOs and the public at large. While the AUWP does include  
275 topic areas from the ICT sector, it contains limited detail and focuses on  
276 those actions where EU mandates are or may be involved.

277 The Rolling Plan complements the AUWP. The Rolling Plan is exclusively  
278 addressed to ICT standardisation. It covers a broader spectrum and identifies  
279 in greater detail the topic areas where ICT standards and technical  
280 specifications could help achieve policy objectives including through  
281 complementary interoperability testing and awareness actions to ensure the  
282 effective uptake and implementation of those standards. Recommendations  
283 for actions may not only refer to the use of standards and technical  
284 specifications or the initiation of standardisation activities, but may also  
285 include the development of guidelines, reports and supporting activities.

286 The Rolling Plan goes well beyond the items listed in the AUWP. The  
287 Rolling Plan sets out in detail the policy framework with relevance to ICT  
288 standardisation for the benefit of all interested parties in the ICT area. Topic  
289 areas that are addressed in the AUWP are also listed in the Rolling Plan if  
290 the policy relevance and the suggestions for actions go beyond the work  
291 referenced in the AUWP.

292

## 293 **1.6. EU Policy Priorities**

294 The Rolling Plan is a tool for the European Commission to collect all  
295 standardisation needs to support EU policies. To this end, the Commission  
296 services contribute to the Rolling Plan indicating the policy areas where they  
297 need primary support from ICT standardisation and set the priorities.

298 Since policy making is a process, the policy requirements reflected in the  
299 Rolling Plan address at a given time different stages of this process.  
300 Therefore, a full spectrum of ICT standardisation needs can be considered  
301 from preliminary guidance useful for initial policy conception to  
302 development of specific standards to support policies fully in place.

303

## 304 **1.7. Pan-European consistency**

### 305 *1.7.1. EU Member States and EFTA Countries*

306 The EU Member States as well as the EFTA countries associated with  
307 European standardisation participate in the development of the Rolling Plan.  
308 They are members of the MSP. For the Rolling Plan they bring in their  
309 respective national interests, e.g. in the form of national strategy papers,  
310 standards lists, standardisation work programmes or interoperability  
311 frameworks.

312 The objective of the Rolling Plan in this respect is to integrate the different  
313 approaches, interests and policy objectives and to bridge between the various  
314 approaches and interests. The Rolling Plan is informative and not  
315 prescriptive in any way. The Rolling Plan may identify overlaps with policy

316 objectives on the side of some of the Member States and EFTA countries. It  
317 also contains suggestions for new or further activities or policy needs as seen  
318 by Member States and EFTA countries. Overall, the Rolling Plan aims at  
319 facilitating pan-European consistency on ICT standardisation by providing  
320 the necessary information and linkage.

#### 321 *1.7.2. Broad Stakeholder input*

322 The Rolling Plan is based and integrates broad stakeholder input on ICT  
323 standardisation topics and strategies. All stakeholders represented in the  
324 MSP provide regular input and feedback and thus contribute to the  
325 development of a concise picture on ongoing standardisation activities as  
326 well as on standardisation needs and market and policy needs in general.

327 The Rolling Plan does not claim to be comprehensive or complete. It  
328 provides a perspective at a given point in time and subject to the  
329 contributions received and integrated.

330

### 331 **1.8. Development and Maintenance of the Rolling Plan**

332 The Rolling Plan is developed by the European Commission, in a  
333 collaborative process with the MSP, based on various inputs from the  
334 European Commission services which provides new actions and updates on  
335 standardisation needs. The Commission identifies EU policy objectives and  
336 priorities as well as ways where ICT standardisation can support the  
337 implementation of the respective policies.

338 The MSP provides comments and derives recommendations, compiling its  
339 **advice** in a consolidated draft.

340 Once finalised, the Rolling Plan is endorsed by the European Commission  
341 and made public.

342 The Rolling Plan is regularly reviewed and updated by the Commission in  
343 collaboration with the MSP, at least once a year, following a similar process.

344

### 345 **1.9. Instruments for implementation of the Rolling Plan**

#### 346 *1.9.1. General aspects*

347 The Rolling Plan aims to provide a concise picture of the plans and needs in  
348 ICT standardisation in the context of EU policy making.

349 This information is intended for all stakeholders involved in ICT  
350 standardisation. This way, the ESOs and any other standards development  
351 organisation are given an overview on standardisation needs and the  
352 possibilities to contribute to the work.

353 This high level of transparency is an opportunity to encourage collaborative  
354 work among all these standards development organizations, which can  
355 coordinate in the MSP.

#### 356 *1.9.2. Financial instruments*

357 The Commission supports the voluntary work by stakeholders concerning  
358 standardisation with the following tools:

- 359 (1) Standardisation budget. The ESOs have a privileged link with the  
360 Commission to apply for action grants, in particular to develop  
361 standards and European standardisation deliverables in support to  
362 mandated work, but also to develop standards and other European  
363 standardisation deliverables in support of EU policies. For ICT  
364 standardisation, ESOs can act as coordinator involving different  
365 global standards development organisations and including their work.
- 366 (2) Research budget. Standardisation organizations and other bodies can  
367 apply to EU-financed research programmes in accordance to the rules  
368 of the different available calls for proposals. The Commission  
369 encourages research projects to feed their results into the  
370 standardisation process. Therefore, activities in support of  
371 standardisation can be funded via research budget. Coordination and  
372 support actions may also provide support to standardisation activities.  
373

374 **2. PROMOTING THE IMPLEMENTATION OF STANDARDS**

375 **2.1. The use of standardisation in support of policy making**

376 An important objective of this Rolling Plan is to create awareness of the  
377 importance of standards in the context of policy making and to promote the  
378 use and uptake of standards in general in order to increase ICT  
379 interoperability in those areas that were identified as policy priorities. To this  
380 end, the Rolling Plan may look at the full spectrum of available instruments  
381 for promoting awareness about standardisation and standards; for identifying  
382 standards and kicking off new activities in ICT standardisation; and for  
383 making use of standardisation, standards and technical specifications in  
384 policies. International cooperation regarding ICT standardisation may also  
385 be addressed.

386 The proposed actions around standardisation in this Rolling Plan may,  
387 therefore, directly address public authorities, but they may also be directed  
388 to the various stakeholders suggesting some activities which are considered  
389 important in the context of specific policy making and of promoting the  
390 uptake and implementation of standards.

391 In some instances standardisation or the availability of standards can be  
392 helpful or even a precondition to implement a policy or a piece of  
393 legislation. Standards and technical specifications in ICT ensure  
394 interoperability and promote open ICT ecosystems. Standardisation may,  
395 therefore, play an important role in promoting the uptake of new  
396 technologies or the transformation of technologies and systems into new,  
397 innovative complex systems including ICT technologies and combining  
398 them with other technologies and technology layers. In this respect, the  
399 availability of a standard or technical specification may also facilitate  
400 legislation enforcement and allow the target users to actually implement the  
401 policy.

402 Once standardisation activities or specific standards or technical  
403 specifications have been identified as needed in support of a policy or  
404 legislation, it is, however, important that the respective activities or  
405 standards are well known and get broadly accepted, used and implemented.  
406 Different instruments can be pursued in promotion of the uptake of  
407 standards. Some of these instruments are generic, i.e. independent of the  
408 standard concerned. Examples are guidance of public procurement on how  
409 to ask for standards in general; or conferences to raise awareness on the  
410 importance of ICT standards. It may also be important that the respective  
411 policy contexts in which specific standards are to be used are highlighted,  
412 best with broad stakeholder involvement, and awareness is raised on the  
413 importance, benefit and need of using the standards within the policy  
414 contexts.

415 In general, adoption instruments can be classified according to the nature of  
416 the instruments (communication/education or mandating/comply or  
417 explain/procurement) or to the development phase of the standard  
418 (preliminary, creation, drafting, adoption).

419 Of course, not all instruments are available for all stakeholders and not  
420 relevant in all phases of policy making. Obliging standards by law is, for  
421 example, only possible for public authorities and only when it concerns an

422 international, European or national standard. Providing free and easy insight  
423 in the specifications documents is up to the standard development  
424 organisation (SDO) concerned and is relevant in all development phases of a  
425 standard.

426 In the next sections, instruments that are general in nature are mentioned.  
427 Gearing the instruments to the standard involved is up to the specific stake  
428 holder(s) who want to have a standard adopted and out of scope of this  
429 Rolling Plan

## 430 **2.2. Public procurement**

431 Governments can promote the uptake and implementation of standards and  
432 specifications via public procurement.

433 The Rolling Plan moreover builds on the possibility to have relevant global  
434 ICT technical specifications available for use in Europe. The Regulation on  
435 European Standardisation 1025/2012, which came into force in January  
436 2013, now offers the possibility to identify certain relevant ICT  
437 specifications, primarily to enable interoperability, under conditions defined  
438 in Articles 13 and 14. Identified ICT technical specifications get the status of  
439 common technical specifications and may be referenced by public procurers.  
440 The European Commission draws on this possibility with the "Guide for the  
441 procurement of standards-based ICT — Elements of Good Practice"  
442 (COM(2013) 455 and SWD(2013) 224). The Rolling Plan supports this  
443 Guide by identifying available standardisation activities, standards and  
444 technical specifications in areas with policy relevance.

445 This may allow formal identification of various consortia standards that are  
446 in practical use at present by various Member States. Several Member States  
447 use lists with standards that can be used by public authorities in their public  
448 procurement. Some Member States use instruments to help procurement  
449 specialists requiring standards. E.g. the Netherlands have made  
450 procurements text (general and per standard) to help procurement specialists  
451 to ask for standards in a way that is in line with Dutch policy. Other Member  
452 States have similar activities in place.

453 With the "Guide for the procurement of standards-based ICT – Elements of  
454 Good Practice" the European Commission also promotes the sharing of best  
455 practices among public authorities in order to diminish lock-in.

## 456 **2.3. Research and Innovation**

457 Research is a rich potential source of new standards or standards  
458 components as well as for applying available standards in advanced  
459 technology contexts. The new knowledge resulting from publicly funded  
460 research and innovation programmes can be included in new or improved  
461 standards, contributing both to the implementation of the research outcomes  
462 and the usage of standards. Similarly, historically, many European ICT  
463 research projects under EU R&D Framework Programmes utilise standards  
464 in their design and execution.

465 Initiatives to link ICT standardisation and ICT R&I appear to be most  
466 effective when carried out already at the research planning stage.  
467 Standardisation awareness thus needs to be considered early in the research  
468 life cycle. Standardisation bodies have partially set up links into research

469 activities for facilitating the uptake of standardisation deliverables in  
470 research projects as well as the transfer of research results into  
471 standardisation. Research Support Actions can also contribute to support  
472 standardisation activities, liaison between R&I projects and standardisation  
473 organisations, awareness and international cooperation.

474 Similar programmes have been set up addressing in particular innovative  
475 SMEs. The objectives are to promote the use and implementation of  
476 standards with SMEs but also to encourage and facilitate the participation of  
477 SMEs in the standardisation processes. Failing to support innovative SMEs  
478 in the ICT industry in their efforts to influence standards could seriously  
479 restrict the market impact of these SMEs, and their long-term growth  
480 prospects.

#### 481 **2.4. Testing and quality improvement in standards**

482 If standards are to be successful in terms of widespread deployment, it is  
483 necessary to ensure that there are products implementing them and that they  
484 are truly interoperable.

485 Therefore, one of the main aims of European and global standardisation is to  
486 enable interoperability in a multi-vendor, multi-network, multi-service  
487 environment. Interoperability gives users a much greater choice of products,  
488 and enables manufacturers to benefit from the economies of scale of a wider  
489 market. There is a broad stakeholder demand in the marketplace to ensure  
490 interoperability.

491 Validation of standards and products through open interoperability events is  
492 an example of how to achieve this in a pragmatic and efficient manner.  
493 Organizing such events in the earlier phases of the development of standards  
494 can give an assurance of a level of quality and facilitates the development of  
495 commonly agreed standardised solutions.

496 Interoperability testing leads not only to better products but to better  
497 standards, suited to users' needs and gives stakeholders confidence to  
498 implement standards and to release products in a timely manner.

499 Ongoing relevant activities are:

- 500 – Standards bodies, governments and other organisations regularly organise  
501 interoperability events, e.g. in the form of plug tests, plug fests, etc. One  
502 example is, for instance, the ETSI "Plugtests<sup>TM</sup> events". Typically these  
503 interoperability events gather different vendors (often competitors) in  
504 order to check whether their products properly implement standards and  
505 are interoperable between them. This approach has proven to be a  
506 practical way to boost interoperability further to the development of  
507 standards, and has been applied with some success to standards and  
508 specifications issued by other organisations, including formal standards  
509 bodies as well as industry consortia.
- 510 – Some fora and consortia also have internal interoperability and  
511 conformance testing requirements applied to specifications as a quality  
512 control matter prior to their finalisation as standards.

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## 2.5. New actions

In summary, new standardisation related initiatives to further support the effective take up and implementation of standards in the priority domains identified by the Rolling Plan could cover:

- awareness, promotion, conferences, information and education, paying particular attention to the cooperation with R&I and SMEs involvement
- implementation of field operational tests, pilot projects and interoperability testing
- exchange of good practice between Member States and between Standardisation Organizations, including international cooperation
- guidelines for procurers on how to mention standards
- monitoring the use of standards in IT systems and in IT procurement. Monitoring is an effective way to get insight in the adoption of a standard and makes it possible for standards users to learn from each other (higher ranking countries/organisations could teach others how to get a standard adopted)
- hotline for helping procurers to respect standardisation policy and to report bad practice
- Suppliers manifest. Encouraging major IT suppliers to issue a voluntary manifest promising to implement selected standards in their products.



534 **3. EU POLICY AREAS SUPPORTED BY ICT STANDARDISATION**

535 **3.1. Listing and structuring EU policy areas**

536 The topics listed in this chapter are policy priorities where standardisation plays a  
 537 role in the implementation of the respective policy. The topics were identified by  
 538 the European Commission and reviewed with the MSP. The topic areas are  
 539 grouped into four clusters and within the clusters each topic area is covered in a  
 540 separate sub-section. All topic areas are presented in the same structure as  
 541 outlined below.

542 The policy areas are grouped in four **clusters**:

<p><b>Societal Challenges</b></p> <ul style="list-style-type: none"> <li>- eHealth</li> <li>- Web Accessibility</li> <li>- Accessibility of ICT products and services</li> <li>- e-Skills and e-Learning</li> <li>- Emergency communications</li> <li>- eCall</li> <li>- Digital Cinema</li> </ul>	<p><b>Innovation for the digital single market</b></p> <ul style="list-style-type: none"> <li>- e-Procurement, Pre and Post award</li> <li>- e-Invoicing</li> <li>- Card, Mobile and Internet Payments</li> <li>- XBRL</li> <li>- Online Dispute Resolution (ODR)</li> </ul>
<p><b>Sustainable growth</b></p> <ul style="list-style-type: none"> <li>- Smart Grids and Smart Metering</li> <li>- Technologies and Services for a Smart and Efficient Energy Use</li> <li>- ICT Environmental Impact</li> <li>- EETS (European Electronic Toll Service)</li> <li>- Intelligent Transport Systems</li> </ul>	<p><b>Key enablers and security</b></p> <ul style="list-style-type: none"> <li>- Cloud computing</li> <li>- (Open) Data</li> <li>- eGovernment:             <ul style="list-style-type: none"> <li>= DCAT Application profile for data portals in Europe</li> <li>= Metadata on re-usable interoperability assets among national and international repositories</li> <li>= Core Concepts to facilitate the development of interoperable IT solutions</li> </ul> </li> <li>- Electronic identification and trust services including e-signatures</li> <li>- RFID</li> <li>- Internet of Things</li> <li>- Network and Information Security</li> <li>- ePrivacy</li> </ul>

543

544 For all topic areas below the same structure has been chosen to represent both the  
 545 rationale for proposing the topic area as policy priority as well as the input related  
 546 to standardisation and standards. The template used for this structure is as  
 547 follows:

548

549 **(1.) Policy area title and description**

550 **(2.) Legislation and policy documents**

551 *(2.1) European legislation and policy documents*

552 *(2.2) Additional information on legal documents in Member States if available*

553 **(3.) Member States and Stakeholder input on policy context**

554 *(3.1) Input from Member States*

555 *(3.2) Input from other Stakeholders*

556 **(4.) Standardisation needs to implement the legislation and policy**

557 *(4.1) Commission perspective*

558 *(4.2) Member States and Stakeholder perspective*

559 **(5.) Related ongoing standardisation and research activities**

560 *(5.1) At European level*

561 *(5.2) Other relevant work*

562 **(6.) Proposed new standardisation activities**

563 *(6.1) Proposed standards developments*

564 *(6.2) Proposed other activities around standardisation*

565

566 The above template has been applied for all policy areas below structuring the  
567 information in an identical way. If for some line items of the template no specific further  
568 information was required to be listed in addition to what is already well known and  
569 available the following phrases are inserted: “For information available in the Member  
570 States please see the documents listed in Annex I to this Rolling Plan. There is no  
571 additional information at this point in time for this Rolling Plan.” and “No specific or  
572 additional input to this Rolling Plan”, respectively.

573

574 In general, the information which is given in the following sections on each policy  
575 reflects the current status of technologies available or in progress as well as the current  
576 understanding of the policy needs.

577

578 This Rolling Plan does not claim completeness. The information provided by the  
579 stakeholders is the one which has explicitly been submitted to this Rolling Plan. Much  
580 more information may be available and many more activities may be going on in  
581 different stakeholder organisations or within Member States.

582

583 It is expected that the various organizations continue to refine their understanding of  
584 what work is relevant to which policy areas. Various stakeholders also maintain websites  
585 with up-to-date information about their activities - including in relation to the policy  
586 areas. The reader is advised to also refer to those web pages for the most up to date  
587 information.

588 **3.2. Societal challenges**

589 *3.2.1. eHealth*

590 **(1.) Policy area title and description**

591 Information and Communication Technologies (ICT) applied to health and  
592 healthcare systems can increase their efficiency, improve quality of life and  
593 unlock innovation in health markets. However, this promise remains largely  
594 unfulfilled. The European Commission has been developing targeted policy  
595 initiatives aimed at fostering widespread adoption of eHealth throughout the EU.  
596 Member States have dynamically responded by demonstrating a high level of  
597 commitment to the eHealth policy agenda, notably through their participation in  
598 major large scale pilot projects such as epSOS. The adoption in 2011 of the  
599 Directive on the Application of Patients' Rights in Cross Border Healthcare and  
600 its Article 14 establishing the eHealth Network, marked a further step towards  
601 formal cooperation on eHealth, with the aim to maximise social and economic  
602 benefits through interoperability and the implementation of eHealth systems.

603 Notwithstanding this substantial progress, barriers continue to exist that need to  
604 be addressed in order to reap all the benefits from a fully mature and  
605 interoperable eHealth system in Europe. One of them is the lack of  
606 interoperability between eHealth solutions and the rather poor adoption of  
607 standards in eHealth systems.

608 **(2.) Legislation and policy documents**

609 *(2.1) European legislation and policy documents*

610 Directive 2011/24 on patients' rights in cross border care

611 COM(2010) 245: "A Digital Agenda for Europe", actions 76, 77 and 78.

612 SWD(2012) 413 final - eHealth Action Plan 2012-2020 - Innovative healthcare  
613 for the 21st century.

614

615 *(2.2) Additional information on legal documents in Member States if available*

616 Directory for eHealth policies, World Health Organisation,  
617 <http://www.who.int/goe/policies/en>

618 **Extract from 'ICT Strategy of the German Federal Government: Digital**  
619 **Germany 2015'** (TFRP011\_DE\_ict-strategy-digital-germany-2015.pdf). Measure  
620 listed on page 29 for eHealth are 'Preparing an e-health implementation strategy  
621 (packages of measures) in 2011 and starting implementation in 2012' and  
622 'Implementation of the measures, The Smart Home - process optimisation, short  
623 distances, debureaucratisation'.

624 **Extract from 'ICT for Everyone - A Digital Agenda for Sweden'**  
625 (TFRP037\_SV\_ICT\_for\_Everyone-ADigitalAgendaForSweden.pdf). National  
626 efforts in eHealth are focused on creating visible and practical improvements to  
627 three main target groups: the individual, health care and social services personnel  
628 and decision-makers in the health and social services. Government action is being  
629 undertaken together with a broad group of national organisations through  
630 "National eHealth - the strategy for accessible and secure information in  
631 healthcare". A broad range of initiatives have been taken as part of these efforts.  
632 The work is now focused on delivering the beneficial effects of various e-health

633 services, delivering more personal e-services for the whole population, increased  
634 coordination and development of eHealth in municipal health care and social  
635 services and increased interaction with related national and international reform  
636 processes and initiatives.

637 **Extract from 'Strategy of the Federal Council for an Information Society in**  
638 **Switzerland'** (TFRP010\_CH\_e\_Strategie Informationsgesellschaft barrierefrei  
639 mit Ziel-tags.pdf). The Confederation's priorities for action: The Confederation  
640 will continue implementation of the 'eHealth Switzerland' strategy to integrate  
641 ICT into the health care system and to introduce and disseminate electronic  
642 patient records, in close coordination with the cantons and in cooperation with  
643 private partners and international organisations; Personal health records warrant  
644 special data protection. The Confederation ensures the protection of personal  
645 health records and supports the population in exercising their informational self-  
646 determination.

### 647 **(3.) Member States and Stakeholder input on policy context**

#### 648 *(3.1) Input from Member States*

649

650 **The following key aspects should be considered as priorities for work on**  
651 **eHealth:**

652 **1.** The work on components of identity at the European level must be a priority.  
653 For identification data, the position of the eHGI is to try to accommodate the  
654 different identification processes implemented by Member States (specific  
655 identification mechanisms for health purposes or cross sectoral identification  
656 mechanisms);

657 **2:** There is a need to implement standardised data for drug identification. This  
658 point is important because of the necessity "to achieve interoperability of health  
659 services online while respecting for the provision of national health care  
660 legislation in order to protect the patient, including legislation on pharmacies  
661 online, and in particular national bans on mail order of medicinal products subject  
662 to medical prescription,";

663 **3:** Given the evolution of the medical corpus to predictive medicine,  
664 standardisation of data relating to the field of biology and biomarkers is a major  
665 issue that should be put forward. This topic is especially important because  
666 clinical laboratories are subject to a process of accreditation according to ISO  
667 15189 that should be supplemented by standardisation processes in ICT;

668 **4** Given the challenge of the aging population, the standardisation work must also  
669 take into account aspects of personal services dedicated to the autonomy  
670 including ICT solutions in order to promote secure and harmonised solutions at  
671 the European level.

672 All the standardisation work on e-health should ensure a high level of privacy  
673 protection and of security.

674 Last, one aspect could be added, about interoperability of medical devices, to  
675 enable plug-and-play connectivity of devices and services for personal health  
676 management and healthcare delivery. This aspect is currently handled by the US  
677 initiative Continua Health Alliance. It might be interesting for the EU to take up  
678 this subject through the ESOs.

679 In general, the aspect of healthy aging should also be taken into consideration in  
680 the context of eHealth and the proposed work items.

681 *(3.2) Input from other Stakeholders*

682 No specific or additional input to this Rolling Plan.

683 **(4.) Standardisation needs to implement the legislation and policy**

684 *(4.1) Commission perspective*

685 Interoperability of ICT-enabled solutions and of data exchange is the precondition  
686 for better coordination and integration across the entire chain of healthcare  
687 delivery and health data exchange, while unlocking the EU eHealth single market.

688 The use of European and international standards is a way to ensuring the  
689 interoperability of ICT solutions in general. In eHealth however, such standards  
690 are often not specific enough. With the advice of the eHealth Network, more  
691 detailed specifications, which could be used for public procurement, will be  
692 identified in the framework of the new EU standardisation regulation,  
693 contributing to the technical and semantic levels of the eHealth Interoperability  
694 Framework

695 In addition to European and international standards and specifications,  
696 interoperability testing, labelling and certification processes are also essential.  
697 Several projects are successfully testing and implementing standards, open and  
698 secure architecture, clinical workflows and subsets of terminologies as well as  
699 making policy recommendations, to prepare the deployment of eHealth services  
700 on a large scale.

701 It is proposed to boost interoperability by further developing and validating  
702 specifications and components, also through the launch of standardisation  
703 mandates, if deemed necessary.

704 *(4.2) Member States and Stakeholder perspective*

705 No specific or additional input for this version

706 **(5.) Related ongoing standardisation and research activities**

707 *(5.1) At European level*

- 708 – epSOS – European Patient Smart Open Services<sup>3</sup>
- 709 – SemantichHealthNet – Network of excellence in semantic interoperability<sup>4</sup>
- 710 – Antilope project - Adoption and take up of standards and profiles for eHealth  
711 Interoperability
- 712 – Salus project - Scalable, Standard based Interoperability Framework for  
713 Sustainable Pro-active Post Market Safety Studies.
- 714 – Transform project – Translational Research and Patient Safety in Europe.
- 715 – eHealth Governance Initiative – SEHGOVIA - Supporting the European eHealth  
716 Governance Initiative and Action
- 717 – Eureka - Enabling information re-Use by linking clinical REsearch and Care.

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10 <sup>3</sup> [www.epsos.eu](http://www.epsos.eu)

11 <sup>4</sup> [www.semantichhealthnet.eu](http://www.semantichhealthnet.eu)

- 718 – Linked2Safety - A next-generation, secure linked data medical information space  
719 for semantically-interconnecting electronic health records and clinical trials  
720 systems advancing patients safety in clinical research.
- 721 – CEN Technical Committee 251 – Health Informatics: providing a focal point for  
722 standards in this domain, in close collaboration with ISO TC215
- 723 – ETSI TC MBAN is addressing telemedicine and new work on Smart Body Area  
724 Networks Efforts are being made to develop standards for a dedicated radio  
725 technology for Smart Body Area Networks. ETSI is looking to drive innovation  
726 in diverse areas, such as improving quality of life through eHealth in the HITCH  
727 project and Smart Personal Health (SPH).
- 728 – JIC - Joint Initiative on SDO Global Health Informatics standardisation
- 729 – PONTE project - Efficient Patient Recruitment for Innovative Clinical Trials of  
730 Existing Drugs to other Indications
- 731 – eHR4CR project – IMI project with a focus on the use of electronic Health  
732 Records for Clinical Research
- 733 – European Innovation Partnership on Active and Healthy Ageing. Action Plan B3  
734 Integrated Care<sup>5</sup>; Action plan C2 Independent Living<sup>6</sup>.

735 *(5.2) Other relevant work*

736 IEEE has many standards in the eHealth technology area, from body area  
737 networks to 3D modeling of medical data and personal health device  
738 communications. Another area is the IEEE 11073™ family of standards which is  
739 a group of standards under Health Informatics/Personal Health Device  
740 Communication, for data interoperability and architecture. IEEE 11073 standards  
741 are designed to help healthcare product vendors and integrators create devices and  
742 systems for disease management, health and fitness and independent living that  
743 can help save lives and improve quality of life for people worldwide. For more  
744 information about IEEE eHealth activities please see  
745 <http://standards.ieee.org/develop/msp/ehealth.pdf>.

746 **(6.) Proposed new standardisation activities**

747 *(6.1) Proposed standards developments*

748 Use case based approach to develop patient summaries and subsets of ontology's  
749 in a specific clinical context.

750 Use case based approach to develop standardised processes in a specific clinical  
751 context.

752 Use case based approach to develop technical and semantic specifications for  
753 eHealth Systems, especially cross border.

754

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12 <sup>5</sup> European Innovation Partnership on Active and Healthy Ageing, Action Plan B3 Integrated Care <  
13 [http://ec.europa.eu/research/innovation-union/pdf/active-healthy-  
ageing/b3\\_action\\_plan.pdf#view=fit&pagemode=none](http://ec.europa.eu/research/innovation-union/pdf/active-healthy-<br/>14 ageing/b3_action_plan.pdf#view=fit&pagemode=none)>

15 <sup>6</sup> European Innovation Partnership on Active and Healthy Ageing, Action Plan C2 Independent  
16 Living [[http://ec.europa.eu/research/innovationunion/pdf/activehealthyageing/c2\\_action\\_plan.pdf](http://ec.europa.eu/research/innovationunion/pdf/activehealthyageing/c2_action_plan.pdf)]

755 (6.2) *Proposed other activities around standardisation*

756           Ensure the right mechanisms are in place for collaboration and coherence on  
757           eHealth standardisation issues at European level.

759 **(1.) Policy area title and description**

760 Accessibility of ICT products and services

761 This policy area covers accessibility of ICT products and services, it includes  
762 telecommunications, TV and Broadcasting, web accessibility and new emerging  
763 technologies both from the mainstream side and the assistive technology side.

764 This area is related to the EU implementation of the UN Convention on the  
765 Rights of persons with Disabilities<sup>7</sup> to which the EU and 25 Member States are a  
766 party and the remaining have signed it and express their intention to ratify.

767 The Commission adopted the European Disability strategy 2010-2020<sup>8</sup> with the  
768 aim of supporting the implementation of the Convention in the EU. According  
769 REGULATION (EU) No 1025/2012<sup>9</sup>

770 *“(24) The European standardisation system should also fully take into account  
771 the United Nations Convention on the Rights of Persons with Disabilities<sup>7</sup>. It is  
772 therefore important that organisations representing the interests of consumers  
773 sufficiently represent and include the interests of people with disabilities. In  
774 addition, the participation of people with disabilities in the standardisation  
775 process should be facilitated by all available means”.*

776 **(2.) Legislation and policy documents**777 *(2.1) European legislation and policy documents*

778 The Commission announced in the Work programme for 2012<sup>10</sup>, Annex I<sup>11</sup>, under  
779 item 99 the preparation of the European Accessibility Act<sup>12</sup> to improve the  
780 functioning of the internal market of accessible goods and services. One of the  
781 areas under examination to be covered is the area of ICT goods and services.

782 Accessibility of ICT is related to the following documents:

783 (1) the Commission’s eGovernment Action Plan 2011-2015<sup>13</sup> to develop  
784 eGovernment services that ensure inclusiveness and accessibility,785 (2) the Disability Strategy 2010-2020<sup>14</sup>, and

17 <sup>7</sup> See <http://www.un.org/disabilities/convention/conventionfull.shtml> or  
18 <http://www.un.org/disabilities/default.asp?navid=14&pid=150>

19 <sup>8</sup> See [http://ec.europa.eu/justice/discrimination/disabilities/disability-strategy/index\\_en.htm](http://ec.europa.eu/justice/discrimination/disabilities/disability-strategy/index_en.htm)

20 <sup>9</sup> See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:316:0012:0033:EN:PDF> or  
21 <http://ec.europa.eu/enterprise/policies/european-standards/standardisation-policy/#h2-1>

22 <sup>10</sup> [http://ec.europa.eu/atwork/key-documents/index\\_en.htm](http://ec.europa.eu/atwork/key-documents/index_en.htm)

23 <sup>11</sup> [http://ec.europa.eu/atwork/pdf/cwp2012\\_annex\\_en.pdf](http://ec.europa.eu/atwork/pdf/cwp2012_annex_en.pdf), item 99: European Accessibility Act:  
24 improving accessibility of goods and services in the Internal Market

25 <sup>12</sup> Public consultation from 12 December 2011 to 29 February 2012, consultation document on  
26 [http://ec.europa.eu/justice/discrimination/files/2011-12-13\\_consultation\\_background\\_document.pdf](http://ec.europa.eu/justice/discrimination/files/2011-12-13_consultation_background_document.pdf),  
27 the EU commission is expected to publish a proposal in 2013

28 <sup>13</sup> <https://ec.europa.eu/digital-agenda/en/european-egovernment-action-plan-2011-2015>

29 <sup>14</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0636:FIN:EN:PDF>



786 (3) the ratification of the UN Convention on the Rights of Persons with  
787 Disabilities (UN CRPD)<sup>7</sup>.

788 The UN Convention establishes accessibility as one of its general principles,  
789 which also applies to ICT and systems, including Internet and electronic services,  
790 and requires the State Parties to take the necessary measures to ensure to persons  
791 with disabilities access on an equal basis with others. According to the UN CRPD  
792 this includes measures related to all services open or provided to the public.

793 *(2.2) Additional information on legal documents in Member States if available*

794 For information available in the Member States please see the documents listed in  
795 Annex I to this Rolling Plan. There is no additional information at this point in time  
796 for this Rolling Plan.

### 797 **(3.) Member States and Stakeholder input on policy context**

798 *(3.1) Input from Member States*

799 For information available in the Member States please see the documents listed in  
800 Annex I to this Rolling Plan. There is no additional information at this point in  
801 time for this Rolling Plan.

802 *(3.2) Input from other Stakeholders*

803 No specific or additional input to this Rolling Plan.

### 804 **(4.) Standardisation needs to implement the legislation and policy**

805 *(4.1) Commission perspective*

806 Standardisation needs are twofold:

807 First, the UN Convention requires in Article 9 the development of accessibility  
808 standards and in the general obligations the promotion of universal design in the  
809 development of standards. Work on this area needs to advance at European level  
810 to increase market coherence.

811 Second, accessibility standards might be needed to support the European  
812 Accessibility Act.

813 *(4.2) Member States and Stakeholder perspective*

814 *General*

815 Accessibility needs to be reflected in ICT and many other areas (like emergency  
816 communication, digital cinema, health, public transport, learning) both for users  
817 with disabilities in the general public and for staff/entrepreneurs with disabilities  
818 in the industry or public administration. As a consequence, accessibility should  
819 ideally be mentioned in all relevant policy areas. As an example, a specific  
820 measure was taken in the revision of the Public Procurement Directive<sup>15</sup> in Article  
821 40.1 (see also clause 3.3.1 eProcurement of the present document):

822 *The technical specifications as defined in point 1 of Annex VIII shall be set out in*  
823 *the procurement documents. They shall define the characteristics required of a*  
824 *works, service or supply. These characteristics may also refer to the specific*  
825 *process of production or provision of the requested works, supplies or services or*  
826 *of any other stage of its life cycle as referred to in point (22) of Article 2. The*  
827 *technical specifications shall also specify whether the transfer of intellectual*

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30 <sup>15</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0896:FIN:EN:HTML>

828 *property rights will be required. For all procurement the subject of which is*  
829 *intended for use by persons, whether general public or staff of the contracting*  
830 *authority, those technical specifications shall, except in duly justified cases, be*  
831 *drawn up so as to take into account accessibility criteria for people with*  
832 *disabilities or design for all users.*

833 Regarding standardisation needs Member States are aligned with the Commission  
834 perspective as characterised above.

835 *List of standardisation actions needed*

836 The list below contains, out of a Member States' and a number of experts'  
837 perspective, potential items to be better addressed in standardisation. This is just  
838 an initial list which is intended to trigger further discussion with all stakeholders:

- 839 • Design of ICT that better addresses the needs of persons with cognitive  
840 and learning disabilities
- 841 • Approaches to addressing the reported intelligibility problems experienced  
842 by some people with hearing impairments when using modern networks and  
843 equipment
- 844 • Mapping of character repertoires on soft, non standard and reduced  
845 keypads
- 846 • User interfaces to enable a consistent user experience for domains like m-  
847 payments.
- 848 • Identification of Mobility needs like the usage of mobile devices by  
849 people with impaired movements
- 850 • Specification of requests for user interface devices including presentation  
851 techniques, it may be for bus tickets, access to social and commercial services,  
852 not only communications systems:
  - 853 o Display requests, in public and private domains
  - 854 o Possible usage of RFID to facilitate access
  - 855 o Voice recognition for devices control
  - 856 o Audio description for control keys
- 857 • Specification of Communications systems requests
  - 858 o 'total conversation' and 'accessible TV distribution' transmission  
859 needs including how many and which real time voice/audio, video, text,  
860 eventually others synchronized streams are needed to ensure accessibility  
861 features like subtitling, messaging, audio description and sign language for  
862 all citizens
  - 863 o standardisation of broadcasters accessible interfaces to IP (and  
864 other) systems
  - 865 o convergence and interoperability of video relay services
  - 866 o accessible Hybrid TV services
- 867 • Specification of requests for translation among languages

- 868 o voice to text like automation of relay services for telephony and
- 869 capturing/ subtitling TV transmissions
- 870 o interoperability of the most common text transmission techniques
- 871 like IM – SMS- eMail
- 872 o text to voice like in automatic generated audio description
- 873 o text to sign language like in automatic generated sign language

## 874 **(5.) Related ongoing standardisation and research activities**

### 875 *(5.1) At European level*

876 The use of standards in that context is being addressed in Mandate M/376<sup>16</sup>. This  
877 Mandate takes into consideration relevant national and international standards on  
878 accessibility, like those adopted by the US Access Board, W3C WAI and some  
879 related ISO work. The resulting standard EN 301 549<sup>17</sup> is expected to be  
880 published by February 2014.

881

882 Another ongoing standardisation work under Mandate M/473<sup>18</sup> is aimed to  
883 mainstream accessibility in other relevant European standardisation initiatives, as  
884 well as to update a number of standards in priority areas according to Design for  
885 All approach. In addition it requires the development of standards that will  
886 explain to manufacturers and services providers how to include accessibility  
887 following design for all, hence facilitating the implementation of the accessibility  
888 clauses in European standards, which will cover the majority of the  
889 standardisation work mentioned in this Rolling Plan.

890 In response to this mandate, CEN has formed a Strategic Advisory Group on  
891 Accessibility (SAGA), which will consider how to address accessibility  
892 throughout the standardisation process. This group includes representatives of  
893 national standards bodies, CENELEC and ETSI, as well as organisations  
894 representing disabled and older persons.

895 Furthermore, ETSI continues producing accessibility standards on specific ICT  
896 topics and is planning to produce a guide on user-centred terminology for existing  
897 and upcoming devices and services<sup>19</sup> and recommendations for the design of ICT  
898 devices for persons with cognitive disabilities<sup>20</sup>. Initial early investigations are  
899 being undertaken into transmission quality and its possible linkage to reported  
900 intelligibility problems for some hearing impaired people.

901 Finally Mandate 420<sup>21</sup> while focusing on accessibility of the built environment,  
902 might also include ICT that is used in that context

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31 <sup>16</sup> [http://ec.europa.eu/enterprise/standards\\_policy/mandates/database/index.cfm?](http://ec.europa.eu/enterprise/standards_policy/mandates/database/index.cfm?fuseaction=search.detail&id=333#)  
32 [fuseaction=search.detail&id=333#](http://ec.europa.eu/enterprise/standards_policy/mandates/database/index.cfm?fuseaction=search.detail&id=333#)

33 <sup>17</sup> [http://webapp.etsi.org/WorkProgram/Report\\_WorkItem.asp?WKI\\_ID=30873](http://webapp.etsi.org/WorkProgram/Report_WorkItem.asp?WKI_ID=30873)

34 <sup>18</sup> <http://www.etsi.org/images/files/ECMandates/m473.pdf>

35 <sup>19</sup> [http://webapp.etsi.org/WorkProgram/Report\\_WorkItem.asp?WKI\\_ID=35174](http://webapp.etsi.org/WorkProgram/Report_WorkItem.asp?WKI_ID=35174)

36 <sup>20</sup> [http://webapp.etsi.org/WorkProgram/Report\\_WorkItem.asp?WKI\\_ID=37153](http://webapp.etsi.org/WorkProgram/Report_WorkItem.asp?WKI_ID=37153)

37 <sup>21</sup> [http://ec.europa.eu/enterprise/standards\\_policy/mandates/database/index.cfm?](http://ec.europa.eu/enterprise/standards_policy/mandates/database/index.cfm?fuseaction=search.detail&id=392#)  
38 [fuseaction=search.detail&id=392#](http://ec.europa.eu/enterprise/standards_policy/mandates/database/index.cfm?fuseaction=search.detail&id=392#)

903 (5.2) *Other relevant work*

904 Relevant IETF work<sup>22</sup> may be found in the [RAI area](#). For instance [RFC 3551](#)  
905 identifies the requirements for SIP to support the hearing impaired and [RFC4103](#)  
906 defines the RTP payload for text conversation.

907 RFCs [4103](#) and [5194](#) are being referenced in various accessibility regulations  
908 being proposed in the US ([Section 255/508](#)) and EU (e.g. M3768).

909 **(6.) Proposed new standardisation actions**

910 (6.1) *Proposed standards developments*

911 New standardisation actions may build on M/376 and M/473

912 (6.2) *Proposed other activities around standardisation*

913 A broad discussion with stakeholders should be held about the preferred and  
914 adequate procedures around conformity with accessibility standards. Concrete  
915 standardisation activities might result from this discussion.

916 On a more specific level, there have been anecdotal reports that some citizens  
917 with hearing impairments are experiencing increasing intelligibility problems  
918 with modern networks and devices. It has not yet been possible to identify  
919 whether some of these problems are related to factors such as normal age-related  
920 hearing deterioration or to the increasing use of mobile phones in noisy public  
921 environments (such as airports). Further investigation into the potential causes of  
922 the reported problems experienced by hearing impaired people could identify  
923 areas where the standard models for predicting speech quality may need to be  
924 updated. There is an urgent need to better understand how ICT products and  
925 services can be designed to meet the needs of persons with cognitive and learning  
926 disabilities, including many older users, and then to develop and update standards  
927 to ensure that they recommend solutions that are beneficial to this group of users.

928 The preponderance of different names for the same ICT features and functions is  
929 confusing for all people, but this can be a significantly more important problem  
930 for older users or users with learning and cognitive disabilities. This has a  
931 negative impact on individual citizens and on the size of the ICT market. The  
932 development of a guide on user-centred terminology (that would include  
933 accessibility issues) for existing and upcoming devices and services would  
934 provide benefits for all potential users, but would greatly benefit older users and  
935 users with learning and cognitive impairments who are currently partly excluded  
936 from benefitting from the use of modern ICT.

937 In the development of the standard to support Mandate M/376 (EN 301 549),  
938 supporting public procurement of ICT but also usable for other purposes, it has  
939 been necessary to try to define testing procedures that are as objective and  
940 repeatable as possible to ensure that comparative assessment of the ICT offered  
941 by suppliers is as robust as possible. The Mandate M/376 includes also a technical  
942 report on test procedures and award criteria. The development of one or more  
943 standards that include alternative ways of assessing accessibility, such as survey  
944 criteria and associated procedures, could be assessed after the end of Mandate  
945 M/376..

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39 <sup>22</sup> <http://trac.tools.ietf.org/group/iab/trac/wiki/Multi-Stake-Holder-Platform#ICTAccess>

948 **(1.) Policy area title and description**

949 Web Accessibility.

950 Within the area of accessibility this specific policy areas addresses the proposal  
951 for a Directive on the Accessibility of public sector bodies' websites by use of  
952 globally agreed web accessibility guidelines.

953 **(2.) Legislation and policy documents**

954 *(2.1) European legislation and policy documents*

955 Action 64 of the Digital Agenda<sup>23</sup> addressing the full accessibility of public sector  
956 websites by 2015<sup>24</sup>,

957 Proposal for a Directive on the accessibility of public sector bodies' websites –  
958 COM (2012) 721<sup>25</sup>

959 *(2.2) Additional information on legal documents in Member States if available*

960 For information available in the Member States please see the documents listed in  
961 Annex I to this Rolling Plan. There is no additional information at this point in  
962 time for this Rolling Plan.

963 **(3.) Member States and Stakeholder input on policy context**

964 *(3.1) Input from Member States*

965 For information available in the Member States please see the documents listed in  
966 Annex I to this Rolling Plan. There is no additional information at this point in  
967 time for this Rolling Plan.

968 *(3.2) Input from other Stakeholders*

969 Focus should be put on the following requirements and objectives in the area of  
970 web accessibility:

- 971 • Enable and incentive improvement on accessibility and supports continued  
972 innovation.
- 973 • Support a global market place (any fragmentation on meeting user needs  
974 makes accessible products more expensive as accessible requirements are  
975 highly diverse already - international standards are always preferred).
- 976 • Do not restrict new approaches and dedicated, simple or personalised  
977 approaches. Do not restrict the access to the market to non-accessible  
978 products, but instead promote accessible products in ‘public environments’

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40 <sup>23</sup> <http://ec.europa.eu/digital-agenda/digital-agenda-europe> or

41 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0245R>  
42 [%2801%29:EN:NOT](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0245R)

43 <sup>24</sup> [http://ec.europa.eu/digital-agenda/en/pillar-vi-enhancing-digital-literacy-skills-and-inclusion/action-](http://ec.europa.eu/digital-agenda/en/pillar-vi-enhancing-digital-literacy-skills-and-inclusion/action-64-ensure-accessibility-public)  
44 [64-ensure-accessibility-public](http://ec.europa.eu/digital-agenda/en/pillar-vi-enhancing-digital-literacy-skills-and-inclusion/action-64-ensure-accessibility-public)

45 <sup>25</sup> See  
46 [http://ec.europa.eu/digital-agenda/en/news/proposal-directive-european-parliament-and-council-](http://ec.europa.eu/digital-agenda/en/news/proposal-directive-european-parliament-and-council-accessibility-public-sector-bodies-websites)  
47 [accessibility-public-sector-bodies-websites](http://ec.europa.eu/digital-agenda/en/news/proposal-directive-european-parliament-and-council-accessibility-public-sector-bodies-websites) and  
48 <http://ec.europa.eu/digital-agenda/en/web-accessibility>

979 like in the contexts of public procurement or licenses (e.g. Universal or  
980 Mobile Services);

- 981 • Do not apply at either the product or a vendor level but operate at a higher  
982 level or via targeted sectors to move the overall market provision in  
983 meeting accessibility requirements.
- 984 • Do not presume appropriate approaches ahead of research (in particular  
985 cognitive issues but more generally issues are known where users require  
986 alternatives and some areas where technical detail can improve matters)

987 Whatever approach is taken these requirements and objectives should be  
988 observed.

#### 989 **(4.) Standardisation needs to implement the legislation and policy**

##### 990 *(4.1) Commission perspective*

991 The Proposal for a *Directive on the accessibility of public sector bodies' websites*  
992 includes a presumption of conformity for the websites concerned which meet the  
993 relevant harmonised standards. It also states that a harmonised standard to  
994 provide presumption of conformity should be built on the outcome of Mandate  
995 M/376 for accessibility requirements of products and services in the ICT domain  
996 suitable for public procurement purposes.

997 The Commission's proposal also states that a methodology for the monitoring of  
998 the conformity of the websites concerned with the requirements for web-  
999 accessibility, thus the harmonized standard, will be developed.

1000 There is broad, if not unanimous agreement that the WCAG 2.0 guidelines  
1001 developed by W3C is the appropriate standard to be used.

##### 1002 *(4.2) Member States and Stakeholder perspective*

1003 For information available in the Member States please see the documents listed in  
1004 Annex I to this Rolling Plan. There is no additional information at this point in  
1005 time for this Rolling Plan.

#### 1006 **(5.) Related ongoing standardisation and research activities**

##### 1007 *(5.1) At European level*

1008 Mandate 376 of the Commission to the ESOs asks to deliver a European standard  
1009 setting accessibility requirements for the public procurement of ICT products and  
1010 services, including web-content. The resulting standard EN 301 549 is expected  
1011 to be published by February 2014. In its parts related to web-content, it points to  
1012 specific parts of the ISO/IEC 40500:2012, thus to specific parts of the  
1013 WCAG 2.0<sup>26</sup>.

1014 Other-identified activities are

- 1015 – eAccess+: HUB providing resources notably on standards and guidelines  
1016 for Web accessibility (CIP ICT PSP)
- 1017 – Aalliance 2 – Next Generation European Ambient Assisted Living  
1018 Innovation Alliance (FP7): repository of existing standards

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49 <sup>26</sup> See <http://www.w3.org/TR/WCAG/>

1019 – Atis4All – EU Thematic Network on Assistive Technologies and Inclusive  
1020 solutions for all: marketplace with a specific section on standards (CIP  
1021 ICT PSP)

1022 – VERITAS – Virtual and Augmented Environments and Realistic User  
1023 Interactions To achieve Embedded Accessibility Designs: review of policy  
1024 and standardisation issues (FP7)

1025 *(5.2) Other relevant work*

1026 The globally recognised web-accessibility specifications are the "Web-Content  
1027 Accessibility Guidelines" (WCAG) 2.0 developed by the World Wide Web  
1028 Consortium (W3C). The WCAG became recently an International Standard:  
1029 ISO/IEC 40 500:2012.

1030 The W3C Website Accessibility Conformance Evaluation Methodology (WCAG-  
1031 EM) 1.0<sup>27</sup> is currently at a Working Draft status and addresses some aspects of  
1032 website evaluation. However it is generally accepted that there are many other  
1033 aspects of website evaluation about which there is no universally agreed  
1034 methodology and there is a widespread perception that such an agreed and  
1035 standardised approach would be of great value. No other initiatives could be  
1036 identified at present.

1037 Other activities identified are related to:

1038 (1) ISO / IEC JTC1/SWG-A (Special Working Group on Accessibility)

1039 (2) ISO / IEC JTC1/SC35 (User Interfaces)

1040 (3) ITU-T SG16 Q.26 (Accessibility to multimedia systems and services)

1041 (4) ITU-T FG AVA (Audio Visual Accessibility)

1042 The Web Accessibility Initiative (WAI) of W3C is further progressing their  
1043 activity<sup>28</sup>.

1044 **(6.) Proposed New standardisation actions**

1045 *(6.1) Proposed standards developments*

1046 Apart from ongoing activities no further work is needed before the clarification  
1047 suggested in item 6.2 below.

1048 *(6.2) Proposed other activities around standardisation*

1049 A broad, open and undetermined discussion with stakeholders should be held on  
1050 the best way for making the W3C WCAG 2.0 guidelines the base specification for  
1051 web accessibility and for ensuring conformity with the specifications.

1052

1053

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50 <sup>27</sup> <http://www.w3.org/TR/WCAG-EM/>

51 <sup>28</sup> <http://www.w3.org/WAI/>

1055 3.2.4. *e-Skills and e-Learning*1056 **(1.) Policy area title and description**

1057 e-Skills and e-Learning

1058 The development and the promotion of ICT professionalism, ICT skills and e-  
 1059 learning require a strong consensus and cooperation among Member States and  
 1060 stakeholders.

1061 **(2) Legislation and policy documents**1062 *(2.1) European legislation and policy documents*

1063 IP/13/182 “Grand Coalition for Digital Jobs” of 4 March 2013

1064 SWD(2012) 446: “Digital Agenda for Europe - a good start and stakeholder  
 1065 feedback” of 18 December 2012

1066 COM(2012) 173: “Toward a Job-rich Recovery” and SWD(2012) 96: “Exploiting  
 1067 the employment potential of ICTs” of 18 April 2012

1068 COM(2010) 682: “An Agenda for New Skills and Jobs” of 23 November 2010

1069 COM(2010) 546: “Innovation Union” of 6 October 2010

1070 COM(2010) 245: “A Digital Agenda for Europe” of 26 August 2010

1071 COM(2007) 496: “e-Skills in the 21<sup>st</sup> Century” and Competitiveness

1072

1073 ***(2.2) Additional information on legal documents in Member States if available***

1074 For information available in the Member States please see the documents listed in  
 1075 Annex I to this Rolling Plan. There is no additional information at this point in  
 1076 time for this Rolling Plan.

1077 **(3.) Member States and Stakeholder input on policy context**1078 *(3.1) Input from Member States*

1079 For information available in the Member States please see the documents listed in  
 1080 Annex I to this Rolling Plan. There is no additional information at this point in  
 1081 time for this Rolling Plan.

1082 *(3.2) Input from other Stakeholders*

1083 No specific or additional input for this version

1084 **(4.) Standardisation needs to implement the legislation and policy**1085 *(4.1) Commission perspective*

1086 Regarding e-skills:

1087 Pan-European e-competences frameworks and tools as well as efficient and  
 1088 interoperable e-learning solutions are indispensable to reduce e-skills shortages,  
 1089 gaps and mismatches. Similar activities are under development in the United  
 1090 States of America, Russia, Japan, Australia, Canada, South Africa and Latin  
 1091 America etc. In the early 2000s the development of national frameworks had  
 1092 already been initiated in the UK, Germany and France etc. In their Council  
 1093 Conclusions of 23 November 2007 Member States supported the Commission’s  
 1094 intention to continue to provide a platform for the exchange of best practices;



1095 promote a regular dialogue on e-skills and develop a European e-Competence  
1096 Framework.

1097 Regarding e-learning:

1098 Efficient and interoperable e-learning solutions are necessary to promote the  
1099 development of a large e-learning market in Europe.

1100

#### 1101 *(4.2) Member States and Stakeholder perspective*

1102 Regarding e-skills:

1103 Such a topic is suitable for standardisation for well-documented needs. Fostering  
1104 ICT professionalism is a challenging task. As new technologies and new areas of  
1105 application of technologies emerge rapidly, establishing standardised skill sets is a  
1106 great challenge requiring timely and regular updates. Since the 1990s, this topic  
1107 has primarily been addressed by Public and Private Partnerships (PPP) with the  
1108 ICT industry playing a leading role (e.g. Career Space initiative). More recently,  
1109 standardisation efforts have been launched by many countries in the world. There  
1110 is a need to maintain a platform at a European level in order to exchange best  
1111 practices, implement a master plan and coordinate across Europe. The existing  
1112 structure of the CEN ICT Skills workshop is a good place for such a piece of  
1113 work – following the already successful development of the e-CF.

1114 The e-skills manifesto also contains contributions from various stakeholders, see  
1115 [http://ec.europa.eu/enterprise/sectors/ict/documents/e-skills/index\\_en.htm](http://ec.europa.eu/enterprise/sectors/ict/documents/e-skills/index_en.htm)

1116

1117

### 1118 **(5.) Related ongoing standardisation and research activities**

#### 1119 *(5.1) At European level*

1120 Regarding e-skills:

1121 The CEN ICT Skills Workshop is contributing to the implementation of the long-  
1122 term EU e-skills agenda. Fourteen CEN Workshop Agreements have been  
1123 approved, in particular on a European e-Competence Framework (e-CF) – see  
1124 [http://www.cen.eu/cen/Sectors/Sectors/ISSS/CWAdownload/Pages/ICT-](http://www.cen.eu/cen/Sectors/Sectors/ISSS/CWAdownload/Pages/ICT-Skills.aspx)  
1125 [Skills.aspx](http://www.cen.eu/cen/Sectors/Sectors/ISSS/CWAdownload/Pages/ICT-Skills.aspx). The European e-Competence Framework 3.0 will be available in  
1126 December 2013.

1127 See [http://www.cen.eu/cen/Sectors/Sectors/ISSS/CWAdownload/Pages/ICT-](http://www.cen.eu/cen/Sectors/Sectors/ISSS/CWAdownload/Pages/ICT-Skills.aspx)  
1128 [Skills.aspx](http://www.cen.eu/cen/Sectors/Sectors/ISSS/CWAdownload/Pages/ICT-Skills.aspx). At CEN a new Project Committee has been proposed for converting  
1129 the present e-CF into a European Standard. Following the positive outcome of a  
1130 vote in August 2013, this Project Committee should be established in the coming  
1131 months (most probably at the beginning of 2014).

1132

1133 Regarding e-learning:

1134 CEN/TC 353 “Information and Communication Technologies for Learning,  
1135 Education and Training” and the CEN Learning Technologies Workshop  
1136 contribute to the development of standards and specifications in this field. The  
1137 Technical Committee focuses on standards for vocabularies and frameworks,

1138 quality and competencies, and the Workshop – which has agreed 26 CWAs -  
1139 complements these, also ensuring that European requirements are properly  
1140 addressed by global initiatives.

1141 At CEN a new Technical Committee has been proposed for converting the present  
1142 e-CF into a European Standard.

1143

#### 1144 (5.2) *Other relevant work*

1145 IEEE has activities in several eLearning areas, including Digital Rights  
1146 Expression Languages, Computer Managed Instruction, Learning Object  
1147 Metadata, Resource Aggregation Models for Learning, Education and  
1148 Training, Competency Data Standards. It coordinates, both formally and  
1149 informally, with other organizations that produce specifications and standards for  
1150 learning technologies. For more information about IEEE eLearning activities  
1151 please see <http://standards.ieee.org/develop/msp/elearning.pdf>.

### 1152 **(6.) Proposed new standardisation activities**

#### 1153 (6.1) *Proposed standards developments*

1154 Regarding e-skills:

1155 Standardisation proposals must be based on clear and well-defined market needs  
1156 and be developed in full coherence with multi-stakeholder initiatives and public  
1157 policies (such as the EU e-skills strategy, the Digital Agenda and the “Grand  
1158 Coalition for Digital Jobs”) aiming at reducing e-skills shortages, gaps and  
1159 mismatches and at fostering ICT professionalism in Europe.

1160 Regarding e-learning:

1161 European e-learning standards to ensure European harmonisation, usage and  
1162 implementation. Focus should be on specifications and guidelines for e-learning  
1163 opportunities, learning outcomes, credit points, assessment and e-portfolios.

1164

#### 1165 (6.2) *Proposed other activities around standardisation*

1166 Regarding e-skills: The public and private sectors need to collaborate on the  
1167 following topics :

1168 – E-competences frameworks, job profiles, qualifications and certifications,  
1169 methods and tools for the development, promotion, implementation and  
1170 maintenance of the e-Competence Framework with a view in particular to  
1171 promote ICT professionalism (including international cooperation);

1172 – Curriculum development guidelines and ICT industry training and  
1173 certifications: development, promotion and implementation of e-competences  
1174 curriculum guidelines and quality labels to facilitate transparency and the  
1175 recognition of learning outcomes between formal, non-formal and industry  
1176 education and training.

1177 Regarding e-learning:

1178 – E-learning courses, content repositories and exchange mechanisms with a  
1179 focus on metadata, learning design and structure, technical and semantic  
1180 interoperability supported by agreed protocols, exchange formats and

1181 vocabularies. Interoperability should include context-aware, adaptable and  
1182 mobile/ambient e-learning systems and also cross-domain aspects.  
1183  
1184

1185 3.2.5. *Emergency communications*

1186 **(1.) Policy area title and description**

1187 Emergency communications

1188 The ability to initiate an emergency communication to request help when needed  
1189 is a right of all citizens, and this ability should be independent of the network and  
1190 access technologies deployed or the physical and mental abilities of the citizen.  
1191 The successful outcome of an emergency call could make the difference between  
1192 life and death.

1193 **(2) Legislation and policy documents**

1194 *(2.1) European legislation and policy documents*

1195 Directive 2009/136/EC of the European Parliament and the Council of 25  
1196 November 2009 amending Directive 2002/22/EC on universal service and users'  
1197 rights relating to electronic communications networks and services, Directive  
1198 2002/58/EC concerning the processing of personal data and the protection of  
1199 privacy in the electronic communications sector and Regulation (EC) No  
1200 2006/2004 on cooperation between national authorities responsible for the  
1201 enforcement of consumer protection laws.

1202 Directive 2009/140/EC of the European Parliament and the Council of 25  
1203 November 2009 amending Directives 2002/21/EC on a common regulatory  
1204 framework for electronic communications networks and services, 2002/19/EC on  
1205 access to, and interconnection of, electronic communications networks and  
1206 associated facilities, and 2002/20/EC on the authorisation of electronic  
1207 communications networks and services

1208 Directive 2002/21/EC of the European Parliament and the Council of 7 March  
1209 2002 on a common regulatory framework for electronic communications  
1210 networks and services (Framework Directive)

1211 Directive 2002/58/EC of the European Parliament and of the Council of 12 July  
1212 2002 concerning the processing of personal data and the protection of privacy in  
1213 the electronic communications sector (Directive on privacy and electronic  
1214 communications)

1215 Directive 2002/22/EC of the European Parliament and the Council of 7 March  
1216 2002 on universal service and user's rights relating to electronic communications  
1217 networks and services (Universal Service Directive)

1218 Recommendation 2003/558/EC of the Commission of the European Communities  
1219 of 25 July 2003 on the processing of caller location information in electronic  
1220 communication networks for the purpose of location-enhanced emergency call  
1221 services

1222 *(2.2) Additional information on legal documents in Member States if available*

1223 For information available in the Member States please see the documents listed in  
1224 Annex I to this Rolling Plan. There is no additional information at this point in  
1225 time for this Rolling Plan.

1226 **(3.) Member States and Stakeholder input on policy context**

1227 *(3.1) Input from Member States*

1228 For information available in the Member States please see the documents listed in  
1229 Annex I to this Rolling Plan. There is no additional information at this point in  
1230 time for this Rolling Plan.

1231 *(3.2) Input from Stakeholders*

1232 No specific or additional input for this version

1233 **(4.) Standardisation needs to implement the legislation and policy**

1234 *(4.1) Commission perspective*

1235 The lack of commonly agreed standards in support of electronic communications  
1236 networks for the emergency call service in Europe is a barrier for implementing  
1237 future proof solutions which fulfil the requirements of the amended Universal  
1238 Service Directive 2002/22/EC.

1239 Standards for Total Conversation access to 112 to fulfil special needs for users'  
1240 rights as per 2009/136/EC.

1241 *(4.2) Member States and Stakeholder perspective*

1242 The lack of harmonised values for location accuracy and reliability hampers the  
1243 development of adequate solutions in Member States.

1244 **(5) Related ongoing standardisation and research activities**

1245 *(5.1) At European level*

1246 Mandate M/493 – Standardisation Mandate in support of the Location Enhanced  
1247 Emergency Call Service. ETSI is performing work in response to this mandate  
1248 and is currently working on the single functional architecture (draft ES 2013 178)  
1249 and will then move on to the protocols definition.

1250 ECC PT ES is investigating criteria for location accuracy and reliability.

1251

1252 Work on Total Conversation Access to emergency services is continuing with the  
1253 finalisation of an ETSI Technical Specification and the development of a user  
1254 guide.

1255 *(5.2) Other relevant work*

1256 No specific or additional input to this Rolling Plan

1257 **(6) Proposed new standardisation activities**

1258 *(6.1) Proposed standards developments*

1259 No specific or additional input to this Rolling Plan

1260 *(6.2) Proposed other activities around standardisation*

1261 It is necessary to identify the standardisation needs for the deployment of 112  
1262 Smartphone applications enhanced with caller location and multimedia features.

1263 Completion of standards in response to mandate M/493 to produce the relevant  
1264 standards to support the Location Enhanced Emergency Call Service. Standards  
1265 Development Organisations (SDO) are invited to contribute taking into account  
1266 next generation networks and location accuracy and reliability.

1267

1268 3.2.6. eCall

1269 **(1.) Policy area title and description**

1270 Intelligent Transport Systems. Emergency Communications. Road Safety. The  
1271 pan-European in-vehicle emergency call, 'eCall', is an interoperable service to be  
1272 available in all vehicles in order to reduce fatalities.

1273 **(2.) Legislation and policy documents**

1274 *(2.1) European legislation and policy documents*

1275 COM(2013)0316: Proposal for a Regulation of the European Parliament And Of  
1276 The Council concerning type-approval requirements for the deployment of the  
1277 eCall in-vehicle system and amending Directive 2007/46/EC

1278 COM(2013)0315: Proposal for a Decision of the European Parliament and of the  
1279 Council on the deployment of the interoperable EU-wide eCall

1280 Commission delegated regulation (EU) of 26.11.2012 305/2013 supplementing  
1281 Directive 2010/40/EU of the European Parliament and of the Council with regard  
1282 to the harmonised provision for an interoperable EU-wide eCall

1283 COM 2011/750/EU: Commission Recommendation of 8 September 2011 on  
1284 support for an EU-wide eCall service in electronic communication networks for  
1285 the transmission of in-vehicle emergency calls based on 112 (eCalls)

1286 Directive 2010/40/EU of the European Parliament and of the Council of 7 July  
1287 2010 on the framework for the deployment of Intelligent Transport Systems in the  
1288 field of road transport and for interfaces with other modes of transport

1289 COM(2009) 434 final: eCall: Time for Deployment

1290 Directive 2002/22/EC of the European Parliament and of the Council of 7 March  
1291 2002 on universal service and users' rights relating to electronic communications  
1292 networks and services (Universal Service Directive).

1293 *(2.2) Additional information on legal documents in Member States if available*

1294 For information available in the Member States please see the documents listed in  
1295 Annex I to this Rolling Plan. There is no additional information at this point in  
1296 time for this Rolling Plan

1297 **(3.) Member States and Stakeholder input on policy context**

1298 *(3.1) Input from Member States*

1299 For information available in the Member States please see the documents listed in  
1300 Annex I to this Rolling Plan. There is no additional information at this point in  
1301 time for this Rolling Plan

1302 *(3.2) Input from other Stakeholders*

1303 No specific or additional input to this Rolling Plan

1304 **(4.) Standardisation needs to implement the legislation and policy**

1305 *(4.1) Commission perspective*

1306 In the event of an accident, in-vehicle sensors will automatically trigger an eCall.  
1307 A voice connection is established with the European emergency number 112 and  
1308 routed to the Public Safety Answering Point (PSAP). At the same time, an  
1309 emergency message is sent, providing information such as the time, location and

- 1310 driving direction (Minimum Set of Data). The emergency call can also be  
1311 triggered manually.
- 1312 It is required to develop standards for the future generation of eCall service,  
1313 taking into account the future evolution of the mobile communication networks  
1314 and the IP environment, in particular LTE and IPv6 networks.
- 1315 It is also required to analyse the need and develop standards if needed for the  
1316 extension to other vehicles types and services, such as Heavy Duty Vehicles,  
1317 Power Two Wheelers or Hazardous Goods tracking.
- 1318 *(4.2) Member States and Stakeholder perspective*
- 1319 eCall aims at issuing an automated call, based on 112, to emergency services,  
1320 including data such as exact location of the crash site, the identification of the  
1321 vehicle, the number of passengers, etc., which is called the Minimum Set of Data  
1322 (MSD). With this information emergency services will be able to provide a faster  
1323 response.
- 1324 The EC wants all new vehicle types placed on the market after October 2015 to  
1325 implement eCall, the PSAPs to be upgraded to handle the eCalls, and is making  
1326 recommendations to Member States to draw up detailed rules for public mobile  
1327 network operators operating in their countries on handling eCalls.
- 1328 **(5.) Related ongoing standardisation and research activities**
- 1329 *(5.1) At European level*
- 1330 CEN and ETSI have developed several TS, ENs and other deliverables to define  
1331 the MSD structure and the transfer from the vehicles to the PSAP. The MSD is  
1332 defined in CEN EN 15722. The transport protocol to send MSD from the Vehicle  
1333 system to the PSAP, via the GSM/UMTS network has been defined in several  
1334 ETSI TS along with the service principles.
- 1335 Under Mandate M/453 (Co-operative systems for Intelligent Transport), CEN and  
1336 ETSI have developed standards for communications between vehicles and  
1337 infrastructure, and defined on-board unit functionalities.
- 1338 ETSI MSG STF 456 is looking at the issue of the migration of the networks.
- 1339 HeERO (Harmonised eCall European Pilot) pilots are testing the standards in real  
1340 conditions.
- 1341 The European eCall Implementation Platform is proposing recommendations to  
1342 ensure the best operation of the service and to take full advantage of all its  
1343 possibilities.
- 1344 *(5.2) Other relevant work*
- 1345 No specific or additional input to this Rolling Plan
- 1346 **(6.) Proposed new standardisation activities**
- 1347 *(6.1) Proposed standards developments*
- 1348 Develop technical specification/standards for the implementation of eCall in  
1349 vehicles of categories other than M1 and N1.
- 1350 Propose guidelines on certification of eCall systems (in particular for aftermarket  
1351 in-vehicle devices)
- 1352 *(6.2) Proposed other activities around standardisation*

1353 To carry out Plugtest interoperability events (e.g. the eCall Testfest  
1354 Interoperability Event from the 9<sup>th</sup> to 13<sup>th</sup> September 2013 in Essen, Germany –  
1355 see <http://www.ertico.com/2nd-ecall-interoperability-event/>).

1356 Actions to collect feedback about the early versions of the standards and their  
1357 implementation with technical representatives from vendors and implementors.

1358



1359 3.2.7. Digital Cinema

1360 **(1) Policy area title and description**

1361 Digital Cinema

1362 The digitalisation of film projection means that all cinemas in Europe will have to  
1363 install digital equipment within a few years. This equipment has to follow the US-  
1364 developed DCI standard and is very expensive. One possible consequence is that  
1365 a number of small European cinemas will have to close. This standardisation  
1366 initiative will explore alternative standards which will allow for more affordable  
1367 projectors, to secure the diversity of European film and cinema and all the  
1368 accessibility services that Digital Cinema makes possible.

1369 **(2.) Legislation and policy documents**

1370 *(2.1) European legislation and policy documents*

1371 COM(2010) 0487 Communication from the Commission on opportunities and  
1372 challenges for European Cinema in the Digital Era<sup>29</sup> - the Digital Cinema  
1373 Communication

1374 *(2.2) Additional information on legal documents in Member States if available*

1375 For information available in the Member States please see the documents listed in  
1376 Annex I to this Rolling Plan. There is no additional information at this point in  
1377 time for this Rolling Plan

1378 **(3.) Member States and Stakeholder input on policy context**

1379 *(3.1) Input from Member States*

1380 For information available in the Member States please see the documents listed in  
1381 Annex to this Rolling Plan. There is no additional information at this point in time  
1382 for this Rolling Plan

1383 *(3.2) Input from other Stakeholders*

1384 No specific or additional input to this Rolling Plan

1385 **(4.) Standardisation needs to implement the legislation and policy**

1386 *(4.1) Commission perspective*

1387 As stated in the Digital Cinema Communication, less expensive projectors are  
1388 presently available to cinema owners providing a high degree of security and a  
1389 highly transportable device. While they present some disadvantages they could  
1390 represent an economic solution for smaller arthouse or local European operators  
1391 with smaller screens both in large multiplexes and single screen theatres. These  
1392 operators might not afford the projector and equipment following the DCI  
1393 specifications. The possibility of an alternative specification should be explored.

1394 *(4.2) Member States and Stakeholder perspective*

1395 For information available in the Member States please see the documents listed in  
1396 Annex I to this Rolling Plan. There is no additional information at this point in  
1397 time for this Rolling Plan

1398 **(5.) Related ongoing standardisation and research activities**

1399 *(5.1) At European level*

52 <sup>29</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0487:EN:NOT>

1400 *No specific or additional input to this Rolling Plan*

1401 *(5.2) Other relevant work*

1402 The US-led Digital Cinema initiative (DCI) launched in 2002 has resulted in a  
1403 specification for digital cinema and also the publication of ISO (International  
1404 Standard Organisation) standard ISO 26428-1:2008 (2048X1080 or 2k) for the  
1405 digital master. This standard is the one required by Eurimages and some Member  
1406 States (France, UK, The Netherlands), in the context of their support mechanism  
1407 to digitisation of cinemas. The DCI specifications were last updated Aug 30<sup>th</sup>  
1408 2012.

1409 3D Digital projection has now been successfully initiated in digitised cinemas and  
1410 has become very popular, and an important source of revenue for the cinema  
1411 sector. As indicated in the Digital Cinema Communication, there is no standard  
1412 for 3D projection yet, but the DCI released a so-called recommended practice on  
1413 Sept 28<sup>th</sup> 2012. European Cinemas will need to follow this development closely.

1414 **(6.) Proposed new standardisation activities**

1415 *(6.1) Proposed standards developments*

1416 No actions proposed.

1417 *(6.2) Proposed other activities around standardisation*

1418 The feasibility of a standard other than the DCI previously referred to should be  
1419 explored for smaller screens. The Commission will engage in a stakeholder  
1420 dialogue concerning these matters – also taking into account 3D cinema.

1421 Based on these consultations the Commission will consider the best ways to  
1422 encourage standardisation activities within this field.

1423

1424 **3.3. Innovation for the Digital Single Market**

1425 *3.3.1. e-Procurement – Pre and Post award*

1426 **(1.) Policy area title and description**

1427 e-Procurement

1428 Public Procurement, modernisation of public procurement in the European Union  
1429 covering pre-award and post-award, e-Procurement, including procurement of  
1430 goods, services and works using electronic means. There remains open a  
1431 question whether some specified data requirements and methods also would or  
1432 could apply.

1433 **(2.) Legislation and policy documents**

1434 *(2.1) European legislation and policy documents*

1435 COM(2011) 896 final - COM legislative proposals of 20.12.2011 for the revision  
1436 of Directive 2004/18/EC (public works, supply and service contracts)

1437 COM(2012) 179 of 20 April 2012 - Communication from the Commission to the  
1438 European Parliament, the Council, the European Economic and Social Committee  
1439 and the Committee of the Regions on a strategy for e-Procurement

1440 *(2.2) Additional information on legal documents in Member States if available*

1441 For information available in the Member States please see the documents listed in  
1442 Annex I to this Rolling Plan. There is no additional information at this point in  
1443 time for this Rolling Plan

1444 **(3.) Member States and Stakeholder input on policy context**

1445 *(3.1) Input from Member States*

1446 For information available in the Member States please see the documents listed in  
1447 Annex I to this Rolling Plan. There is no additional information at this point in  
1448 time for this Rolling Plan

1449 *(3.2) Input from other Stakeholders*

1450 No specific or additional input to this Rolling Plan

1451 **(4.) Standardisation needs to implement the legislation and policy**

1452 *(4.1) Commission perspective*

1453 The Commission's legislative proposals aims to make e-Procurement the  
1454 mainstream method for carrying out public procurement to achieve broader  
1455 competition (even across borders), increased transparency, value for money on  
1456 procurement expenditure and savings on procedural costs. The proposals set out a  
1457 phased transition to mandatory e-procurement within deadlines that are currently  
1458 under negotiation by Council and EP (likely to be set between 2015 and 2017).  
1459 The transition will generalise the use of electronic means of communication to  
1460 pre-award procurement phases including e-notification (of procurement notices  
1461 submitted to TED), e-access (to tender documents) and e-submission (of tenders),  
1462 for all contracting authorities and entities.

1463 The 2012 Communication recognises that the Commission and the member states  
1464 need to undertake coherent actions at all levels in order to meet the goals

1465 underpinning this obligation. Indeed, e-Procurement is bound to become, one way  
1466 or another, the mainstream procurement method at some point in the future, but,  
1467 without Community-wide action, scattered developments across the EU would  
1468 lead to islands of e-procurement operations fragmenting the Internal Market.

1469 The EU e-Procurement internal market is facing several types of barriers,  
1470 including cross-border interoperability and interfaces complexity.

1471 Cross-border variations in requirements: Specific member state e-Procurement  
1472 platforms are often built on top of national or regional infrastructures which are  
1473 optimized for integration with other public services, and for the specific  
1474 performance and security requirements of that platform's host government. (For  
1475 example, the commercial law and practices of some member states may require  
1476 high-security or specific forms of digital signature, while others have more  
1477 permissive requirements.) As a result, the tools available to access the services  
1478 provided by one member state's systems may not be available to, or adaptable to  
1479 the needs of, users in other member states.

1480 Proliferation of platforms. SMEs (and anyone doing business in multiple  
1481 locations) experience another hindering factor. The proliferation of platforms for  
1482 e-Tendering (and consequently of user interfaces) makes it difficult for a  
1483 company to respond to calls for tenders run on multiple platforms. It is estimated  
1484 that over 300 distinct such platforms are in use across Europe today. A bidder  
1485 may be required to learn concepts, mechanisms, tools and rules used on each of  
1486 the different systems concerned. Unfortunately, platforms are far from reaching a  
1487 common "look-and-feel."

1488 e-Procurement technology interoperability and standardisation is a key strategy to  
1489 remove technical barriers or extra costs when supplier bid on a plurality of  
1490 systems. In order to achieve a true single market, bidders including SMEs ideally  
1491 should be able to communicate and participate, in multiple markets across various  
1492 systems, through their favourite or a common system.

1493 This is recognised by the legislative proposal itself, which empowers the  
1494 Commission to adopt delegated acts in a number of specific areas to render  
1495 mandatory the use of specific technical standards.

1496 The need for standardisation in the e-Procurement domain is strongly reaffirmed  
1497 by the e-Tendering Expert (eTEG) group (see below), set up by the Commission,  
1498 as one of the actions planned in the 2012 Communication, to advise on paths to  
1499 be taken to achieve interoperable, accessible and SME-inclusive systems. The e-  
1500 TEG report issued its report and operational recommendations in February 2013,  
1501 and lists a number of standardisation actions to be undertaken as soon as possible.

#### 1502 *(4.2) Member States and Stakeholder perspective*

1503 For information available in the Member States please see the documents listed in  
1504 Annex I to this Rolling Plan. There is no additional information at this point in  
1505 time for this Rolling Plan

### 1506 **(5.) Related ongoing standardisation and research activities**

#### 1507 *(5.1) At European level*

1508 There are a large number of existing mandates, standardisation projects, research  
1509 projects which are developing/have developed standards or pre-standards at the  
1510 European and global levels, within formal and non-formal organisations.

1511 Standardisation work already underway needs to be reinforced or completed  
1512 through specific actions.

1513 The PEPPOL (Pan European Public Procurement On-Line project) Large Scale  
1514 Pilot project, co-funded by the EU's Competitiveness and Innovation Framework  
1515 Programme, involved over ten European countries: <http://www.peppol.eu>.  
1516 PEPPOL developed e-procurement specifications for cross-border transactions,  
1517 which in the aggregate supply a complete model infrastructure, with all required  
1518 components for an effective and efficient e-procurement architecture (including  
1519 open source access point implementations; message transport protocols; PKI  
1520 trust models and methodology; interoperable profiles for the aggregate use of  
1521 existing specifications to assemble transactional procurement business documents  
1522 and messages; and methods for networked discovery of market, service and  
1523 participant metadata). The project also specified desirable future activities for  
1524 standardisation. The related, new Large Scale Pilot project e-SENS ("Electronic  
1525 Simple European Networked Services") will also be expected to include activities  
1526 to promote the development and use of technical specifications that can lead to  
1527 standardisation.

#### 1528 (5.2) Other relevant work

1529 No specific or additional input to this Rolling Plan

### 1530 (6.) Proposed new standardisation activities

#### 1531 (6.1) Proposed standards developments

1532 PEPPOL has provided and eSENS may augment a set of existing specifications  
1533 and methods sufficient for production implementation of e-Procurement and e-  
1534 Invoicing business functions. An appropriate long-term community feedback,  
1535 updating and maintenance structure for these assets is desirable, as any living  
1536 network of transacting parties will evolve and discover new needs over time.

1537 The Commission's e-TEG group identified the following needs for  
1538 standardisation:

1539 – e-notification (publication of notices on procurement opportunities,  
1540 contracts awarded and other legal notifications);

1541 – qualification of suppliers (eAttestations/certificates/Virtual Company  
1542 Dossier);

1543 – a process model for procurement procedures as specified in the Directives  
1544 such as negotiated procedures and competitive dialogue;

1545 – system models that may achieve interoperability among and across  
1546 multiple differing e-tendering platforms without necessarily requiring a business  
1547 to change its favourite system (For example, see <http://www.xvergabe.org>);

1548 – tender structures for de-materialisation of tenders. The next-generation e-  
1549 Procurement platforms are expected to enforce a model in which the platform  
1550 used by the contracting authority to run a tendering process collaborates with  
1551 independent "tender response preparation" platforms used by the EO, by sharing a  
1552 unique view of the process and document structures being exchanged as part of  
1553 the e-Tendering transactions;

1554 – product/services catalogues and classifications;

- 1555 – code lists, identification schemes and the responsible agencies;
- 1556 – accessibility standards for user interfaces (see the separate Section on Web  
1557 Accessibility, above);
- 1558 – registration / authentication standards for e-Procurement platforms.  
1559 Standards in this area would enable to set up federations of e-Tendering platforms  
1560 sharing company information or even single sign-on services, simplifying the task  
1561 of economic operators which currently have to go through complex procedures on  
1562 each platform on which they have to work;
- 1563 – digital signature and use of public key infrastructure, which may leverage  
1564 current ETSI work on trusted lists and signature formats;
- 1565 – data models and processes for e-Tendering performance measurement.

1566 *(6.1) Proposed other activities around standardisation*

1567 Interested SDOs should enter into dialogue with the Commission concerning the  
1568 implementation of the eTEG report, to define the specific actions required, noting  
1569 the eTEG recommendation to develop of European Standards based on the CEN  
1570 WS/BII outputs.

1572 **(1.) Topic area title and description**

1573 eInvoicing

1574 Electronic invoicing, or the exchange of invoices in the form of structured  
1575 electronic data which allows for their automatic processing, brings numerous  
1576 benefits to all users (senders and recipients). By automating the relevant business  
1577 processes, e-invoicing leads to cost savings, increased efficiency, faster payments,  
1578 and a reduced environmental impact. Its deployment is a strong tool in support of  
1579 enterprise and financial policies as it renders enterprises more efficient and  
1580 generates potentially significant savings for Member States' governments.  
1581 Additionally, it contributes significantly to the EU's Digital Agenda by promoting  
1582 the development of e-government, and ready accessibility to users with  
1583 disabilities (see the separate Section on Web Accessibility, above).

1584 **(2.) Legislation and policy documents**

1585 *(2.1) European legislation and policy documents*

1586 Council Directive 2006/112/EC of 28 November 2006 on the common system of  
1587 value added tax.

1588 Council Directive 2010/45/EU of 13 July 2010 amending Directive 2006/112/EC  
1589 on the common system of value added tax as regards the rules on invoicing.

1590 DG TAXUD Explanatory Notes on e-invoicing<sup>30</sup>.

1591 COM(2010) 245: "A Digital Agenda for Europe", which gives a prominent role to  
1592 achieving a single digital market and calls for removing the regulatory and  
1593 technical barriers which prevent mass adoption of e-invoicing.

1594 Communication COM(2010)712 "Reaping the benefits of electronic invoicing for  
1595 Europe" defines a number of actions in different areas, including standardisation,  
1596 needed to facilitate the deployment of e-invoicing in Europe.

1597 Member States called for measures to promote e-invoicing at the Informal  
1598 competitiveness Council of February 2012 and in the European Council  
1599 Conclusions of June 2012.

1600 The European Parliament called for making e-invoicing compulsory in public  
1601 procurement by 2016 in a resolution adopted in April 2012.

1602 Communication COM(2012)179 "A strategy for e-procurement" states that the  
1603 ultimate goal is "straight through e-procurement" with all phases of the procedure  
1604 from notification (e-notification) to payment (e-payment) being conducted  
1605 electronically.

1606 Communication COM (2013) 449<sup>31</sup>, Proposal of Directive on electronic invoicing  
1607 in public procurement.

1608 *(2.2) Additional information on legal documents in Member States if available*

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53 <sup>30</sup> [http://ec.europa.eu/taxation\\_customs/resources/documents/taxation/vat/traders/invoicing\\_rules/explanatory\\_notes\\_en.pdf](http://ec.europa.eu/taxation_customs/resources/documents/taxation/vat/traders/invoicing_rules/explanatory_notes_en.pdf)  
54

55 <sup>31</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0449:FIN:EN:PDF>  
56

1609 Danish legal e-Invoice mandate: Executive Order No. 354 of 26 March 2010:  
1610 <http://www.oioubl.info/documents/en/OIOUBLStatute.pdf>

### 1611 **(3.) Member States and Stakeholder input on policy context**

#### 1612 *(3.1) Input from Member States*

1613 For information available in the Member States please see the documents listed in  
1614 Annex I to this Rolling Plan. There is no additional information at this point in  
1615 time for this Rolling Plan

#### 1616 *(3.2) Input from other Stakeholders*

1617 No specific or additional input to this Rolling Plan

### 1618 **(4.) Standardisation needs to implement the legislation and policy**

#### 1619 *(4.1) Commission perspective*

1620 In the current environment, a vast number of e-invoicing standards, data formats,  
1621 and usage requirements exist across the EU and globally. However, none of the  
1622 existing formats has so far achieved dominance, and there is no globally used  
1623 standard for e-invoicing. Commission policy initially supported the parallel  
1624 development and planning of multiple suitable systems, by various member  
1625 states, but has emphasized the need for interoperability and broad access across  
1626 markets. The diversity of data and usage requirements, and very different  
1627 approaches to their implementation, increase complexity and cost, and create a  
1628 risk of market fragmentation.

1629 Electronic invoicing has been used by business for some time already. The  
1630 earliest form of e-invoicing was based on Electronic Data Interchange (EDI)  
1631 which is still used by many multinational companies. In the last decade or so,  
1632 many newer e-invoicing standards/formats have been developed, based for the  
1633 most part on different versions of XML. Many of these are proprietary formats,  
1634 and are only used by one multinational company and its suppliers, or embed  
1635 proprietary unique identifiers that may require licensing from a single source. As  
1636 member states developed their own national standards, some of these also  
1637 differed from anything already on the market, resulting in further divergence and  
1638 a lack of interoperability. As a consequence, market players, such as enterprises or  
1639 financial and IT service providers need to support multiple formats, necessitating  
1640 substantial mapping and conversion exercises to cope with data expressed in  
1641 different syntaxes.

#### 1642 *(4.2) Member States and Stakeholder perspective*

1643 For information available in the Member States please see the documents listed in  
1644 Annex I to this Rolling Plan. There is no additional information at this point in  
1645 time for this Rolling Plan

### 1646 **(5.) Related ongoing standardisation and research activities**

#### 1647 *(5.1) At European level*

1648 The situation in terms of e-invoicing standardisation is currently very fragmented,  
1649 with several European and international standardisation organisations working in  
1650 this area.

1651 At European level, efforts at standardisation have been ongoing since the middle  
1652 of the last decade. In November 2009, the Final Report of the Expert Group on e-



1653 Invoicing anticipated the use of a common reference semantic data model , as a  
1654 unifying method of interoperability for e-invoice contents, and recommended  
1655 that the UN/CEFACT Cross-Industry Invoice (CII) v.2 be adopted. Along these  
1656 lines, the Communication COM(2010) 712 encouraged all market actors within  
1657 both the private and public sectors to develop and to implement, or to converge  
1658 on, solutions that are compliant with the UN/CEFACT CII data model. Moreover,  
1659 it contained a set of actions in the domain of standardisation, including these:

1660 – CEN was asked to work with standards organizations and sources to  
1661 promote convergence with, and requirements for the further development of, the  
1662 CII model (see <http://www.cenbii.eu/>).

1663 – UN/CEFACT was asked to pursue the fast development of e-business  
1664 messages complementary to the e-invoice.

1665 At the end of 2010, a European Multi-stakeholder Forum on e-Invoicing was set  
1666 up to address standardisation issues and advise the Commission on specific policy  
1667 needs. The group came to the conclusion that the convergence towards the CII  
1668 data model should be considered a long term objective. Work is currently being  
1669 undertaken to endorse by October 2013 a recommendation on the use of a  
1670 semantic data model to support interoperability for e-invoicing. The final  
1671 document will need to take into account recent developments in the field of e-  
1672 invoicing, such as the growing trend across the EU for the use of the Universal  
1673 Business Language (UBL) and CEN WS/BII2 as the preferred syntax and  
1674 implementation guidelines, respectively.

1675 These already serve as the basis of several Member States' e-invoicing systems,  
1676 and a number of well-advanced Commission co-funded Large Scale Pilot projects  
1677 such as PEPPOL, co-funded by the EU's Competitiveness and Innovation  
1678 Framework Programme, which involved over ten European countries. PEPPOL  
1679 developed e-invoicing specifications with a multilateral interoperability model for  
1680 cross-border transactions, largely based on the work carried out in the CEN BII  
1681 workshops. (For more on PEPPOL and its successor program e-SENS, see the  
1682 separate Section 3.3.1 on e-Procurement, above) and interoperability actions (e.g.  
1683 e-PRIOR). They have also been endorsed by at least one e-invoicing association.  
1684 It is likely that the recommendations will have to be followed up by  
1685 standardisation work for the adoption of an EN on the core invoice data elements.

1686 Presently, CEN is running the BII3 and eBES Workshops that will address  
1687 specific e-invoicing implementation issues. Complementary standardisation work  
1688 will be needed to address the outstanding standardisation issues described in the  
1689 DG ENTR paper "e-Invoicing standardisation - Overview, issues and conclusions  
1690 for future actions" published in September 2012:  
1691 [http://ec.europa.eu/enterprise/sectors/ict/files/invoicing/e-invoicing-  
1692 standardisation-overview-issues-and-conclusions-for-future-actions\\_en.pdf](http://ec.europa.eu/enterprise/sectors/ict/files/invoicing/e-invoicing-standardisation-overview-issues-and-conclusions-for-future-actions_en.pdf).

1693 – At international level, UN/CEFACT has developed and is maintaining the  
1694 CII v.2, and is cooperating with the Organisation for the Advancement of  
1695 Structured Information Standards (OASIS, which developed UBL, on  
1696 convergence between the UBL invoice and the CII data model, and with ISO for  
1697 the integration where appropriate of the CII data model and ISO 20022 financial  
1698 invoice methodology.

1699 (5.2) Other relevant work

1700 No specific or additional input to this Rolling Plan

1701 **(6.) Proposed new standardisation activities**

1702 *(6.1) Proposed standards developments*

1703 UN/CEFACT and CEN should carry out specific work in response to the actions  
1704 described in the Communication COM(2010)712, or to specific needs that are  
1705 endorsed by the Commission further to their identification by the European  
1706 Multi-stakeholder Forum on e-Invoicing.

1707 *(6.2) Proposed other activities around standardisation*

1708 Overall, the actions should be part of an agreed standardisation strategy shared by  
1709 the Commission, the ESOs, consortia and standards bodies supplying  
1710 specifications in use, and member states with active implementations.  
1711 Commission may launch further broad, neutral fact-finding inquiries (perhaps via  
1712 the MSP) to identify appropriate shared needs and goals. The work may result in  
1713 the publication of ENs, CWAs, Technical Reports, and Guidelines, or other  
1714 standardisation deliverables as appropriate. In particular, the recommendation on  
1715 the use of a semantic data model proposes to formalise the semantic data model  
1716 for the core section of an electronic invoice. Moreover, the proposed Directive on  
1717 e-invoicing in public procurement (COM(2013) 449 final) requires the  
1718 Commission to issue a standardisation mandate to the relevant ESOs.

1719 3.3.3. *Card, Internet and Mobile Payments*

1720 **(1.) Policy area title and description**

1721 Card, Internet and Mobile Payments

1722 While there is no globally accepted definition of mobile payments, payments  
1723 involving the mobile phone seem to gain importance. Mobile payments can be  
1724 based on card payments, credit transfers, direct debits, or through pre-funded  
1725 cards and accounts.

1726 In general, the Commission strives to promote an integrated European market for  
1727 card, internet and mobile payments for the benefits of consumers and merchants.

1728 **(2.) Legislation and policy documents**

1729 *(2.1) European legislation and policy documents*

1730 Directive 2007/64/EC on payment services

1731 Regulation (EC) 924/2009 on cross-border payments

1732 Regulation (EC) 260/2012 on the SEPA migration end-date

1733 COM(2011) 941 final: Green Paper “Towards an integrated European market for  
1734 card, internet and mobile payments”

1735 Cybersecurity Strategy of the European Union: An Open, Safe and Secure  
1736 Cyberspace [JOIN(2013) 1 final].

1737 *(2.2) Additional information on legal documents in Member States if available*

1738 For information available in the Member States please see the documents listed in  
1739 Annex I to this Rolling Plan. There is no additional information at this point in  
1740 time for this Rolling Plan

1741 **(3.) Member States and Stakeholder input on policy context**

1742 *(3.1) Input from Member States*

1743 Objectives and actions are well balanced given standardisation state of the art.

1744 *(3.2) Input from other Stakeholders*

1745 Extract from European Round Table of Industrialists (ERT) summary document :

1746 *CASE STUDY: NEAR FIELD COMMUNICATION (NFC) STANDARD*

1747 *Initiated in 2011, the NFC standard aims at leveraging mobile payment services*  
1748 *in Europe by defining the tools to develop a SIM-based NFC ecosystem. This*  
1749 *standard is currently developed with a cross-industry approach, involving*  
1750 *primarily mobile network operators and handset-manufacturers.*

1751 *The NFC standardisation process engages over 40 industry players which allows*  
1752 *for competition within a standard, contrary to quasi-monopolistic market*  
1753 *structures often generated by proprietary platforms. Stakeholder involvement is*  
1754 *also crucial to achieve critical mass when launching a new network service, such*  
1755 *as NFC mobile wallets.*

1756 *Given the pace of technologies and the level of global competition in the Telecom*  
1757 *sector, it is essential for the NFC success that standardisation is fast and takes*  
1758 *the time-to-market of the product into account. To support these needs for*  
1759 *coordination and speed, the European Commission as a whole has a key role to*

1760 ensure that strategic coordination across industries in standard setting is  
1761 facilitated and promoted.

1762

1763 Other inputs:

1764 In general regarding card, internet and mobile payments, some stakeholders  
1765 believe that the following issues should in particular be addressed: security,  
1766 access and accessibility, management and portability of customer data,  
1767 transparency.

#### 1768 **(4.) Standardisation needs to implement the legislation and policy**

##### 1769 *(4.1) Commission perspective*

1770 The market for mobile payments at European level is fragmented. The current  
1771 landscape is characterised by applications for niche users and by a myriad of pilot  
1772 projects, mostly at domestic or local level.

1773 The absence of shared standards, standardisation gaps and the lack of  
1774 interoperability between the various market players are delaying the mass market  
1775 adoption of this innovative payment method. While certain solutions, such as  
1776 Near Field Communication (NFC), seem to emerge as possible lead technology  
1777 for proximity mobile payments, common standards for mobile payments at the  
1778 Point of Sale (POS) do not exist or are in a very early stage of development.

1779 Filling the standardisation gaps will make it easier for payment services providers  
1780 and merchants alike to reach critical mass by making use of the digital single  
1781 market and commit to making the necessary investments.

##### 1782 *(4.2) Member States and Stakeholder perspective*

1783 For information available in the Member States please see the documents listed in  
1784 Annex I to this Rolling Plan. There is no additional information at this point in  
1785 time for this Rolling Plan

#### 1786 **(5.) Related ongoing standardisation and research activities**

##### 1787 *(5.1) At European level*

1788 So far, the development of technical specifications has been undertaken mainly by  
1789 industry organizations, such as the European Payment Council or the Global  
1790 Platform (in case of specific solutions such as NFC).

1791 ETSI and CEN are also carrying out standardisations activities relevant for this  
1792 area, respectively in the TC SCP (Smart Card Platform) and TC 224 (Personal  
1793 identification, electronic signature and cards and their related systems and  
1794 operations).

1795 W3C: EPASOrg<sup>32</sup> and EPC<sup>33</sup> currently focus on the protocols for card payment  
1796 protocols in the Eurozone and aim to replace the current mess of proprietary  
1797 protocols. EPC (European Payment Council) are also involved in SEPA (Shared  
1798 Euro Payment Area) and see themselves as the decision-making and coordination  
1799 body of the European banking industry in relation to payments.

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57 <sup>32</sup> <http://www.epasorg.eu/>

58 <sup>33</sup> <http://www.europeanpaymentscouncil.eu/>

1800 (5.2) *Other relevant work*

1801 The W3C web payments CG focuses on specific payment solutions, e.g.  
1802 Payswarm. The basic idea is for W3C to standardise the API between web apps  
1803 and the wallet with the browser as an intermediary.

1804 It is critical to keep a level playing field for payment solution providers large and  
1805 small. We will need to create standards for installing payment solutions into the  
1806 wallet after a device has shipped. We also want to allow for device and cloud  
1807 based solutions, including secure elements and contactless payments. The  
1808 SysApps and NFC working groups will provide valuable building blocks.

1809 **(6.) Proposed new standardisation activities**

1810 (6.1) *Proposed standards developments*

1811 No concrete proposals before the recommendations under 6.2 below are  
1812 completed.

1813 (6.2) *Proposed other activities around standardisation*

1814 The Commission, in cooperation with the European Central Bank, intends to  
1815 facilitate the convergence of ongoing standardisation activities in the area of card  
1816 payments and spur the emergence of pan-European standards for m-payments and  
1817 Internet payments. As a first step the Commission will invite the ESOs and other  
1818 relevant bodies such as the SEPA Council to map out business and user  
1819 requirements and assess existing standardisation gaps.

1820 Taking as starting point the requirements of businesses and consumers, there is a  
1821 need to assess the existing standards, to identify interoperability gaps, and to  
1822 develop a work programme that will serve to develop missing standards and to fix  
1823 the existing problems.

1824 In particular the following issues should be addressed: security, access,  
1825 management and portability of customer data, transparency.

1826 After a successful Workshop, W3C expects the need to charter a new working  
1827 group on the payment request API and a complementary business group with a  
1828 broader remit

1830 **(1.) Policy area title and description**

1831 eXtensible Business Reporting Language (XBRL)

1832 eBusiness, defined as doing business over the internet, needs unified definitions,  
1833 identification and codification of business-related information, processes, actors  
1834 and their roles, and relationships. That includes names, legal form and status,  
1835 financial information and reports, transactional information, deeds and claims in  
1836 legal and administrative proceedings used in a variety of commercial, societal and  
1837 administrative contexts in commerce, taxation, statistics, public procurement,  
1838 supervision of regulated activities, judicial etc. Once unified, information can  
1839 then be automatically processed by ICT, published, searched and retrieved from  
1840 the internet, automatically analysed and used by governments, businesses,  
1841 consumers and civil society.

1842 XBRL is a set of XML predefined vocabularies and rules, developed and used by  
1843 financial industries, originating largely with accountancy practices, to report  
1844 financial position, performance and economic viability of businesses. XBRL  
1845 permits the publication of financial reports augmented by mark-up according to  
1846 sets of XBRL tags (called taxonomies) which then may be processed and  
1847 retrieved by market participants, including analysts, supervisors, enterprise  
1848 regulators, tax offices, clients, suppliers, creditors and investors.

1849 **(2.) Legislation and policy documents**

1850 *(2.1) European legislation and policy documents*

1851 The European Parliament resolution of 10 March 2009 on the Small Business Act  
1852 (2008/2237(INI)) ([http://www.europarl.europa.eu/sides/getDoc.do?  
1853 type=TA&language=EN&reference=P6-TA-2009-0100](http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P6-TA-2009-0100))

1854 COM(2011)0684 – C7-0393/2011 – 2011/0308(COD): The European Parliament,  
1855 Committee of Legal Affairs - Report of 25 September 2012 on the proposal for a  
1856 directive of the European Parliament and of the Council on the annual financial  
1857 statements, consolidated financial statements and related reports of certain types  
1858 of undertakings ([http://www.europarl.europa.eu/sides/getDoc.do?  
1859 pubRef=-//EP//NONSGML+REPORT+A7-2012-0278+0+DOC+PDF+V0//EN](http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A7-2012-0278+0+DOC+PDF+V0//EN) )

1860 COM(2011)0683 – C7-0380/2011 – 2011/0307(COD): The European Parliament,  
1861 Committee of Legal Affairs - Report of 27 September 2012 on the proposal for a  
1862 directive of the European Parliament and of the Council amending Directive  
1863 2004/109/EC on the harmonisation of transparency requirements in relation to  
1864 information about issuers whose securities are admitted to trading on a regulated  
1865 market and Commission Directive 2007/14/EC  
1866 ([http://www.europarl.europa.eu/sides/getDoc.do?  
1867 pubRef=-//EP//NONSGML+REPORT+A7-2012-0292+0+DOC+PDF+V0//EN](http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A7-2012-0292+0+DOC+PDF+V0//EN) )

1868 *(2.2) Additional information on legal documents in Member States if available*

1869 The Netherlands Standard Business Reporting (SBR) program, using XBRL  
1870 taxonomies for government-to-business interactions: [http://www.sbr-nl.nl/wat-is-  
1871 sbr/international/](http://www.sbr-nl.nl/wat-is-sbr/international/)

1872 **(3.) Member States and Stakeholder input on policy context**

1873 *(3.1) Input from Member States*

1874 No specific or additional input to this version.

1875 (3.2) *Input from other Stakeholders*

1876 No specific or additional input to this version.

1877 **(4.) Standardisation needs to implement the legislation and policy**

1878 (4.1) *Commission perspective*

1879 No specific or additional input to this version.

1880 (4.2) *Member States and Stakeholder perspective*

1881 No specific or additional input to this version.

1882 **(5.) Related ongoing standardisation and research activities**

1883 (5.1) *At European level*

1884 • XBRL specifications and related resources (<http://www.xbrl.org/>);

1885 • International Financial Reporting Standards XBRL taxonomies and related

1886 resources (<http://www.ifrs.org/XBRL/Resources/Pages/Resources.aspx>);

1887 • XBRL resources for EU banking and insurance supervision

1888 (<http://www.eurofiling.info/>);

1889 • A CEN Workshop entitled “XBRL - Improving transparency in financial

1890 and business reporting” held its kick-off meeting in May 2012, and is currently

1891 finalising three CEN Workshop Agreements, expected to be published in 2014:

1892 ◦ Standard specifications for XBRL attributes ("harmonization

1893 topics");

1894 ◦ A "metadata container" to wrap a submitted XBRL instance

1895 document and compliance test;

1896 ◦ A standardised "roll-out package" that wraps the specifications as

1897 defined under previous deliverables.

1898 (5.2) *Other relevant work*

1899 No specific or additional input to this version.

1900 **(6.) Proposed new standardisation activities**

1901 (6.1) *Proposed standards developments*

1902 No activities proposed.

1903 (6.2) *Proposed other activities around standardisation*

1904 A basic survey to determine EU member states’ initiatives, resources and position

1905 on XBRL and its fit to European regulatory accounting practices is one option,

1906 depending on the findings from the above CEN workshops. Coordinated EU

1907 input to the global XBRL standardisation processes, notably in XBRL and in

1908 International Financial Reporting Standards taxonomy, could leverage

1909 multilateral efforts leading to transparent financial industries and sound

1910 governance in the post-crisis global economy.

1911 3.3.5. *Online Dispute Resolution (ODR)*

1912 **(1.) Policy area title and description**

1913 Online Dispute Resolution (ODR)

1914 This action is related to the EU policy on consumer redress and alternative  
1915 dispute resolution. The European Commission will set up a web-based European  
1916 Online Dispute Resolution ('ODR') Platform, making it possible for consumers,  
1917 traders and alternative dispute resolution ('ADR') entities in the EU Member  
1918 States to communicate with each other online, in all EU official languages and  
1919 through an accessible website, for the purpose of resolving e-commerce disputes  
1920 out of court.

1921 **(2.) Legislation and policy documents**

1922 *(2.1) European legislation and policy documents*

1923 Directive 2013/11/EU of the European Parliament and of the Council on  
1924 alternative dispute resolution for consumer disputes and amending Regulation  
1925 (EC) No 2006/2004 and Directive 2009/22/EC (Directive on consumer ADR)\*;

1926 Regulation 524/2013 of the European Parliament and of the Council on online  
1927 dispute resolution for consumer disputes and amending Regulation (EC) No  
1928 2006/2004 and Directive 2009/22/EC (Regulation on consumer ODR)

1929 *(2.2) Additional information on legal documents in Member States if available*

1930 For information available in the Member States please see the documents listed in  
1931 Annex I to this Rolling Plan. There is no additional information at this point in  
1932 time for this Rolling Plan.

1933 **(3.) Member States and Stakeholder input on policy context**

1934 *(3.1) Input from Member States*

1935 For information available in the Member States please see the documents listed in  
1936 Annex I to this Rolling Plan. There is no additional information at this point in  
1937 time for this Rolling Plan.

1938 *(3.2) Input from other Stakeholders*

1939 No specific or additional input to this version.

1940 **(4.) Standardisation needs to implement the legislation and policy**

1941 *(4.1) Commission perspective*

1942 The ODR platform will enable the online submission of complaints to a  
1943 competent ADR entity. To this end, all ADR entities established in the EU  
1944 Member States in accordance with the Directive on consumer ADR will be  
1945 connected electronically to the ODR platform.

1946 The Regulation on consumer ODR sets out the requirement for the ODR platform  
1947 to ensure the secure interchange of data with ADR entities and to comply with the  
1948 principles of the European Interoperability Framework adopted pursuant to  
1949 Decision 2004/387/EC on interoperable delivery of pan-European eGovernment  
1950 services to public administrations, businesses and citizens (IDABC).

1951 In order for the ODR platform to meet the abovementioned objectives and  
1952 requirements, it is necessary to allow for a certain degree of standardisation of



- 1953 data exchange and interoperability between the ODR platform and the ODR  
1954 systems operated by ADR entities at national level.
- 1955 (4.2) *Member States and Stakeholder perspective*  
1956
- 1957 **(5.) Related ongoing standardisation and research activities**  
1958 (5.1) *At European level*
- 1959 A CEN Workshop Agreement (CWA) was adopted in November 2009 by the  
1960 CEN Workshop on standardisation of Online Dispute Resolution tools.
- 1961 (5.2) *Other relevant work*
- 1962 At the international level, pre-standardisation activities have been undertaken  
1963 within the United Nations Centre for Trade Facilitation and Electronic Business  
1964 (UN/CEFACT).
- 1965 Relevant work is also going on in IETF – see  
1966 <http://trac.tools.ietf.org/group/iab/trac/wiki/Multi-Stake-Holder-Platform#ODR.>
- 1967 **(6.) Proposed new standardisation activities**  
1968 (6.1) *Proposed standards developments*
- 1969 The Commission aims to encourage the development of an interoperable  
1970 framework for data exchange between ODR systems, building in particular on  
1971 UN/CEFACT international standards and practices, in order to determine the  
1972 content and format of electronic document exchange and to re-use global business  
1973 processes for the definition and expression of standard data object types.
- 1974 Further involvement of European standardisation bodies, including for the  
1975 establishment of standards at European level, could be considered subject to  
1976 stakeholder interest, and alignment with UN/CEFACT.
- 1977 (6.2) *Proposed other activities around standardisation*  
1978 No further activities proposed

1979

1980

1981 **3.4. Sustainable growth**

1982 *3.4.1. Smart Grids and Smart Metering*

1983 **(1.) Policy area title and description**

1984 Smart Grids and Smart Metering

1985 One of the EU's key ambitions is to develop a low-carbon economy. To make this  
1986 happen, the EU has given policy direction through the comprehensive policy  
1987 framework proposed in the energy and climate package, including among others  
1988 the climate and energy targets for 2020:

- 1989
- 1990 ■ A reduction of at least 20% in greenhouse gases (GHG)
  - 1991 ■ A 20% share of renewable energies in EU energy consumption
  - 1992 ■ Increase of 20% energy saving compared to 1990 levels

1992 As Smart Grids could be described as an upgraded electricity network to which  
1993 two-way digital communication between supplier and consumer, intelligent  
1994 metering and monitoring systems have been added, the growing participation and  
1995 integration of ICT in the smart electricity grid is evident.

1996 The European Smart Grid Task Force defines smart grids as electricity networks  
1997 that can efficiently integrate the behaviour and actions of all users connected to it  
1998 — generators, consumers and those that do both — in order to ensure an  
1999 economically efficient, sustainable power system with low losses and high quality  
2000 and security of supply and safety.

2001 Smart grids will be the backbone of the future decarbonised power system. They  
2002 will enable improved energy efficiency and the integration of vast amounts of  
2003 Renewable Energy Sources (RES) and electric vehicles; provide an opportunity to  
2004 boost the retail market competitiveness and worldwide technological leadership  
2005 of EU technology providers, and a platform for traditional energy companies or  
2006 new market entrants such as ICT companies, including SMEs, to develop new,  
2007 innovative energy services. That dynamic should enhance competition in the  
2008 retail market, incentivise reductions in greenhouse gas emissions and provide an  
2009 opportunity for economic growth.

2010 The use of Smart Grids for future high-tech infrastructures in Europe, such as  
2011 integration of renewables and energy infrastructure for electric cars, needs to be  
2012 addressed at European level from a very beginning to create synergies, assure  
2013 interoperability and establish a real internal market.

2014 **(2.) Legislation and policy documents**

2015 *(2.1) European legislation and policy documents*

2016 [Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC](#)  
2017 [and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC](#)

2018 Directives 2009/72/EC and 2009/73/EC: Internal market in electricity and gas

2019

2020 COM(2012)663: Communication Making the internal energy market work

2021 Recommendation COM 2012/148/EU (09.03.2012) on preparations for the roll-  
2022 out of smart metering systems

2023 COM(2011) 202 Smart Grids: from innovation to deployment

2024 COM(2010) 245: “A Digital Agenda for Europe”: actions 71 & 73 address  
2025 respectively minimum functionalities to promote smart grid interoperability and a  
2026 common set of functionalities for smart meters and are directly related to the  
2027 standardisation activities at CEN/CENELEC/ETSI.

2028 COM(2009) 111: Mobilising Information and Communication Technologies to  
2029 facilitate the transition to an energy-efficient, low-carbon economy

2030 COM(2009) 519 final: Investing in the Development of Low Carbon  
2031 Technologies (SET-Plan)

2032 COM(2008) 30 final: 20 20 by 2020, Europe's climate change opportunity

2033 COM(2008) 241: Addressing the challenge of energy efficiency through  
2034 Information and Communication Technologies

2035 COM(2009) 7604: Recommendation (9.10.2009) on mobilising Information

2036 *(2.2) Additional information on legal documents in Member States if available*

2037 For information available in the Member States please see the documents listed in  
2038 Annex I to this Rolling Plan. There is no additional information at this point in  
2039 time for this Rolling Plan.

2040 **(3.) Member States and Stakeholder input on policy context**

2041 *(3.1) Input from Member States*

2042 For information available in the Member States please see the documents listed in  
2043 Annex I to this Rolling Plan. There is no additional information at this point in  
2044 time for this Rolling Plan.

2045 *(3.2) Input from other stakeholders*

2046 No specific or additional input for this version

2047 **(4.) Standardisation needs to implement the legislation and policy**

2048 *(4.1) Commission perspective*

2049 The deployment of Smart Grids will be crucial to achieve the 20-20-20 targets.  
2050 The implementation of appropriate ICT solutions will also enhance network  
2051 efficiency and improve overall system operation through better demand response  
2052 mechanisms and cost savings (remote operation of meters, lower reading costs,  
2053 avoiding investment in peak generation, etc.), which will also contribute to the  
2054 implementation of the internal energy market.

2055 Standards are needed to cover the communication needs of the grid management,  
2056 balancing and interfacing with the millions of new renewable sources, as well as  
2057 standards for the complex interactions of the new distributed energy market, and  
2058 in special a transparent Demand Response scheme.

2059 As systems need to be integrated to ensure their coherent operation in response to  
2060 user's requirements, interoperability is a first and fundamental requirement to be  
2061 considered. This can be ensured only through an appropriate standardisation  
2062 activity by reviewing existing standards or, where needed, developing new ones.  
2063 The majority (estimated at 70%) of the standards needed for the smart grid are

2064 ICT related. Of paramount importance is the agreement around data protection  
2065 and data security related standards.

2066 Communication standards will also be crucial for the deployment of electric cars  
2067 and the building-up of smart cities. Harmonised communication protocols would  
2068 provide standard components and interfaces giving ‘plug-and-play’ capability for  
2069 any new entrant to the network, such as renewables or electric cars, or the use of  
2070 open architectures based on global communication standards.

2071 A major difficulty is the choice of stakeholders which need to be brought together  
2072 to conduct the standardisation work taking into account that between smart grid  
2073 management (of relevance to utility producers, the utility network operators) and  
2074 smart consumption (involving the end consumer) a seamless environment should  
2075 be established where interests are not identical and potentially conflicting.

2076 The main coordination reference for smart grids at European level is the Smart  
2077 Grids Task Force, which was given the mission to advise the European  
2078 Commission on policy and regulatory directions at European level and to  
2079 coordinate the first steps towards the implementation of Smart Grids under the  
2080 provision of the Third Energy Package. Nine DGs are participating: ENER (chair  
2081 ), CLIMA, ENTR, ENV, CONNECT (co-chairing two of the four expert groups,  
2082 EG3 and EG4), JUSTICE, JRC, RTD and SANCO.

2083 Policy aspects relating to mandate M/490 are dealt with under the Expert Group 1  
2084 (EG1) of the Smart Grids Task Force. EG1 is chaired by DG ENER and  
2085 CONNECT is actively participating in this group. EG1 is also monitoring related  
2086 activities under mandate M/441 (Smart Meters) and M/468 (electric vehicles  
2087 chargers) to the ESOs.

#### 2088 *(4.2) Member States and Stakeholder perspective*

2089 For information available in the Member States please see the documents listed in  
2090 Annex I to this Rolling Plan. There is no additional information at this point in  
2091 time for this Rolling Plan.

### 2092 **(5.) Related ongoing standardisation and research activities**

#### 2093 *(5.1) At European level*

2094 On 1 March 2011 the European Commission issued Mandate 490 -  
2095 Standardisation Mandate to European Standardisation Organisations (ESOs) to  
2096 support European Smart Grid deployment. With this mandate CEN, CENELEC,  
2097 and ETSI were requested to develop a framework to enable European  
2098 Standardisation Organisations to perform continuous standard enhancement and  
2099 development in the field of Smart Grids, while maintaining transverse  
2100 consistency and promote continuous innovation.

2101 Policy aspects relating to mandate M/490<sup>34</sup> are dealt with under the Expert Group  
2102 1 (EG1) of the Smart Grids Task Force. EG1 is chaired by DG ENER and  
2103 CONNECT is actively participating in this group. EG1 is also monitoring related  
2104 activities under M/441 (Smart Meters) and M/468 (electric vehicles chargers) to  
2105 the ESOs. Finally, a joint ESO coordination group between mandates M/490 and  
2106 M/468 has been launched by ESOs on smart charging.

2107 In order to ensure effective collaboration, the ESOs combined their strategic  
2108 approach and established in July 2011, together with the relevant stakeholders,

59 <sup>34</sup> [http://ec.europa.eu/energy/gas\\_electricity/smartgrids/doc/2011\\_03\\_01\\_mandate\\_m490\\_en.pdf](http://ec.europa.eu/energy/gas_electricity/smartgrids/doc/2011_03_01_mandate_m490_en.pdf)

2109 the CEN-CENELEC-ETSI Smart Grid Coordination Group (SG-CG), being  
2110 responsible for coordinating the ESOs reply to M/490.

2111 The SG-CG works closely with other smart grid standards initiatives in other  
2112 regions, including with NIST in the US and activities in China and Japan.

2113 Concerning smart meters, a separate Co-ordination Group of the three ESOs is  
2114 managing the standards programme under mandate M/441.

2115 The first set of standards lists more than 400 (available and under development)  
2116 standards which, for the majority, are ICT related and support information  
2117 exchange (communication protocols and data models) and the integration of all  
2118 users into the electric system operation. It is to be noted that Set of Consistent  
2119 Standards report does not only list ESO standards but also technical specifications  
2120 from other bodies. In this context, the CEN-CLC-ETSI Smart Grid Coordination  
2121 Group would like to encourage the use of existing work.

2122 *(5.2) Other relevant work*

2123 In specific geographies:

2124 • NIST. The US government sponsored a Smart Grid  
2125 Interoperability Panel from 2009-2012 to spur cooperative industry and public  
2126 agency development of open data standards for smartgrid functionality:  
2127 <http://www.nist.gov/smartgrid/priority-actions.cfm>. In 2013, the management of  
2128 this project was turned over to industry stakeholders as a continuing standards  
2129 cooperation project: <http://sgip.org/>

2130 • Japanese Industrial Standards Committee (JISC) roadmap to  
2131 international standardisation for smart grid

2132 • The State Grid Corporation of China – SGCC Framework. A  
2133 lot of further national activities and roadmaps could be mentioned as well, such  
2134 as those of Austria, Spain, the United Kingdom, the Netherlands, France, Korea and  
2135 others.

2136 General global work:

2137 • ETSI and the OneM2M Partnership project are active in the  
2138 area of M2M with some relation to smart grids.

2139 • IEC- Strategic Group 3 and multiple activities in numbers of  
2140 specific TCs, with over 100 relevant standards. A copy of the IEC Smart Grids  
2141 System Roadmap is available at  
2142 [http://www.iec.ch/smartgrid/downloads/sg3\\_roadmap.pdf](http://www.iec.ch/smartgrid/downloads/sg3_roadmap.pdf)

2143 • [IEEE](http://www.ieee.org) has many standards and standards projects in  
2144 development from the diverse fields of digital information and controls  
2145 technology, networking, security, reliability, assessment, interconnection of  
2146 distributed resources including renewable energy sources to the grid, sensors,  
2147 electric metering, broadband over power line, and systems engineering. IEEE has  
2148 developed a guide for smart grid interoperability standardisation, IEEE 2030-  
2149 2011 IEEE Guide for Smart Grid Interoperability of Energy Technology and  
2150 Information Technology Operation with the Electric Power System (EPS), End-  
2151 Use Applications, and Loads. IEEE 2030(r) spans the three distinct perspectives  
2152 of power and energy, communications and information technology. For more

2153 information about IEEE Smart Grid and Smart Metering activities please see  
2154 <http://standards.ieee.org/develop/msp/smartgrid.pdf>.

2155 • ITU-T - Smart Grid Focus Group, which completed its work  
2156 in December 2012, with adopted deliverables at [http://www.itu.int/en/ITU-](http://www.itu.int/en/ITU-T/focusgroups/smart/Pages/Default.aspx)  
2157 [T/focusgroups/smart/Pages/Default.aspx](http://www.itu.int/en/ITU-T/focusgroups/smart/Pages/Default.aspx)

2158 • OASIS developed a series of transactive energy standards for  
2159 smart grid information, energy supply transactions and monitoring, starting in  
2160 2009 which have been adopted by some regulators as model specifications for  
2161 open energy markets. (See [https://www.oasis-open.org/committees/tc\\_cat.php?](https://www.oasis-open.org/committees/tc_cat.php?cat=smartgrid)  
2162 [cat=smartgrid](https://www.oasis-open.org/committees/tc_cat.php?cat=smartgrid) and [https://www.oasis-open.org/news/pr/oasis-members-form-](https://www.oasis-open.org/news/pr/oasis-members-form-committee-to-define-transaction-standards-for-smart-grid)  
2163 [committee-to-define-transaction-standards-for-smart-grid](https://www.oasis-open.org/news/pr/oasis-members-form-committee-to-define-transaction-standards-for-smart-grid)

## 2164 **(6.) Proposed new standardisation activities**

### 2165 *(6.1) Proposed standards development*

2166 At the end of 2012, the reference architecture and a first set of standards  
2167 (including newly delivered technical specifications) were issued by M/490 and  
2168 are available at:  
2169 <http://www.cencenelec.eu/standards/HotTopics/SmartGrids/Pages/default.aspx>.

2170 Clause 3.4 of M/490 states that if needed, the reference architecture, sustainable  
2171 processes and the set of standards will be subject to further iterations, e.g. yearly  
2172 period. An iteration of Mandate M/490 for 2013-2014 was agreed by the EC in  
2173 November 2012.

2174 The work to be carried out during the next two years shall address two main  
2175 standardisation topics:

2176 I. System interoperability testing methods and a conformance testing map by  
2177 2013

2178 II. Implementation of the methodologies developed and second set of  
2179 standards by the end of 2014.

2180 Other relevant international initiatives have to be taken into account.

### 2181 *(6.2) Proposed other activities around standardisation*

2182 No other activities required.

2183 3.4.2. *Smart Cities / Technologies and Services for a Smart and Efficient*  
2184 *Energy Use*

2185 **(1.) Policy area title and description**

2186 Smart Cities

2187 The construction sector is the highest energy consumer in the EU (about 40%)  
2188 and main contributor to GHG emissions (about 36% of the EU's total CO2  
2189 emissions and for about half of the CO2 emissions which are not covered by the  
2190 Emission Trading System). In this framework, the building industry will be one of  
2191 the key enablers of the 2050 decarbonisation goal for the European economy.  
2192 This goal links two European policies:

2193 The energy policy: scenarios by 2050 show that a 40% to 50% reduction of the  
2194 building "sector" energy consumption is mandatory by 2050, where fossil fuel  
2195 heating represents a major share (60%);

2196 The climate policy: scenarios by 2050 show that the building "sector" must target  
2197 a reduction of about 90% of its CO2 emissions, since accounting for about 1.4  
2198 Gtons of CO2 per year.

2199 **(2.) Legislation and policy documents**

2200 *(2.1) European legislation and policy documents*

2201 Directive 2003/96/EC of the Council on Energy Taxation

2202 Directive 2003/87/EC of the European Parliament and the Council on EU Trading  
2203 Scheme

2204 Directive 2004/8/EC of the European Parliament and the Council on  
2205 Cogeneration

2206 Directive 2009/28/EC of the European Parliament and the Council on the Use of  
2207 Energy from renewable sources

2208 Directives 1992/75/EC and 2010/30/EU on Labelling and Information

2209 Directives 2005/32/EC and 2009/125/EC on Eco Design of products

2210 Directive 2006/32/EC of the European Parliament and the Council on Energy  
2211 end-use efficiency and energy services

2212 Directive 2010/31/EU of the European Parliament and the Council on Energy  
2213 Performance of Buildings

2214 Regulation 2013/105/EC: Mobilising Information and Communications  
2215 Technologies to facilitate the transition to an energy-efficient, low-carbon  
2216 economy

2217 Communication COM(2012) 4701: "Smart Cities and Communities - European  
2218 Innovation Partnership"

2219 *(2.2) Additional information on legal documents in Member States if available*

2220 For information available in the Member States please see the documents listed in  
2221 Annex I to this Rolling Plan. There is no additional information at this point in  
2222 time for this Rolling Plan.

2223 **(3.) Member States and Stakeholder input on policy context**

2224 *(3.1) Input from Member States*

2225 For information available in the Member States please see the documents listed in  
2226 Annex I to this Rolling Plan. There is no additional information at this point in  
2227 time for this Rolling Plan.

### 2228 *(3.2) Input from other Stakeholders*

2229 No specific or additional input for this version

## 2230 **(4.) Standardisation needs to implement the legislation and policy**

### 2231 *(4.1) Commission perspective*

2232 At the level of Smart Cities, the interoperability need is stronger than at the level  
2233 of Buildings, - which is in the end a controlled environment -, due to the many  
2234 players, actors and system owners. This is specially so when it comes to public  
2235 services. Open data comes along with standardised open data.

2236 It has to link with the public services energy management (i.e. lighting), and  
2237 buildings energy management (public buildings, offices and businesses and  
2238 homes).

2239 From a physical point of view, we can think of the urban environment as a  
2240 hierarchical system in which, for example, buildings are grouped in  
2241 neighbourhoods, neighbourhoods in cities, cities in regions, and so on. From this  
2242 point of view, an urban area is a complex system made of smaller systems each  
2243 consisting of a set of elements which work with each other in a certain way.  
2244 However, there are many more relationships occurring which cannot be  
2245 represented as a simple hierarchical structure like a tree but with the more subtle  
2246 and complex structure of a semi lattice. In practical terms, that means that the  
2247 energy sector has a) to keep control of the elements comprising it (e.g. to assure  
2248 coordinated operation between energy transformation plants, transport and  
2249 distribution systems), and b) to prioritise across socio-economic sectors for the  
2250 resources needed to perform its tasks.

2251 The core brick in the complex system is the systems controlling the efficient  
2252 consumption of energy at buildings (BIM , BEMS ). It should address the whole  
2253 lifecycle (design of buildings, optimising energy consumption at operational level  
2254 ) to ensure seamless transfer of information; availability of energy management  
2255 appliances (sensors, switches) designed as 'plug and play' devices; compatibility  
2256 with home automation networks.

2257 In Smart Cities, nowadays, ISO standards are all in terms of the building scale,  
2258 and there are no specific International Standards for energy modelling at the  
2259 urban scale. However, starting from analysis at the building scale, the ISO  
2260 standards also can be indirectly applied to urban energy modelling.

2261 The European Commission has created a Smart Cities and Communities  
2262 European Innovation Partnership (SCC-EIP). This has established a Smart Cities  
2263 Stakeholder Platform (with ESO participation) and a High Level Group advising  
2264 the Commission. The High Level Group is preparing a Strategic Implementation  
2265 Plan (SIP) that will describe a joint vision, a common target and proposals for  
2266 implementation, which are fully expected to contain standardisation aspects.

2267 The release of the SIP and an EC Communication as well as the kick-off of the  
2268 implementation phase of the Partnership are under preparation (anticipated for  
2269 November 2013).

### 2270 *(4.2) Member States and Stakeholder perspective*



2271 For information available in the Member States please see the documents listed in  
2272 Annex I to this Rolling Plan. There is no additional information at this point in  
2273 time for this Rolling Plan

## 2274 **(5.) Related ongoing standardisation and research activities**

### 2275 *(5.1) At European level*

2276 SEMANTCO, is for the first time developing a Semantic Energy Information  
2277 Framework (SEIF) to model the energy-related knowledge planners and decision  
2278 makers need.

2279 For the area of Building Energy Management Systems, a stakeholders group  
2280 named eeSemantics on Energy Efficient Buildings Data Models has been  
2281 launched by DG CONNECT, building up from our FP7 and CIP project  
2282 participants, with a remarkable engagement of the construction industry, together  
2283 with ICT industry. Activities build on the already universally accepted  
2284 construction industry standard promoted by the buildingSmart Alliance<sup>35</sup>, IFC. It  
2285 consists mainly of extensions of IFC towards the Facility Management phase and  
2286 the adding of Energy Efficiency components. Adapt4EE, is in charge of running a  
2287 series of Vocabulary Camps along 2013 and 2014, to agree with the stakeholders  
2288 vocabularies addressing specific subareas.

2289 DG Enterprise and Industry has made a tender for a project "Stimulating  
2290 industrial innovation in the construction sector through smart use of ICT:  
2291 connecting SMEs in digital value chains". This project will, from 2013 to 2015,  
2292 provide a market analysis of the construction industry in terms of the current and  
2293 foresight integration of ICT and eBusiness solutions and systems and develop a  
2294 framework for digital value networks in the construction sector. This framework  
2295 will set the principles for interoperability among different business processes and  
2296 data exchange models in order to allow for seamless digital communication and  
2297 data flows among business partners along the construction value chain.

2298 A coordination Group on Smart Cities and Communities has been launched in  
2299 CEN-CENELEC.

### 2300 *(5.2) Other relevant work*

2301 ISO Technical Committee 268 "Sustainable development in communities" is  
2302 directly working on many relevant issues, including management systems and  
2303 indicators.

2304 Energy model terminology is specified in ISO/IEC CD 13273 (Energy efficiency  
2305 and renewable energy sources), ISO/DTR 16344 (Common terms, definitions and  
2306 symbols for the overall energy performance rating and certification of buildings),  
2307 ISO/CD 16346 (Assessment of overall energy performance of buildings),  
2308 ISO/DIS 12655 (Presentation of real energy use of buildings), ISO/CD 16343  
2309 (Methods for expressing energy performance and for energy certification of  
2310 buildings), and ISO 50001:2011 (Energy management systems – Requirements  
2311 with guidance for use).

2312 ISO/TC 257 General technical rules for determination of energy savings in  
2313 renovation projects, industrial enterprises and regions" is currently working on a  
2314 standard on "Energy Efficiency and Savings calculation for Countries, Regions  
2315 and Cities" (ISO/CD 17742)

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60 <sup>35</sup> [www.buildingsmartalliance.org](http://www.buildingsmartalliance.org)

2316 In ITU-T, a focus group on smart and sustainable cities has been initiated.

2317 **(6.) Proposed new standardisation activities**

2318 *(6.1) Proposed standards developments*

2319 None at this point in time

2320 *(6.2) Proposed other activities around standardisation*

2321 DG CONNECT Objective ICT-2013.6.4 Optimising Energy Systems in Smart  
2322 Cities includes a CSA that should identify ICT/Energy vocabularies and  
2323 ontologies to foster interoperability of Energy Management Systems related to the  
2324 building and construction domain, and beyond the building into public spaces,  
2325 neighbourhoods and districts, and analyse their relevance and possible evolution  
2326 towards formal standards; analyse their potential extension to energy management  
2327 in industry and commerce.

2328 In the area of smart appliances (white goods, HVAC systems, lighting, etc.) a  
2329 working group has been established bringing together energy consuming and  
2330 producing products (EupP) manufacturers and stakeholders with the objective of  
2331 creating a roadmap towards agreed solutions for interoperability. Focus is  
2332 communication with smart appliances at information level in smart homes. Long  
2333 term perspective is M2M solutions in the context of IoT.

2334 In addition as regards smart appliances, the ongoing work of CENELEC (noting,  
2335 for example, EN 50523:2009 'Household appliances interworking') and IEC  
2336 needs to be referenced.

2337 3.4.3. *ICT Environmental Impact*

2338 **(1.) Policy area title and description**

2339 ICT Environmental Impact

2340 ICT is currently one of the fastest growing GHG emission and energy  
2341 management sector.

2342 At the level of ICT multiple methodologies were present to assess the  
2343 environmental impact of ICT itself but they didn't provide a consistent  
2344 methodological framework for this assessment. A solution to this is the work  
2345 developed in various European and International standardisation bodies like ETSI  
2346 (European Telecommunication Standard Institute), the ITU (International  
2347 Telecommunications Unit), IEC (International Electrotechnical Commission),  
2348 ISO (International standardisation Organization) and others around  
2349 methodologies to assess this environmental impact, currently focused on energy  
2350 management including energy consumption and GHG emissions, in a widely  
2351 consented way. This work is done together with industry, standardisations bodies  
2352 and public authorities and it is expected to be extended to water, raw materials  
2353 and other environmental criteria.

2354 **(2.) Legislation and policy documents**

2355 *(2.1) European legislation and policy documents*

2356 COM(2010) 245: “A Digital Agenda for Europe”, key Key Action 12:

2357 1. Assess whether the ICT sector has developed common measurement  
2358 methodologies

2359 2. Propose legal measures if appropriate

2360 *(2.2) Additional information on legal documents in Member States if available*

2361 For information available in the Member States please see the documents listed in  
2362 Annex I to this Rolling Plan. There is no additional information at this point in  
2363 time for this Rolling Plan

2364 **(3.) Member States and Stakeholder input on policy context**

2365 *(3.1) Input from Member States*

2366 For information available in the Member States please see the documents listed in  
2367 Annex I to this Rolling Plan. There is no additional information at this point in  
2368 time for this Rolling Plan

2369 *(3.2) Input from other Stakeholders*

2370 No specific or additional input to this Rolling Plan

2371 **(4.) Standardisation needs to implement the legislation and policy**

2372 *(4.1) Commission perspective*

2373 A key challenge is in achieving transparency around claims relating to the  
2374 environmental performance of ICT products and services, and setting an effective  
2375 basis to drive competition

2376 In parallel the ESOs are working on defining energy efficient KPIs in the  
2377 framework of mandate M/462 from the EC.

2378 Starting at the level of "Good, networks and Services" both ITU and ETSI have  
2379 approved methodologies for the assessment of the environmental impact. These  
2380 will allow to assess in a transparent, qualitative, accurate and consistent the  
2381 footprint among others of various products and services that are part of our daily  
2382 digital live like email, telephone services, laptops, broadband access... As well,  
2383 companies, public bodies and other organizations will be able to assess and report  
2384 their own ICT footprint based among others on ITU's "ICT in Organization"

2385 Building on top of the above mentioned two other methodologies are being developed:

2386 • "L.ICT projects" where the enabling effect of ICT projects in reducing the  
2387 GHG emissions in the ICT and more importantly, non ICT sectors like transport,  
2388 buildings or smart grid can be assessed.

2389 • "L.Cities methodology": where the footprint of ICT in cities and the city  
2390 dimension of ICT projects & services are being considered. The European  
2391 Commission through DG CNECT H5 has been appointed in the important role of  
2392 Chief editor.

#### 2393 (4.2) Member States and Stakeholder perspective

2394 For information available in the Member States please see the documents listed in  
2395 Annex I to this Rolling Plan. There is no additional information at this point in  
2396 time for this Rolling Plan

### 2397 (5.) Related ongoing standardisation and research activities

#### 2398 (5.1) At European level

2399 On top of developing the methodologies the European Commission has  
2400 concluded, with the support of ICT companies, the piloting of various  
2401 methodologies for Goods, networks, services & Organizations. Elements like  
2402 compatibility and workability of different standards have been assessed with a  
2403 positive outcome regarding these two elements. As an example, ITU & ETSI are  
2404 going to work together to further align their methodologies around "Goods,  
2405 networks and services"

2406 Impact and measure of progress: The impact will strongly depend on the uptake  
2407 of these methodologies and associated regulation if defined. Once this point is  
2408 clarified the progress could be measured in for instance number of companies  
2409 reporting their footprint calculated using these methodologies.

2410 Mandate M/462 on efficient energy use in large ICT networks was accepted by  
2411 the ESOs to provide standards for measurement and monitoring. This mandate is  
2412 not only limited to networks but extends as well to Data Centers and other ICT  
2413 nodes.

#### 2414 (5.2) Other relevant work

2415 No specific or additional input to this Rolling Plan

### 2416 (6.) Proposed new standardisation activities

#### 2417 (6.1) Proposed standards developments

2418 Not excluding others, the following standardisation activities might be needed:

2419 ◦ Guidelines for the environmental footprinting of ICT networks, products or  
2420 services.

- 2421      ○ Guidelines for Organizations ICT footprint reporting.
- 2422      ○ On Data Centres and other ICT nodes the ongoing standardisation activities by  
2423 CEN/CENELEC/ETSI will as well be considered for possible legislation. These  
2424 activities are among others discussed in:
- 2425      ○ CENELEC: CLC TC215 WG3 and a number of other TCs dealing with specific  
2426 appliances
- 2427      ○ CEN/CENELEC/ETSI Coordination Group Green Data Centres : (further to  
2428 request from CENELEC: CLC BT WG132-3)
- 2429      ○ ETSI: TC ATTm and former STF 439 working on the definition of Global KPIs  
2430 for Energy Management of Data Centres
- 2431      ○ ETSI: ETSI Industrial Specification Group Operational Energy efficiency for  
2432 Users (ISG OEU) gathering ICT Users from the whole industry (all sectors, e.g.  
2433 aircraft factories, banks, insurances, energy providers) issuing Position Papers  
2434 and Referential Specifications on Global KPIs and implementation sustainable  
2435 standardisation. These Position Papers are issued to support the development of  
2436 needed standards by standardisation technical committees.
- 2437      (6.2) *Proposed other activities around standardisation*
- 2438      Both the L.ICT Projects and L.Cities methodology are foreseen to be final in  
2439 2013.
- 2440      An impact assessment on how better use the methodologies to contribute to the  
2441 20/20/20 objectives will take place in 2013.
- 2442      Not excluding others, following standardisation activities might be needed:
- 2443      – Definition of Global KPIs for Energy Management of Fixed and Mobile  
2444 access, and Core networks
- 2445      – Guidelines for the use of Global KPIs for Data Centres.
- 2446      – Guidelines for the definition of Green Data Centres.
- 2447      – Definition of Global KPIs for Data Services.
- 2448      – Guidelines for the definition of Green Data Services.
- 2449      – Definition and guidelines of KPIs for ICT networks.
- 2450      – Ontologies and vocabularies to foster interoperability of Energy Systems /  
2451 white goods / brown goods / inside the buildings

2452

2453 *3.4.4. European Electronic Toll Service (EETS)*

2454 **(1.) Policy area title and description**

2455 European Electronic Toll Services (EETS)

2456 Intelligent Transport Systems, Continuity of traffic and freight management, and  
2457 Implementation of the interoperability of electronic road.

2458 **(2.) Legislation and policy documents**

2459 *(2.1) European legislation and policy documents*

2460 Directive 2004/52/EC of the European Parliament and of the Council of 29 April  
2461 2004 on the interoperability of electronic road toll systems in the Community;

2462 Commission Decision 2009/750/EC of 6 October 2009 on the definition of the  
2463 European Electronic Toll Service and its technical elements;

2464 Directive 2010/40/EU of the European Parliament and of the Council of 7 July  
2465 2010 on the framework for the deployment of Intelligent Transport Systems in  
2466 the field of road transport and for interfaces with other modes of transport;

2467 COM(2008)886: Action Plan for the Deployment of Intelligent Transport  
2468 Systems in Europe;

2469 COM(2012)474: Implementation of the European Electronic Toll Service.

2470 *(2.2) Additional information on legal documents in Member States if available*

2471 For information available in the Member States please see the documents listed in  
2472 Annex I to this Rolling Plan. There is no additional information at this point in  
2473 time for this Rolling Plan

2474 **(3.) Member States and Stakeholder input on policy context**

2475 *(3.1) Input from Member States*

2476 For information available in the Member States please see the documents listed in  
2477 Annex I to this Rolling Plan. There is no additional information at this point in  
2478 time for this Rolling Plan

2479 *(3.2) Input from other Stakeholders*

2480 No specific or additional input to this Rolling Plan

2481 **(4.) Standardisation needs to implement the legislation and policy**

2482 *(4.1) Commission Perspective*

2483 European Electronic Toll Service (EETS), as required by Directive 2004/52/EC,  
2484 will achieve interoperability of the electronic road toll systems in the European  
2485 Union<sup>1</sup>. EETS involve two main stakeholders:

2486 • Toll chargers, which operate either on behalf of the Member State or in the  
2487 framework of a concession contract with the Member State, manage the  
2488 infrastructure and levy the tolls for the circulation of vehicles on the network they  
2489 manage.

2490 • EETS Providers, supplying motorists or road hauliers with the necessary  
2491 equipment and services to access all EU tolled infrastructures and ensuring the  
2492 payment to the toll chargers of the fees due for the use of their network.

2493 Directive 2004/52/EC provides that Member States having electronic road toll  
2494 systems would ensure that operators offer the European Electronic Toll Service to  
2495 heavy goods vehicles at the latest three years after the entry into force of the  
2496 decision defining EETS<sup>36</sup> and to all other categories of vehicle at the latest five  
2497 years after.

2498 It is required to further develop standards allowing (i) to monitor and enforce  
2499 EETS, in particular for autonomous GNSS-based toll systems (Trusted Recorders  
2500 ); (ii) to exchange information between Service Provision and Toll Charging  
2501 activities (Interoperable Application Profiles).

2502 *(4.2) Member States and Stakeholder perspective*

2503 For information available in the Member States please see the documents listed in  
2504 Annex I to this Rolling Plan. There is no additional information at this point in  
2505 time for this Rolling Plan

2506 **(5.) Related ongoing standardisation and research activities**

2507 *(5.1) At European level*

2508 Under Mandate M/338, CEN and ETSI have developed standards for DSRC- and  
2509 GNSS-based electronic fee collection systems.

2510 *(5.2) Relevant other work*

2511 No specific or additional input to this Rolling Plan

2512 **(6.) Proposed new standardisation activities**

2513 *(6.1) Proposed standards developments*

2514 • Develop technical specification and test standards for the secure monitoring of  
2515 toll systems (Compliance Checking and Trusted Recorders) and for profiles of  
2516 information exchange between Service Provision and Toll Charging activities.

2517 • Revision of test standards for EN 17575-1/2/3/4, EN 12813 and EN 13141,  
2518 which form the basis of satellite-based electronic tolling systems, and EN  
2519 15509, the profile standard for DSRC-based electronic tolling.

2520 *(6.2) Proposed other activities around standardisation*

2521 No specific or additional input to this Rolling Plan

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61 <sup>36</sup> Decision 2009/750/EC defining EETS entered into force the 8 October 2009.

2522 3.4.5. *Intelligent Transport Systems (ITS)*

2523 **(1.) Policy area title and description**

2524 Intelligent Transport Systems (ITS)

2525 ITS means applying Information and Communication Technologies (ICT) to the  
2526 transport sector. ITS services and applications can create clear benefits in terms of  
2527 transport efficiency, sustainability, accessibility, safety and security, whilst  
2528 contributing to the EU Internal Market and competitiveness objectives.

2529 **(2.) Legislation and policy documents**

2530 *(2.1) European legislation and policy documents*

2531 C(2013) 885/2013 final: Commission Delegated Regulation (EU) of 15.5.2013  
2532 supplementing ITS Directive 2010/40/EU of the European Parliament and of the  
2533 Council with regard to the provision of information services for safe and secure  
2534 parking places for trucks and commercial vehicles

2535 Directive 2010/40/EU of the European Parliament and of the Council of 7 July  
2536 2010 on the framework for the deployment of Intelligent Transport Systems in the  
2537 field of road transport and for interfaces with other modes of transport

2538 Commission Decision 2008/8455/EC final of 19/12/2008 on the conclusion of an  
2539 Implementing Arrangement between the European Commission and the  
2540 Department of Transportation of the United States of America in the field of  
2541 research on Intelligent Transport Systems and Information and Communication  
2542 Technologies applications to road transport

2543 COM(2008)886 final: Communication from the Commission "Action Plan for the  
2544 Deployment of Intelligent Transport Systems in Europe

2545 Directive 2004/52/EC of the European Parliament and of the Council of 29 April  
2546 2004 on the interoperability of electronic road toll systems in the Community (OJ  
2547 L166, 30.4.2004. Corrected version in OJ L200, 7.6.2004)

2548 Commission Decision 2009/750/EC of 6 October 2009 on the definition of the  
2549 European Electronic Toll Service and its technical elements (notified under  
2550 document C(2009) 7547)

2551 Commission Decision 2008/671/EC of 5 August 2008 on the harmonised use of  
2552 radio spectrum in the 5875-5905 MHz frequency band for safety-related  
2553 applications of Intelligent Transport Systems (ITS)

2554 Recommendation C/2006/7125: Safe and efficient in-vehicle information and  
2555 communication systems: update of the European statement of principles on  
2556 human machine interface (EsoP).

2557 *(2.1) Additional information on legal documents in Member States if available*

2558 Extract from 'ICT Strategy of the German Federal Government: Digital Germany  
2559 2015' (TFRP011\_DE\_ict-strategy-digital-germany-2015.pdf). Measure listed on  
2560 page 35 'Implementation of Directive 2010/40/EU of the European Parliament  
2561 and of the Council of 7 July 2010 on the framework for the deployment of  
2562 Intelligent Transport Systems in the field of road transport and for interfaces with  
2563 other modes of transport'.

2564 Extract from 'ICT for Everyone – A Digital Agenda for Sweden'  
2565 (TFRP037\_SV\_ICT\_for\_Everyone-ADigitalAgendaForSweden.pdf). 'The



2566 Government established a Council for Intelligent Transport Systems (ITS Council  
2567 ) in June 2010. The aim is to make better use of the opportunities to use  
2568 information and communication technology in the transport system to attain  
2569 transport and business policy objectives. The Council is to develop forms of  
2570 cooperation between authorities and the business community, provide advice to  
2571 and speed up the work of the Swedish Transport Administration and other parties  
2572 on implementing the action plan for intelligent transport systems and promote  
2573 greater Swedish action in the EU. A final report is due to be presented by 31  
2574 December 2012’.

### 2575 **(3.) Member States and Stakeholder input on policy context**

#### 2576 *(3.1) Input from Member States*

2577 Pursuant Directive 2010/40/EU, Member States have submitted to the  
2578 Commission information on their national activities and projects on national ITS  
2579 actions. In addition, several Member States gave their agreement to the  
2580 publication of their initial contributions:

2581 [http://ec.europa.eu/transport/themes/its/road/action\\_plan/its\\_national\\_reports\\_en.  
2582 htm](http://ec.europa.eu/transport/themes/its/road/action_plan/its_national_reports_en.htm)

#### 2583 *(3.1) Input from other Stakeholders*

2584 No specific or additional input to this Rolling Plan

### 2585 **(4.) Standardisation needs to implement the legislation and policy**

#### 2586 *(4.1) Commission perspective*

2587 To take full advantage of the benefits that ICT based systems and applications can  
2588 bring to the transport sector it is necessary to ensure interoperability and  
2589 continuity of the services among the different systems throughout Europe. The  
2590 existence of common European standards and technical specifications is  
2591 paramount to ensure the interoperability of ITS services and applications as well  
2592 as to accelerate their introduction and impact. International cooperation aiming at  
2593 global harmonisation is relevant in this area.

#### 2594 *(4.2) Member States and Stakeholder perspective*

2595 Stakeholders suggest to develop a reservation standard for the implementation of  
2596 reservation services for safe and secure parking places for trucks and commercial  
2597 vehicles.

### 2598 **(5.) Related ongoing standardisation and research activities**

#### 2599 *(5.1) At European level*

2600 Mandate M/453: Co-operative systems for Intelligent Transport in the field of  
2601 information and communication technologies to support interoperability of co-  
2602 operative systems for intelligent transport in the European Community (C-ITS).

2603 The standardisation work for Co-operative Intelligent Transport Systems (C-ITS)  
2604 is well advanced in both CEN (TC 278 WG16) and ETSI (TC ITS) but also other  
2605 standardisation organisations have provided standards relevant for C-ITS, falling  
2606 within the scope of Mandate M/453<sup>37</sup>. Evaluation of the application of existing  
2607 standards is an ongoing activity in the standardisation process in the relevant

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62 <sup>37</sup> The final status report under mandate M/453 is available at:  
63 [http://www.etsi.org/images/files/technologies/Final Joint Mandate M453 Report 2013-07-15.pdf](http://www.etsi.org/images/files/technologies/Final_Joint_Mandate_M453_Report_2013-07-15.pdf)

2608 CEN, ISO, SAE, IEEE and ETSI Technical Committees and their Working  
2609 Groups.

2610 Release 1 is close to finalization – see ETSI TC ITS technical report TR 101 067  
2611 with the Release 1 standards and the development of ISO TR 17465-3 with the  
2612 CEN/ISO Release 1 list provides the status of the initial standardisation for  
2613 cooperative ITS in Europe. After finalization and publication of the ISO TR  
2614 17465-3 a joint document listing Release 1 standards will be developed also  
2615 including other relevant standards from other SDOs such as SAE and IEEE. This  
2616 will be done end of 2013/beginning 2014.

2617

2618 Cooperation is also ensured through the ITS Standardisation Coordination Group  
2619 (ITS-CG).

2620 Contacts with stakeholder organizations have been ongoing as indicated in the  
2621 Response to Mandate M/453 and further stakeholder organizations have been  
2622 included in the ETSI TC ITS standardisation work such as ERTICO – ITS  
2623 Europe, the GSM-A organization and the iMobility Forum. To provide detailed  
2624 information about their standardisation activities ETSI and CEN/TC278 have  
2625 developed open web sites: [www.etsi.org/m453](http://www.etsi.org/m453); [www.itsstandards.eu](http://www.itsstandards.eu) and  
2626 [www.tc278.eu](http://www.tc278.eu). These websites contain information about standardisation  
2627 activities and important events.

2628 The industry organization Car-2-Car Communication Consortium (C2C-CC) is  
2629 actively participating in the ETSI TC ITS work providing chairmanship for  
2630 working groups and the committee itself. The automotive industry is also  
2631 represented and contributes to the standardisation work in CEN in the relevant  
2632 working groups. Similarly the COMeSafety2 project strongly supports the  
2633 standardisation activities within both CEN/ISO and ETSI. The iCar Support  
2634 project provides the chairman of ETSI TC ITS WG2 on Architecture issues.

2635 The standardisation activities are supported by RTD projects, pilots and field  
2636 operational tests in the area of C-ITS, in particular contributing to fine-tuning the  
2637 standards, such as DriveC2X, FOTSIS, PRESERVE, ITSSv6, ComeSafety2,  
2638 COMPASS4D, iMobilitySupport, SIM-TD, SCORE@F, eCoMove, EasyWay.

2639 Regarding ICT for Electric Vehicles/Electromobility, there are several EU funded  
2640 projects with possible outcomes relevant for standardisation, such as Mobinet,  
2641 Mobincity, eCo-FEV; E-DASH, eDAS, SmartV2G, ODIN, COSIVU, SafeAdapt,  
2642 Smart-LIC - and the pilots ICT4EVEU, MOBI.Europe, MOLECULES,  
2643 SmartCEM and Green Emotion and the support action Smart EV-VC

2644

2645 *(5.2) Other relevant work*

2646 Internationally, standardisation activities are taken up by ISO TC 204, with strong  
2647 cooperation with CEN TC 278, but also by TC 22. ITU has also established a  
2648 group on ITS.

2649 In addition standardisation relevant to ITS is done by other standardisation bodies  
2650 like SAE, IEEE or ARIB.

2651 ISO/TS 15638-19:2013 ITS – Framework for collaborative telematics  
2652 applications for regulated commercial freight vehicles (TARV Part 19). It is at an

2653 early stage of development but not mature enough to serve as standard for  
2654 reservation at that stage.

2655 International cooperation for the development of harmonised global standards is  
2656 particularly important in these areas. Agreements with the US Department of  
2657 Transport and with the Japanese Ministry for Land Transport and Industry have  
2658 been concluded regarding ICT applications to road transport. Cross-regional  
2659 harmonisation task groups (HTGs) have been established in this area. Currently  
2660 the CAMP/WIIC and the C2C-CC and Japanese OEM are working to solve  
2661 coordination requirements for Day 1 deployment expected in 2015 in Europe.

2662 ETSI has cooperation and liaison agreements with relevant standards  
2663 organizations such as IEEE, SAE, ISO, IETF, and standardisation supporting  
2664 industry groups like TISA. Additionally ETSI have liaisons and contacts with  
2665 regional and national standards organizations such as ARIB (Japan), CCSA  
2666 (China) and TTA (Korea) as well as the Asian Pacific Telecommunication  
2667 organization (APT).

2668 IEEE has standards activities in many aspects of ITS, such as vehicle  
2669 communications and networking (IEEE 802 series), vehicle to grid  
2670 interconnectivity (IEEE P2030.1), addressing applications for electric-sourced  
2671 vehicles and related support infrastructure and also communication for charging  
2672 (IEEE 1901). In addition, the IEEE 1609 Family of Standards for Wireless Access  
2673 in Vehicular Environments (WAVE) define an architecture and a complementary,  
2674 standardised set of services and interfaces that collectively enable secure vehicle-  
2675 to-vehicle (V2V) and vehicle-to-infrastructure (V2I) wireless communications.  
2676 These standards are designed to provide the foundation for a broad range of  
2677 applications in the transportation environment, including vehicle safety,  
2678 automated tolling, enhanced navigation, traffic management and many others. For  
2679 more information please see <http://standards.ieee.org/develop/msp/its.pdf>.

## 2680 **(6.) Proposed new standardisation activities**

### 2681 *(6.1) Proposed standards developments*

2682 • Co-operative systems. There is a need to complete the minimum set of  
2683 standards required to deploy C-ITS systems and application, completing the  
2684 activities foreseen in the M/453, and achieving the Release 1 and 2 for C-ITS,  
2685 including inter-vehicle communications (V2V), vehicle to infrastructure and  
2686 infrastructure to vehicle communications (V2I/I2V) and infrastructure to  
2687 infrastructure communications (I2I). Plugtest activities for interoperability testing,  
2688 and guidelines with methods for assessing the conformity of the identified  
2689 minimum set of standards are also needed.

2690 • Electric Vehicles (EV): Taking into account the C-ITS  
2691 architecture, ICT related standards to support electric vehicles take-up, in  
2692 particular vehicle-to-grid (V2G) communication protocols, message datasets,  
2693 interfaces, and back-office platforms. Regarding in-vehicle systems, integration of  
2694 EVs communication with car architectures; subsystem partitioning and their  
2695 interfaces; X-by-wire controls; Testing and management of energy storage  
2696 systems with on board BMS, metering and certification.

2697 • Open in-vehicle platform architecture: the development, operation and  
2698 user acceptance of vehicle-based intelligent transport systems and services will  
2699 benefit from an agreed open in-vehicle platform architecture enabling a 'single

2700 platform – multiple services' approach and ensuring  
2701 interoperability/interconnection with legacy in-vehicle communication networks  
2702 (CAN-bus) and (generic) infrastructure systems and facilities. The issue so far has  
2703 been addressed in fragmented way, providing building blocks (e.g., the research  
2704 projects CVIS, GST, OVERSEE, the eSafety Working Group on SOA and the  
2705 recommendations of the EeIP Task Force OPEN and the study from the ITS) but  
2706 an overall logical and cost-effective synthesis seems to be lacking. Prior to  
2707 launching the Mandate it is necessary to define the precise standardisation  
2708 requirements needed, taking into consideration latest results from a study  
2709 launched under the ITS Action plan (action 4.1) focusing on synergies among  
2710 legal provisions and obligations for HGV.

2711 • Quality: the establishment of sound business or cost models in light of  
2712 provision of ITS services depends on a generic and overarching definition/  
2713 description of the parameters, indicators and potentially also detailed processes  
2714 that enable earmarking of data quality and/or the quality of resulting ITS services.  
2715 A commonly agreed vision on quality also seems a prerequisite to discuss and  
2716 (potentially) define liability-related aspects.

2717 • Digital Maps: There is a need for standards / specifications to steer  
2718 and manage the integration of accurate (public) road data in digital maps, and  
2719 their timely updating. Work should be based on the results of the ROSATTE  
2720 project (7FP) and subsequent activities carried out by the iMobility Forum  
2721 'Digital Maps Working Group', and consider a possible alignment with the  
2722 INSPIRE technical Framework.

2723 • Public Transport interoperability: It is needed to complement the  
2724 existing IOPTA (Interoperable public transport architecture) standard EN 15320  
2725 to provide Europe with complete standardised data structures and interoperable  
2726 fare management (IFM) schemes. Urban stakeholders should also actively  
2727 participate.

2728 • Information and reservation services for safe and secure parking  
2729 places for trucks and commercial vehicles: There is a need of standards  
2730 concerning the necessary interface between the request for reservation for a  
2731 vehicle and the broker responding to the request in quasi real-time. The  
2732 standardisation of the information exchange is requested by ITS services  
2733 providers in order to lower the cost of implementing such services. This will also  
2734 be a mean to accelerate the take up of this market and the provision.

2735 • The development and use of novel ITS services and applications  
2736 imply guidance and potentially technical specifications to ensure a correct and  
2737 safe on-board 'Human-Machine-Interaction', enabling safe integration and  
2738 operation of nomadic devices. Results of the research project AIDE ("Adaptive  
2739 Integrated Driver vehicle InterfacE"), the conclusions of the Nomadic Device  
2740 Forum and the European Statement of Principles (ESoP) on safe HMI shall be  
2741 taken into consideration.

2742 • International cooperation aiming at achieving the necessary global  
2743 harmonisation of standards is paramount in the field of ITS, in particular with the  
2744 USA and Japan, with which implementation agreements exist, but may also be  
2745 extended to other regions.

2746

2747 (6.2) *Proposed other activities around standardisation*

2748 No specific or additional input to this Rolling Plan

2749 **3.5. Key enablers and security**

2750 *3.5.1. Cloud computing*

2751 **(1.) Policy area title and description**

2752 Cloud computing

2753 Establishing a coherent framework and conditions for Cloud Computing is one of  
2754 the key priorities of the newly updated Digital Agenda for Europe. Cloud  
2755 computing is driving a paradigm shift in the delivery of digital technologies thus  
2756 enhancing innovation, digital single market and access to content.

2757 **(2.) Legislation and policy documents**

2758 *(2.1) European legislation and policy documents*

2759 COM(2012)529 "Unleashing the Potential of Cloud Computing in Europe"

2760 COM(2012)784 "The Digital Agenda for Europe – Driving European growth  
2761 digitally"

2762 *(2.2) Additional information on legal documents in Member States if available*

2763 Extract from 'ICT Strategy of the German Federal Government: Digital Germany  
2764 2015' (TFRP011\_DE\_ict-strategy-digital-germany-2015.pdf). Measure listed on  
2765 page 10 for Cloud reads 'The new Cloud Computing Action Programme  
2766 comprises four fields of activity: Harnessing innovation and market potential  
2767 (research programme for secure Internet services, cloud computing for small and  
2768 medium-sized enterprises and the public sector - trusted cloud; Creating a pro-  
2769 innovative framework (security and legal framework, standards, certification);  
2770 Co-shaping international developments; Providing informational guidance'.

2771 **(3.) Member States and Stakeholder input on policy context**

2772 *(3.1) Input from Member States*

2773 For information available in the Member States please see the documents listed in  
2774 Annex I to this Rolling Plan. There is no additional information at this point in  
2775 time for this Rolling Plan

2776 *(3.2) Input from other Stakeholders*

2777 Coordination with the stakeholders is important. The stakeholders support the  
2778 advisory and coordination groups the Commission has set up. Coordination  
2779 between these groups is equally important.

2780

2781 **(4.) Standardisation needs to implement the legislation and policy**

2782 *(4.1) Commission perspective*

2783 See key action 1 of the EU Cloud Strategy COM(2012)529 "Unleashing the  
2784 Potential of Cloud Computing in Europe".

2785 *(4.2) Member States and Stakeholder perspective*

2786 For information available in the Member States please see the documents listed in  
2787 Annex I to this Rolling Plan. There is no additional information at this point in  
2788 time for this Rolling Plan

2789 **(5.) Related ongoing standardisation and research activities**

2790 *(5.1) At European level*

2791 The Commission has tasked ETSI to coordinate with stakeholders in a transparent  
2792 and open way to identify by 2013 a detailed map of the necessary standards (inter  
2793 alia for security, interoperability, data portability and reversibility). For more  
2794 information see the ETSI Cloud Standards Coordination (CSC) Task Force web  
2795 site <<http://csc.etsi.org>>.

2796 *(5.2) Other relevant work*

2797 The **Cloud Standards Customer Council** is an end user advocacy group  
2798 dedicated to accelerating cloud's successful adoption, and drilling down into the  
2799 standards, security and interoperability issues surrounding the transition to the  
2800 cloud. CSCC provides cloud users with the opportunity to drive client  
2801 requirements into standards development organizations and deliver materials such  
2802 as best practices and use cases to assist other enterprises.

2803 <http://www.cloud-council.org/>

2804 **Distributed Management Task Force (DMTF)**. DMTF's Cloud Management  
2805 Initiative is focused on developing interoperable cloud infrastructure management  
2806 standards and promoting adoption of those standards in the industry. The work of  
2807 DMTF working groups promoted by the Cloud Management Initiative is focused  
2808 on achieving interoperable cloud infrastructure management between cloud  
2809 service providers and their consumers and developers.

2810 <http://www.dmtf.org/standards/cloud>

2811 **ETSI - TC CLOUD**: The goal of ETSI TC CLOUD (previously TC GRID) is to  
2812 address issues associated with the convergence between IT (Information  
2813 Technology) and Telecommunications. The focus is on scenarios where  
2814 connectivity goes beyond the local network. This includes not only Grid  
2815 computing but also the emerging commercial trend towards Cloud computing  
2816 which places particular emphasis on ubiquitous network access to scalable  
2817 computing and storage resources.

2818 <http://www.etsi.org/technologies-clusters/technologies/grid-and-cloud-computing>

2819 **Global Inter-Cloud Technology Forum (GICTF)** is promoting standardization  
2820 of network protocols and the interfaces through which cloud systems inter-work  
2821 with each other, to promote international inter-working of cloud systems, to  
2822 enable global provision of highly reliable, secure and high-quality cloud services,  
2823 and to contribute to the development Japan's ICT industry and to the  
2824 strengthening of its international competitiveness.

2825 [http://www.gictf.jp/index\\_e.html](http://www.gictf.jp/index_e.html)

2826 **ISO/IEC - JTC 1/SC 38**: Standardization for interoperable Distributed  
2827 Application Platforms and Services including: Web Services, Service Oriented  
2828 Architecture (SOA), and Cloud Computing.

2829 [http://www.iso.org/iso/jtc1\\_sc38\\_home](http://www.iso.org/iso/jtc1_sc38_home)

2830 [ISO/IEC JTC 1 / SC 27: Security Techniques: Development of standards for the](#)  
2831 [protection of information and ICT. This includes generic methods, techniques and](#)  
2832 [guidelines to address both security and privacy aspects.](#)

2833 [http://www.iso.org/iso/iso\\_technical\\_committee?commid=45306](http://www.iso.org/iso/iso_technical_committee?commid=45306)

2834 **ITU-T SG13:** Study Group 13 leads ITU's work on standards for next generation  
2835 networks (NGN) and future networks and is the primary SG working on Cloud  
2836 Computing. The Focus Group on Cloud Computing has published a report on  
2837 cloud computing and has concluded its work.

2838 <http://www.itu.int/en/ITU-T/studygroups/2013-2016/13/Pages/default.aspx>

2839 The IEEE Intercloud Testbed (“Testbed” for short) creates a global lab - to prove  
2840 and improve the Intercloud, based on IEEE P2302 Draft Standard for Intercloud  
2841 Interoperability and Federation. To that end, IEEE is partnering with companies,  
2842 universities, and research institutions around the world to create a well-connected  
2843 standards-based platform for the Intercloud. The IEEE Cloud Computing Testbed  
2844 also could be used to experiment with other IEEE cloud computing products and  
2845 services such as eLearning education modules.

2846 <http://standards.ieee.org/develop/msp/cloudcomputing.pdf>.

2847 The IETF has multiple groups working on standards for virtualization techniques,  
2848 including techniques used in Cloud Computing and Data Centers.

2849

2850 <http://trac.tools.ietf.org/group/iab/trac/wiki/Multi-Stake-Holder-Platform#Cloud>.

2851 **Open Grid Forum (OGF)** is a leading standards development organization  
2852 operating in the areas of grid, cloud and related forms of advanced distributed  
2853 computing. The OGF community pursues these topics through an open process  
2854 for development, creation and promotion of relevant specifications and use cases.

2855 <http://www.ogf.org/>

2856 **Object Management Group (OMG):** OMG's focus is always on modeling, and  
2857 the first specific cloud-related specification efforts have only just begun, focusing  
2858 on modeling deployment of applications & services on clouds for portability,  
2859 interoperability & reuse.

2860 <http://www.omg.org/>

2861 **The Open Cloud Consortium (OCC)** supports the development of standards for  
2862 cloud computing and frameworks for interoperating between clouds; develops  
2863 benchmarks for cloud computing; and supports reference implementations for  
2864 cloud computing, preferably open source reference implementations.

2865 The OCC has a particular focus in large data clouds. It has developed the  
2866 MalStone Benchmark for large data clouds and is working on a reference model  
2867 for large data clouds.

2868 <http://opencloudconsortium.org/>



2869 OASIS hosts multiple standardisation projects for cloud computing management,  
2870 interoperability and functionality, including the Cloud Application Management  
2871 for Platforms (CAMP), a Cloud Authorization project, the OASIS Identity in the  
2872 Cloud project, the OASIS Open Data Protocol (Odata) Protocol, and the  
2873 Topology and Orchestration Specification for Cloud Applications (TOSCA).  
2874 [https://www.oasis-open.org/committees/tc\\_cat.php?cat=cloud](https://www.oasis-open.org/committees/tc_cat.php?cat=cloud)

2875 **Storage Networking Industry Association (SNIA):** The Cloud Work Group  
2876 exists to create a common understanding among buyers and suppliers of how  
2877 enterprises of all sizes and scales of operation can include Cloud Computing  
2878 technology in a safe and secure way in their architectures to realize its significant  
2879 cost, scalability and agility benefits. It includes some of the industry's leading  
2880 cloud providers and end-user organizations, collaborating on standard models and  
2881 frameworks aimed at eliminating vendor lock-in for enterprises looking to benefit  
2882 from cloud products and services.

2883 <http://www.snia.org/cloud>

2884 **TM Forum:** The primary objective of TM Forum's Cloud Services Initiative is to  
2885 help the industry overcome these barriers and assist in the growth of a vibrant  
2886 commercial marketplace for cloud based services. The centerpiece of this  
2887 initiative is an ecosystem of major buyers and sellers who will collaborate to  
2888 define a range of common approaches, processes, metrics and other key service  
2889 enablers.

2890 <http://www.tmforum.org/DigitalServices/13907/home.html>

2891 Security and data protection are important aspects in the context of Cloud  
2892 computing and are – as far as standardisation is concerned – also addressed in  
2893 ISO/IEC JTC 1/ SC27.

2894

## 2895 **(6.) Proposed new standardisation activities**

### 2896 *(6.1) Proposed standards developments*

2897 The necessary actions will be determined after the coordination with stakeholders.

### 2898 *(6.2) Proposed other activities around standardisation*

2899 No specific or additional input to this Rolling Plan

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2901

2902

### 3.5.2. (Open) Data

#### 2903 **(1.) Policy area title and description**

2904 (Open)<sup>38</sup> Data

2905 With the continuously growing amount of data (often referred to under the notion  
2906 big data), interoperability ever more becomes a key issue to leveraging the value  
2907 of data. Standardisation is essential to enable broad data integration, data  
2908 exchange and interoperability with the overall goal to foster innovation on the  
2909 basis of (openly available) data. This refers to all types of types of data as diverse  
2910 as geospatial data, statistical data, weather data, unstructured (multilingual) data,  
2911 Public Sector Information (PSI) and especially to the area of Open Data.

#### 2912 **(2.) Legislation and policy documents**

##### 2913 *(2.1) European legislation and policy documents*

2914 The policy area of Open Data relates to Directive 2013/37/EU on reuse of public  
2915 sector information (a revision of the PSI Directive) which has been published in  
2916 the Official Journal on 27 June and requests Member states to provide their data  
2917 preferably in machine-readable formats.

##### 2918 *(2.2) Additional information on legal documents in Member States if available*

2919 For information available in the Member States please see the documents listed in  
2920 Annex I to this Rolling Plan. There is no additional information at this point in  
2921 time for this Rolling Plan

#### 2922 **(3.) Member States and Stakeholder input on policy context**

##### 2923 *(3.1) Input from Member States*

2924 For information available in the Member States please see the documents listed in  
2925 Annex I to this Rolling Plan. There is no additional information at this point in  
2926 time for this Rolling Plan

##### 2927 *(3.2) Input from other Stakeholders*

2928 No specific or additional input to this Rolling Plan

#### 2929 **(4.) Standardisation needs to implement the legislation and policy**

##### 2930 *(4.1) Commission perspective*

2931 In light of the goal of increasing the interoperability in the domain of (Open)  
2932 Data, it is currently not envisioned to impose distinct standards. Instead, the  
2933 overall application of standards should be encouraged, for example in RDI  
2934 projects and in the Open Data portals.

##### 2935 *(4.2) Member States and Stakeholder perspective*

2936 Global standardisation work is ongoing in the area of (Open) Data. This work  
2937 should primarily be considered.

#### 2938 **(5.) Related ongoing standardisation and research activities**

##### 2939 *(5.1) At European level*

2940 Under the call for proposals on objective 2.2.b: Standards for Open Data in the  
2941 ICT PSP Work Programme 2013, a Thematic Network is currently being

64 <sup>38</sup> Although the main topic of this policy area is Open Data, it should be noted that standardisation efforts related to all  
65 types of data are being supported.

2942 negotiated. It has the goal to bring together stakeholders in the reuse of public  
2943 sector information to agree on standards that enable interoperability and  
2944 integration of public sector information across Europe and beyond .

2945 The Commission is starting a Data Catalogue Vocabulary project in the scope of  
2946 the ISA programme (Interoperability solutions for European public  
2947 administrations). The project aims at creating a semantic agreement on a thin  
2948 layer of commonly agreed metadata, and supporting code-lists, to describe  
2949 datasets.

## 2950 (5.2) Other relevant work

2951 The project MultilingualWeb-LT (funded by the CSA grant LT-WEB) is  
2952 addressing standardisation and promotion of best practices in language  
2953 processing, exchange and interoperability of multilingual data, and on  
2954 multilingual Web content management. The standardisation work is coordinated  
2955 and managed by W3C Working Group "MultilingualWeb-LT", part of the  
2956 Internationalization (I18N) Activity of W3C. The standardisation in  
2957 MultilingualWeb-LT is bottom-up, and based on practical and market- oriented  
2958 reference implementations, built by companies and universities operating within  
2959 and having expertise on the field.

2960 <http://www.w3.org/International/multilingualweb/lt/>

2961 <http://www.multilingualweb.eu>

2962 The main task and objective of the Internationalisation (I18N) activity at W3C is  
2963 to implement an Internationalisation Tag Set (ITS), providing a standardized set  
2964 of metadata for web content and "deep web" content that facilitates its interaction  
2965 with multilingual technologies and translation/localization processes, ensuring  
2966 smooth automated multilingual processing of web content. Version 2.0 of ITS is  
2967 technically complete and expected to be adopted by W3C in autumn 2013.

2968 In the multilingual open data track of the MultilingualWeb initiative,  
2969 which is driven by the World Wide Web Consortium (W3C), there is an ongoing  
2970 discussion about the standardisation of multilingual URIs and localisation of  
2971 URIs, in which a representative of the Commission is involved. Moreover, a W3C  
2972 special interest group on this topic is expected to be created.

2973 In OASIS the project on OData addresses the querying and sharing of data across  
2974 disparate applications and multiple stakeholders for re-use in the enterprise,  
2975 Cloud, and mobile devices. Specification development in the OASIS OData TC  
2976 builds on the core OData Protocol V3 released in April 2012 and addresses  
2977 additional requirements identified as extensions in four directional white papers:  
2978 data aggregation, temporal data, JSON documents, and XML documents as  
2979 streams. For more information see [https://www.oasis-](https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=odata)  
2980 [open.org/committees/tc\\_home.php?wg\\_abbrev=odata](https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=odata)

## 2981 (6.) Proposed new standardisation activities

### 2982 (6.1) Proposed standards developments

2983 Currently, the development of new standards in the domain of (Open) Data is not  
2984 envisioned.

### 2985 (6.2) Proposed other activities around standardisation

2986 Three main elements of a standardisation strategy are envisioned, i.e. 1)  
2987 involvement of stakeholders in a dialogue about (Open) Data standards, 2)  
2988 promotion of standardisation in/via Open Data Portals , especially the Pan-  
2989 European Open Data Portal proposed by the European Commission as one of the  
2990 Digital Service Infrastructures under the Connecting Europe Facility, and 3)  
2991 support of (Open) Data standardisation activities as part of H2020 RDI activities.

2992 3.5.3. *E-Government*

2993 In all three of the below concepts listed under E-Government, care should be  
2994 taken to ensure compatibility between public sector and what the private sector  
2995 might achieve, note the eSENS conference proceedings and discussions  
2996 concerning PEPPOL acceptance.

2997 3.5.3.1. *DCAT Application profile for data portals in Europe*

2998 **(1.) Policy area title and description**

2999 DCAT Application profile for data portals in Europe

3000 In the context of the ISA programme, DCAT Application profile for data portals  
3001 in Europe

3002 **(2.) Legislation and policy documents**

3003 *(2.1) European legislation and policy documents*

3004 Decision No 922/2009/EC on interoperability solutions for public administrations  
3005 (ISA)

3006 Directive 2003/98/EC of the European Parliament and of the Council of 17  
3007 November 2003 on the re-use of public sector information (Public Service  
3008 Information Directive<sup>39</sup>)

3009 COM(2011) 882 on Open data<sup>40</sup>

3010 *(2.2) Additional information on legal documents in Member States if available*

3011 For information available in the Member States please see the documents listed in  
3012 Annex I to this Rolling Plan. There is no additional information at this point in  
3013 time for this Rolling Plan

3014 **(3.) Member States and Stakeholder input on policy context**

3015 *(3.1) Input from Member States*

3016 For information available in the Member States please see the documents listed in  
3017 Annex I to this Rolling Plan. There is no additional information at this point in  
3018 time for this Rolling Plan

3019 *(3.2) Input from other Stakeholders*

3020 No specific or additional input to this Rolling Plan

3021 **(4.) Standardisation needs to implement the legislation and policy**

3022 *(4.1) Commission perspective*

3023 The ISA programme (Interoperability between European Public Administrations  
3024 and Public Sector ) supports and facilitates cross-border and cross-sector  
3025 collaboration of public administrations. It defines, promotes and supports the  
3026 implementation of interoperability solutions and frameworks for European public  
3027 administrations. It achieves synergies and promotes the reuse of infrastructure,  
3028 digital services and software solutions. It translates public administrations'  
3029 interoperability requirements into specifications and standards for digital services.

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66 <sup>39</sup> [http://ec.europa.eu/information\\_society/policy/psi/rules/eu/index\\_en.htm](http://ec.europa.eu/information_society/policy/psi/rules/eu/index_en.htm)

67 <sup>40</sup> [http://ec.europa.eu/information\\_society/policy/psi/docs/pdfs/directive\\_proposal/2012/open\\_data.pdf](http://ec.europa.eu/information_society/policy/psi/docs/pdfs/directive_proposal/2012/open_data.pdf)

3030 Studies conducted on behalf of the European Commission<sup>41</sup> show that businesses  
3031 and citizens still face difficulties in finding and re-using public sector  
3032 information. In its [communication on Open Data](#)<sup>42</sup> of December 12 2011, the  
3033 European Commission states that *the availability of the information in a*  
3034 *machine-readable format as well as a thin layer of commonly agreed*  
3035 *metadata could facilitate data cross-reference and interoperability and therefore*  
3036 *considerably enhance its value for reuse.*

3037 The aim of the action is to create a common specification for describing public  
3038 sector data catalogues and datasets and promoting this specification to be used by  
3039 data portals across Europe. The established working group is led by the  
3040 Publication Office (PO), as the owner of the EU Open Data Portal. PO already  
3041 uses DCAT in this portal. By agreeing on a common application profile and  
3042 promoting this to the MSs, the interoperability amongst data catalogues and the  
3043 exchange of data between MSs will be substantially improved.

#### 3044 (4.2) Member States and Stakeholder perspective

3045 For information available in the Member States please see the documents listed in  
3046 Annex I to this Rolling Plan. There is no additional information at this point in  
3047 time for this Rolling Plan

### 3048 (5.) Related ongoing standardisation and research activities

#### 3049 (5.1) At European level

3050 No specific or additional input to this Rolling Plan

#### 3051 (5.2) Other relevant work

3052 Development of the DCAT<sup>43</sup> vocabulary at WC3. The DCAT vocabulary has been  
3053 discussed in the Linked Government Data W3C Working Group for almost two  
3054 years. Currently, the last call for comments has expired and the plan is for the  
3055 specification to be shortly available as a W3C Recommendation.

### 3056 (6.) Proposed new standardisation activities

#### 3057 (6.1) Proposed standards developments

3058 No specific or additional input to this Rolling Plan

#### 3059 (6.2) Proposed other activities around standardisation

3060 The application profile will be based on the Data Catalogue vocabulary (DCAT).  
3061 It contains the specifications for metadata records to meet the specific application  
3062 needs of data portals in Europe while providing semantic interoperability with  
3063 other applications on the basis of reuse of established controlled vocabularies

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68 <sup>41</sup> see [http://ec.europa.eu/information\\_society/policy/psi/docs/pdfs/report/final\\_version\\_study\\_psi.docx](http://ec.europa.eu/information_society/policy/psi/docs/pdfs/report/final_version_study_psi.docx) f  
69 or an overview

70 <sup>42</sup> [http://ec.europa.eu/information\\_society/policy/psi/docs/pdfs/opendata2012/open\\_data\\_communicatio](http://ec.europa.eu/information_society/policy/psi/docs/pdfs/opendata2012/open_data_communication/en.pdf)  
71 [n/en.pdf](http://ec.europa.eu/information_society/policy/psi/docs/pdfs/opendata2012/open_data_communication/en.pdf)

72 <sup>43</sup> <http://www.w3.org/TR/vocab-dcat/>

3064 (e.g. EuroVoc<sup>44</sup>) and mappings to existing metadata vocabularies (e.g. SDMX<sup>45</sup>,  
3065 INSPIRE metadata, Dublin Core, etc.).

3066 The multi-sectoral expert group has already started its work<sup>46</sup>. Experts from  
3067 international standardisation organisations are invited to participate in the group  
3068 to ensure the interoperability of the resulting specification and to assist in its  
3069 standardisation process.

3070

3071

3072 *3.5.3.2. Exchange of metadata on re-usable interoperability assets*  
3073 *(eGovernment)*

## 3074 **(1.) Policy area title and description**

3075 Exchange of metadata on re-usable interoperability assets

3076 Interoperability between European Public Administrations - Exchange of  
3077 metadata on re-usable interoperability assets among national and international  
3078 repositories

3079 The ISA programme supports and facilitates cross-border and cross-sector  
3080 collaboration of public administrations. It defines, promotes and supports the  
3081 implementation of interoperability solutions and frameworks for European public  
3082 administrations. It achieves synergies and promotes the reuse of infrastructure,  
3083 digital services and software solutions. It translates public administrations'  
3084 interoperability requirements into specifications and standards for digital services.

3085 Semantic interoperability is a condition for cross-sector and cross-border  
3086 interoperability and agreeing on and re-using common semantic interoperability  
3087 assets across Europe is an important step in facilitating semantic interoperability.

3088 The EU Digital Agenda identifies the lack of semantic interoperability between  
3089 public administrations as a major obstacle to the Digital Single Market and the  
3090 provision of cross-border digital public services.

3091 In addition to the multilingual challenge, interoperability is compromised by the  
3092 lack of commonly agreed and widely used data models, divergent interpretations  
3093 of the same data and the absence of common reference data (e.g. code-lists,  
3094 identifiers, taxonomies, references to organisations, geospatial references, license  
3095 collections, etc.).

3096 The European Commission, in the context of the ISA programme, is undertaking  
3097 a number of initiatives to reduce semantic interoperability conflicts in Europe.

## 3098 **(2.) Legislation and policy documents**

### 3099 *(2.1) European legislation and policy documents*

3100 Decision No 922/2009/EC on interoperability solutions for public administrations  
3101 (ISA)

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73 <sup>44</sup> <http://eurovoc.europa.eu/drupal/>

74 <sup>45</sup> [http://www.iso.org/iso/catalogue\\_detail.htm?csnumber=52500](http://www.iso.org/iso/catalogue_detail.htm?csnumber=52500)

75 <sup>46</sup> [https://joinup.ec.europa.eu/asset/dcat\\_application\\_profile/asset\\_release/dcat-application-profile-data-  
76 portals-europe-draft-1](https://joinup.ec.europa.eu/asset/dcat_application_profile/asset_release/dcat-application-profile-data-portals-europe-draft-1)

3102 COM(2010) 245 Digital Agenda

3103 *(2.2) Additional information on legal documents in Member States if available*

3104 For information available in the Member States please see the documents listed in  
3105 Annex I to this Rolling Plan. There is no additional information at this point in  
3106 time for this Rolling Plan..

3107 **(3.) Member States and Stakeholder input on policy context**

3108 *(3.1) Input from Member States*

3109 For information available in the Member States please see the documents listed in  
3110 Annex I to this Rolling Plan. There is no additional information at this point in  
3111 time for this Rolling Plan..

3112 *(3.2) Input from other Stakeholders*

3113 No specific or additional information for this version.

3114 **(4.) Standardisation needs to implement the legislation and policy**

3115 *(4.1) Commission perspective*

3116 Public administrations, businesses, standardisation bodies and academia are  
3117 already producing interoperability assets that, if (re)used, can facilitate  
3118 interoperability among public administrations' services. However, these are not  
3119 always easy to find. The Asset Description Metadata Schema (ADMS) is a  
3120 common way to describe semantic interoperability assets making it possible for  
3121 everyone to search and discover them once shared through the forthcoming  
3122 federation of asset repositories.

3123 With the intention to facilitate the visibility and re-usability of interoperability  
3124 assets across borders and sectors, the Commission has made available a large set  
3125 of semantic interoperability assets described using ADMS, through a federation  
3126 of asset repositories of Member States, standardisation bodies and other relevant  
3127 stakeholders. Through this federation – reachable through the Joinup platform),  
3128 semantic interoperability assets became retrievable and available via a single  
3129 point of access.

3130 *(4.2) Member States and Stakeholder perspective*

3131 For information available in the Member States please see the documents listed in  
3132 Annex I to this Rolling Plan. There is no additional information at this point in  
3133 time for this Rolling Plan..

3134 **(5.) Related ongoing standardisation and research activities**

3135 *(5.1) At European level*

3136 No specific or additional information for this version.

3137 *(5.2) Other relevant work*

3138 ADMS<sup>47</sup> specification at the WC3 Linked Government Data Working Group.  
3139 Currently, work is ongoing<sup>48</sup> to extend the ADMS specification to also be able to

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77 <sup>47</sup> <https://dvcs.w3.org/hg/gld/raw-file/default/adms/index.html>

78 <sup>48</sup> [https://joinup.ec.europa.eu/asset/adms/event/efir-workshop-2013-take-part-extension-joinups-](https://joinup.ec.europa.eu/asset/adms/event/efir-workshop-2013-take-part-extension-joinups-catalogue-interoperability-assets)  
79 [catalogue-interoperability-assets](https://joinup.ec.europa.eu/asset/adms/event/efir-workshop-2013-take-part-extension-joinups-catalogue-interoperability-assets)



3140 describe technical, legal and organisational interoperability assets and thus to  
3141 facilitate their re-usability.

3142

3143 **(6.) Proposed new standardisation activities**

3144 *(6.1) Proposed standards developments*

3145 No specific or additional information for this version.

3146 *(6.2) Proposed other activities around standardisation*

3147 Assessment of the ADMS specifications and its extensions with regards to their  
3148 possible implementation into standards

3149 3.5.3.3. *Core Concepts to facilitate the development of interoperable*  
3150 *solutions*

3151 **(1.) Policy area title and description**

3152 Core Concepts to facilitate the development of interoperable solutions

3153 Interoperability between European Public Administrations - Core Concepts to  
3154 facilitate the development of interoperable IT solutions

3155 The ISA programme supports and facilitates cross-border and cross-sector  
3156 collaboration of public administrations. It defines, promotes and supports the  
3157 implementation of interoperability solutions and frameworks for European public  
3158 administrations. It achieves synergies and promotes the reuse of infrastructure,  
3159 digital services and software solutions. It translates public administrations'  
3160 interoperability requirements into specifications and standards for digital services.

3161 Semantics interoperability is a condition for cross-sector and cross-border  
3162 interoperability and agreeing on and re-using common semantic interoperability  
3163 assets across Europe is an important step in facilitating semantic interoperability.

3164 The EU Digital Agenda identifies the lack of semantic interoperability between  
3165 public administrations as a major obstacle to the Digital Single Market and the  
3166 provision of cross-border digital public services.

3167 In addition to the multilingual challenge, interoperability is compromised by the  
3168 lack of commonly agreed and widely used data models, divergent interpretations  
3169 of the same data and the absence of common reference data (e.g. code-lists,  
3170 identifiers, taxonomies, references to organisations, geospatial references, license  
3171 collections, etc.).

3172 **(2.) Legislation and policy documents**

3173 *(2.1) European legislation and policy documents*

3174 Decision No 922/2009/EC on interoperability solutions for public administrations  
3175 (ISA)

3176 COM(2010) 245 Digital Agenda

3177 With regards to fundamental core concepts, the Commission has made available  
3178 three core vocabularies with high re-usability possibilities: the [Core Person](#) the  
3179 [Core Business](#) and [Core Location](#) Vocabularies.

3180 A fourth core vocabulary describing the Public Service concept is currently under  
3181 development<sup>49</sup>

3182 *(2.2) Additional information on legal documents in Member States if available*

3183 For information available in the Member States please see the documents listed in  
3184 Annex I to this Rolling Plan. There is no additional information at this point in  
3185 time for this Rolling Plan.

3186 **(3.) Member States and Stakeholder input on policy context**

3187 *(3.1) Input from Member States*

3188 For information available in the Member States please see the documents listed in  
3189 Annex I to this Rolling Plan. There is no additional information at this point in  
3190 time for this Rolling Plan.

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80 <sup>49</sup> [https://joinup.ec.europa.eu/asset/core\\_public\\_service/description](https://joinup.ec.europa.eu/asset/core_public_service/description)

- 3191 (3.2) *Input from other Stakeholders*
- 3192 No specific or additional information for this version.
- 3193 **(4.) Standardisation needs to implement the legislation and policy**
- 3194 (4.1) *Commission perspective*
- 3195 The European Commission, in the context of the ISA programme, is undertaking
- 3196 a number of initiatives to reduce semantic interoperability conflicts in Europe.
- 3197 Definitions should first be agreed on fundamental concepts, where divergent
- 3198 and/or conflicting views can be handled. These concepts are simplified data
- 3199 models that capture the minimal, global characteristics/attributes of an entity in a
- 3200 generic, country- and domain-neutral fashion.
- 3201 (4.2) *Member States and Stakeholder perspective*
- 3202 No specific or additional information for this version.
- 3203 **(5.) Related ongoing standardisation and research activities**
- 3204 (5.1) *At European level*
- 3205 No specific or additional information for this version.
- 3206 (5.2) *Other relevant work*
- 3207 The Registered Organization Vocabulary<sup>50</sup> which is based on the Business Core
- 3208 Vocabulary is discussed in the W3C Linked Government Data Working Group.
- 3209 **(6.) Proposed new standardisation activities**
- 3210 (6.1) *Proposed standards developments*
- 3211 – Assessment of the Core Person, Core Location and Core Business
- 3212 Vocabularies with regards to their possible implementation into standards.
- 3213 – The Core Location Vocabulary will be an important input to a new
- 3214 working group that is currently discussed in W3C with the participation of the
- 3215 JRC, INSPIRE team.
- 3216 – Supporting the development of the Core Public Service Vocabulary and its
- 3217 implementation as standard.
- 3218 (6.2) *Proposed other activities around standardisation*
- 3219 Nothing proposed.

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81 <sup>50</sup> <http://www.w3.org/TR/vocab-regorg/>

3220 3.5.4. *Electronic identification and trust services including e-signatures*

3221 **(1.) Policy area title and description**

3222 Electronic identification and trust services including e-signatures

3223 This relates to the "Digital Agenda for Europe" flagship initiative of "Europe  
3224 2020", the Key actions 3 and 16 on electronic identification and trust services for  
3225 electronic transactions, including electronic signatures.

3226 **(2.) Legislation and policy documents**

3227 *(2.1) European legislation and policy documents*

3228 Proposal for a Regulation of the European Parliament and of the Council on  
3229 electronic identification and trust services for electronic transactions in the  
3230 internal market, COM(2012)238 of 4.6.2012 (eIDAS Regulation).

3231 Directive 1999/93/EC of the European Parliament and of the Council of  
3232 13.12.1999 on a Community framework for electronic signatures (e-signature  
3233 directive).

3234 *(2.1) Additional information on legal documents in Member States if available*

3235 For information available in the Member States please see the documents listed in  
3236 Annex I to this Rolling Plan. There is no additional information at this point in  
3237 time for this Rolling Plan

3238 **(3.) Member States and Stakeholder input on policy context**

3239 *(3.1) Input from Member States*

3240 For information available in the Member States please see the documents listed in  
3241 Annex I to this Rolling Plan. There is no additional information at this point in  
3242 time for this Rolling Plan

3243 *(3.2) Input from other Stakeholders*

3244 No specific or additional input to this Rolling Plan

3245 **(4.) Standardisation needs to implement the legislation and policy**

3246 *(4.1) Commission perspective*

3247 In the context of the e-signatures Directive, in January 2010, the Commission  
3248 mandated the ESO to rationalise the standards related to e-signatures and related  
3249 trust services into a coherent and up-to-date framework (mandate M/460). The  
3250 bulk of the mandate results are expected in 2014 onwards.

3251 However, in June 2012, the Commission proposed the eIDAS Regulation to  
3252 replace the e-signatures Directive and to expand its scope to address in one  
3253 comprehensive legislation, electronic identification, signatures, seals, timestamps,  
3254 delivery, documents or website authentication certificates to secure and ease  
3255 electronic transactions. To support the implementation of the forthcoming  
3256 Regulation which is highly technical, further standardisation work will be needed  
3257 in particular with regard to the planned secondary legislation which extensively  
3258 refers to the availability of standards as possible means to meet the regulatory  
3259 requirements.

3260 *(4.2) Member States and Stakeholder perspective*

3261 For information available in the Member States please see the documents listed in  
3262 Annex I to this Rolling Plan. There is no additional information at this point in  
3263 time for this Rolling Plan

## 3264 **(5.) Related ongoing standardisation and research activities**

### 3265 *(5.1) At European level*

3266 – Under the standardisation mandate M/460 on e-signatures, running till  
3267 2014, CEN and ETSI have undertaken to update and rationalise their standards on  
3268 e-signatures and related trust services (see ETSI SR 001 604).

3269 – Five ongoing grant agreements running till end 2015, are supporting  
3270 CEN and ETSI to carry out the above rationalisation work. In addition, ETSI is  
3271 working on Trusted Lists ([TS 119 612](#)), [Trust Services Status Lists](#), and  
3272 enhancements to signatures formats ([CAAdES](#), [CAAdES profile](#), [ASiC](#), and [ASiC](#)  
3273 [profile](#))

3274 – ETSI work programme for M/460<sup>51</sup>

3275 – e-SENS (Electronic Simple European Networked Services) is a Large  
3276 Scale Pilot launched within the ICT Policy Support Programme (ICT PSP), under  
3277 the Competitiveness and Innovation Framework Programme (CIP). The aim of  
3278 the project is to develop an infrastructure for interoperable public services in  
3279 Europe. It will build upon and consolidate building blocks such as eID,  
3280 eDocuments, eDelivery, and eSignature etc. from previous pilot projects and  
3281 integrate them into a pan-European digital platform for cross-sector, interoperable  
3282 eGovernment services. See <http://www.esens.eu/home.html>.

3283 – STORK is an EU co-funded project to establish a European eID  
3284 Interoperability Platform that will allow citizens to establish new e-relations  
3285 across borders, just by presenting their national eID. See [https://www.eid-](https://www.eid-stork.eu/)  
3286 [stork.eu/](https://www.eid-stork.eu/).

3287 – Scoping the Single European Digital Identity Community –SSEDIC  
3288 <http://www.eid-ssedic.eu>

3289 – Future of Identity in the Information Society - FIDIS  
3290 (<http://www.fidis.net>)

3291 – Privacy and Identity Management for Europe - PRIME  
3292 (<https://www.prime-project.eu>)

### 3293 *(5.2) Relevant other work*

3294 OASIS hosts multiple standardisation projects for e-identity and e-signature  
3295 management and functionality, including standards for Cross-Enterprise Security  
3296 and Privacy Authorization (XSPA); Digital Signature Services; the eXtensible  
3297 Access Control Markup Language (XACML, also ITU-T Recommendation  
3298 X.1122); the Key Management Interoperability Protocol (KMIP); the Security  
3299 Assertion Markup Language (SAML, also ITU-T Recommendation X.1121);  
3300 Web Services Federation (WS-Fed); Web Services Trust (WS-Trust); Web  
3301 Services Secure Exchange (WS-SX), and the Extensible Resource Identifier (XRI  
3302 ) and XRI Data Interchange (XDI) standards. OASIS also hosts standardisation  
3303 projects on Biometrics device calls and on e-ID credential Trust Elevation  
3304 methods. See [https://www.oasis-open.org/committees/tc\\_cat.php?cat=security](https://www.oasis-open.org/committees/tc_cat.php?cat=security)

82 <sup>51</sup> [M/460 work programme:](http://webapp.etsi.org/WorkProgram/Frame_WorkItemList.asp?) [http://webapp.etsi.org/WorkProgram/Frame\\_WorkItemList.asp?](http://webapp.etsi.org/WorkProgram/Frame_WorkItemList.asp?)  
83 [SearchPage=TRUE&butExpertSearch=++Search++&qMandate\\_List='M%2F460'](http://webapp.etsi.org/WorkProgram/Frame_WorkItemList.asp?SearchPage=TRUE&butExpertSearch=++Search++&qMandate_List='M%2F460')

3305 **(6.) Proposed new standardisation actions**

3306 *(6.1) Proposed standards developments*

3307 M/460 topics not yet covered by ongoing activities will need to be addressed: the  
3308 trust service providers (TSP) providing signature generation services, the TSPs  
3309 providing signature validation services, and standards for trust application service  
3310 providers (current work is limited to an ETSI Special Report (to be ETSI SR  
3311 003 186), which will propose a rationalised and well organized set of standards  
3312 for Electronic Delivery Applying Electronic Signatures).

3313 The Commission intends to request the ESOs (via standardisation mandates) and  
3314 other relevant bodies to update existing standards and to develop additional ones  
3315 in order to address the new requirements and the novelties of the eIDAS  
3316 Regulation when it will be adopted by the European Parliament and Council.  
3317 Alternatively or in complement, ESOs may autonomously submit requests for  
3318 Commission support to carry out these standardisation activities. Further domains  
3319 of interest include eIdentification, eDelivery, eDocuments and Website  
3320 Authentication certificates. In particular regarding eIdentification, the  
3321 standardisation of STORK specifications may be considered, namely the QAA  
3322 model (Quality Authenticator Assurance model for eIDs) and the SAML scheme  
3323 for the exchange of identity attributes, based on OASIS core specification.

3324 Furthermore, in order to favour the mutual recognition of trust services with third  
3325 countries, the "internationalisation" and promotion of related European standards  
3326 may be considered.

3327 *(6.2) Proposed other activities around standardisation*

3328 Support and improve the development of Electronic Signatures interoperable  
3329 standards by facilitating the organization of a series of Electronic Signature  
3330 Plugtests (interoperability events) in line with the proposed scheduling of testing  
3331 events for signature formats in the work plan in draft ETSI SR 003 186.

3332 This anticipates 5 remote interoperability events covering TSL, ASiC, XAdES,  
3333 PAdES and CAdES. This identifies the critical ENs (which are in preparation) of  
3334 the Rationalised Framework whose adoption and deployment would largely  
3335 benefit from interoperability events and the conformity testing tools. It contains  
3336 the scheduling that ensures first that a reasonable amount of tools are available at  
3337 the market for being tested, and second, that these tests may actually impact in  
3338 due time the standardisation process, allowing the ENs to fix any interoperability  
3339 problem or ambiguity identified by the stakeholders/participants in these events.

3340 3.5.5. *Radio Frequency Identification (RFID)*

3341 **(1.) Policy area title and description**

3342 Radio Frequency Identification (RFID)

3343 The RFID standardisation mandate M/436 has in the first place the objective to  
3344 ensure that the deployment of RFID applications takes place in a way compliant  
3345 to the data protection directive.

3346 **(2.) Legislation and policy documents**

3347 *(2.1) European legislation and policy documents*

3348 The legal origin is the data protection directive EC 95/46 and the RFID  
3349 recommendation of May 15 2009 {SEC(2009)585}.

3350 *(2.2) Additional information on legal documents in Member States if available*

3351 For information available in the Member States please see the documents listed in  
3352 Annex I to this Rolling Plan. There is no additional information at this point in  
3353 time for this Rolling Plan

3354 **(3.) Member States and Stakeholder input on policy context**

3355 *(3.1) Input from Member States*

3356 For information available in the Member States please see the documents listed in  
3357 Annex I to this Rolling Plan. There is no additional information at this point in  
3358 time for this Rolling Plan

3359 *(3.2) Input from other Stakeholders*

3360 In the medium term it should be considered which activities are needed to align  
3361 the work under M/436 within the broader scope of Internet of Things.

3362 **(4) Standardisation needs to implement the legislation and policy**

3363 *(4.1) Commission perspective*

3364 The RFID standard mandate will deliver a European standard that will uniquely  
3365 identify the presence of RFID readers and Tags in compliance of the notification  
3366 principle of the data protection directive.

3367 In addition there will be specifications for the largest RFID application domains  
3368 (e.g. retail, ticketing, ...) that will simplify the process of making the application  
3369 compliant with the data protection legislation. These standards are also called  
3370 Privacy Impact Assessment templates.

3371 The RFID standard mandate is important because it does cover a domain for  
3372 which not much knowledge is available [privacy and data protection issues of  
3373 wireless technologies] and the need was formulated as an outcome of a large  
3374 policy debate in the past.

3375 *(4.2) Member States and Stakeholder perspective*

3376 For information available in the Member States please see the documents listed in  
3377 Annex I to this Rolling Plan. There is no additional information at this point in  
3378 time for this Rolling Plan

3379 **(5.) Related ongoing standardisation and research activities**

3380 *(5.1) At European level*

3381 It is not a new mandate that is documented in this template. It is only a place  
3382 holder to remember that CEN/CENELEC resources are needed in 2013 and 2014  
3383 to complete the ongoing work on phase 2 of the mandate.

3384 (5.2) Other relevant work

3385 No specific or additional input to this Rolling Plan

3386 **(6.) Proposed new standardisation activities**

3387 *(6.1) Proposed standards developments*

3388 Focus is on completion of the RFID standardisation mandate. No further work  
3389 beyond this is foreseen.

3390 *(6.2) Proposed other activities around standardisation*

3391 No other activities proposed.



3392

3393 3.5.6. *Internet of Things*

3394 **(1.) Policy area title and description**

3395 Internet of Things (IoT)

3396 Over the past few years, technical development has made it possible to connect  
3397 “things” to data networks. As a consequence a large number of proprietary or  
3398 semi-closed solutions to address specific problems have emerged, leading to non-  
3399 interoperable concepts, based on different architectures and protocols.  
3400 Consequently, the deployments of truly IoT applications, i.e. where information  
3401 of connectable “things” can be flexibly aggregated and scaled have been limited  
3402 in scale and in scope, actually limiting the IoT to a set of "intranets of things – or  
3403 goods".

3404 **(2.) Legislation and policy documents**

3405 *(2.1) European legislation and policy documents*

3406 COM(2013) 48: Industrial cyber security strategy and draft directive, that stresses  
3407 the importance to secure health, energy, transport and banking sectors that rely  
3408 more and more on the Internet and Internet of Things type of applications.

3409 COM(2009)278: "Internet of Things - An action plan for Europe": Cyber security  
3410 Standardisation and European Norms are essential to ensure that the Internet of  
3411 Things develops in an interoperable, trustworthy and secure way

3412 *(2.2) Additional information on legal documents in Member States if available*

3413 For information available in the Member States please see the documents  
3414 listed in Annex I to this Rolling Plan. There is no additional information at this  
3415 point in time for this Rolling Plan.

3416 **(3.) Member States and Stakeholder input on policy context**

3417 *(3.1) Input from Member States*

3418 For information available in the Member States please see the documents listed in  
3419 Annex I to this Rolling Plan. There is no additional information at this point in  
3420 time for this Rolling Plan.

3421 *(3.2) Input from other Stakeholders*

3422 In the field of Internet of Things, good governance principles for standards to be  
3423 developed are important. This implies in particular full consumer participation<sup>52</sup>.

3424 There are a number of global activities ongoing in the area of M2M and IoT  
3425 standardisation. In particular there are the oneM2M partnership project to which  
3426 ETSI contributes; relevant standardisation activities in IEC; a focus group in  
3427 ISO/IEC JTC 1; the standards project on MQTT in OASIS. Before considering  
3428 issuing a standardisation mandate the Commission should consult in detail with  
3429 stakeholders on the market need for a mandate, on common practice, and on the  
3430 future outlook for IoT and related activities.

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84 <sup>52</sup> Footnote: ANEC reply to the European Commission public consultation “The Internet is gearing  
85 up for the next technological revolution: communication with and among objects. How would you  
86 envisage the "governance" of such an "Internet of Things" (IoT)? (ANEC-ICT-2012-G-048)

3431 **(4.) Standardisation needs to implement the legislation and policy**

3432 *(4.1) Commission perspective*

3433 Recent ICT advances are bringing to reality a world where sensors, actuators and  
3434 smart portable devices are interconnected into an Internet-of-Things (IoT)  
3435 ecosystem reaching 50 Billion devices by 2015. The IoT major challenges are,  
3436 from a systemic viewpoint, smart resource management and digital security; and  
3437 from a user/service perspective, the pervasiveness (uniformity of performance  
3438 anytime and anywhere) and interoperability to accomplish this.

3439 The IoT mandate will cover the specific policy related areas of data protection  
3440 and security. In addition it can contain elements linked to the DAE action line on  
3441 interoperability.

3442 Considerations on a mandate may include include European Standards or other  
3443 European standardisation deliverables on several of the IoT facets that are closely  
3444 linked to the legal framework.

3445 *(4.2) Member States and Stakeholder perspective*

3446 For information available in the Member States please see the documents listed in  
3447 Annex I to this Rolling Plan. There is no additional information at this point in  
3448 time for this Rolling Plan

3449 **(5.) Related ongoing standardisation and research activities**

3450 *(5.1) At European level*

3451 Ongoing standardisation activities in the domain of M2M and the IoT in  
3452 international forums such as ITU need to be considered when drafting the  
3453 mandate. On the Internet of Things the largest European standardisation activity  
3454 is the M2M standards developed in ETSI. This M2M initiative however addresses  
3455 the technical aspects and not the aspects linked to the European legal framework.

3456 *(5.2) Other relevant work*

3457 The success of the Internet of Things (IoT) depends strongly on standardisation,  
3458 which provides interoperability, compatibility, reliability, and effective operations  
3459 on a global scale. Recognizing the value of IoT to industry and the benefits this  
3460 technology innovation brings to the public, the IEEE Standards Association  
3461 (IEEE-SA) has a number of standards, projects and events that are directly related  
3462 to creating the environment needed for a vibrant IoT. For more information see  
3463 <http://standards.ieee.org/develop/msp/iot.pdf>.

3464 The IETF has a number of working groups chartered to develop standards to  
3465 support the Internet of Things. The 6lowpan working group is developing  
3466 standards to ensure interoperability between smart object networks and defining  
3467 the necessary security and management protocols and constructs for building such  
3468 networks. The roll working group is developing standards to support the routing  
3469 of communications within low-power and lossy networks. The core working  
3470 group is specifying protocols that allow applications running in resource-  
3471 constrained environments to interoperate with each other and the rest of the  
3472 Internet. For more information see  
3473 <<http://trac.tools.ietf.org/group/iab/trac/wiki/Multi-Stake-Holder-Platform#IOT>>.

3474 OASIS runs a Technical Committee on Message Queuing Telemetry Transport  
3475 (MQTT). It is producing a standard for the Message Queuing Telemetry

3476 Transport Protocol compatible with MQTT V3.1, together with requirements for  
3477 enhancements, documented usage examples, best practices, and guidance for use  
3478 of MQTT topics with commonly available registry and discovery mechanisms.

3479 As an M2M/Internet of Things (IoT) connectivity protocol, MQTT is designed to  
3480 support messaging transport from remote locations/devices involving small code  
3481 footprints (e.g., 8-bit, 256KB ram controllers), low power, low bandwidth, high-  
3482 cost connections, high latency, variable availability, and negotiated delivery  
3483 guarantees. See [https://www.oasis-open.org/committees/tc\\_home.php?](https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=mqtt)  
3484 [wg\\_abbrev=mqtt](https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=mqtt)

## 3485 **(6.) Proposed new standardisation activities**

### 3486 *(6.1) Proposed standards developments*

3487 The decision when the Internet of Things mandate will start will depend on the  
3488 concrete steps that will be taken to realise the cyber security strategy. At its  
3489 earliest a start beginning of 2014 can be envisaged.

### 3490 *(6.2) Proposed other activities around standardisation*

3491 No specific or additional input to this Rolling Plan

3493 **(1.) Policy area title and description**

3494 Network and Information Security

3495 The European Cyber Security Strategy and the accompanying legislative proposal  
3496 on Network and Information Security foresee actions on the promotion of the  
3497 development and of the take-up of ICT security standards.

3498 A Network and Information Security (NIS) Platform has been implemented by the  
3499 Commission with representation of all stakeholders.

3500 **(2.) Legislation and policy documents**

3501 *(2.1) European legislation and policy documents*

3502 Cybersecurity Strategy of the European Union: An Open, Safe and Secure  
3503 Cyberspace - JOIN(2013) 1 final - 7/2/2013

3504 Proposal for a Directive of the European Parliament and of the Council  
3505 concerning measures to ensure a high common level of network and information  
3506 security across the Union - COM(2013) 48 final - 7/2/2013 – EN

3507 *(2.2) Additional information on legal documents in Member States if available*

3508 For information available in the Member States please see the documents listed in  
3509 Annex I to this Rolling Plan. There is no additional information at this point in  
3510 time for this Rolling Plan

3511 **(3) Member States and Stakeholder input on policy context**

3512 *(3.1) Input from Member States*

3513 For information available in the Member States please see the documents listed in  
3514 Annex I to this Rolling Plan. There is no additional information at this point in  
3515 time for this Rolling Plan

3516 *(3.2) Input from other Stakeholders*

3517 No specific or additional input to this Rolling Plan

3518 **(4.) Standardisation needs to implement the legislation and policy**

3519 *(4.1) Commission perspective*

3520 The focus will be on establishing a number of reference standards and/or  
3521 specifications relevant to network and information security, including, where  
3522 relevant, harmonized standards, to serve as a basis for encouraging the coherent  
3523 adoption of standardisation practises across the Union.

3524 *(4.2) Member States and Stakeholder perspective*

3525 For information available in the Member States please see the documents listed in  
3526 Annex I to this Rolling Plan. There is no additional information at this point in  
3527 time for this Rolling Plan

3528 **(5.) Related ongoing standardisation and research activities**

3529 *(5.1) At European level*

3530 Work in network and information security and cyber security standards is  
3531 extensive and ongoing:

3532 CEN, CENELEC and ETSI have set up a Cyber Security Coordination Group.

3533 A Network Security Task Force will be created in the context of the Multi  
3534 Stakeholder Platform for ICT Standardisation.

3535 *(5.1) Other relevant work*

3536 OASIS hosts the PKCS 11 standardisation project for cryptographic tokens  
3537 controlling authentication information (such as personal identity), see  
3538 <https://www.oasis-open.org/committees/pkcs11> , and the Key Management  
3539 Interoperability Protocol (KMIP) for enterprise encryption key administration and  
3540 deployment. See <https://www.oasis-open.org/committees/kmip>

3541 **(6) Proposed new standardisation activities**

3542 *(6.1) Proposed standards developments*

3543 No specific or additional input to this Rolling Plan

3544 *(6.2) Proposed other activities around standardisation*

3545 New actions depending on the work of the Network Security Information  
3546 Platform.

3548 **(1.) Policy area title and description**

3549 ePrivacy

3550 The enforcement of the EU data protection and privacy legal framework is made  
3551 easier if data processing products and processes are designed and built from the  
3552 beginning with legal requirements in mind. This is referred to 'privacy by design'.  
3553 Standards may set forth the basic requirements for privacy by design for products  
3554 and processes, minimising the risk of (i) divergent national approaches, with their  
3555 concomitant risks to freedom of movement of products and services, and (ii) the  
3556 development of several, potentially conflicting, private de-facto standards.

3557 This could be combined with the emergence of certification services: economic  
3558 operators wishing to have their products and processes audited as being "privacy  
3559 by design" compliant, would have to fulfil a set of requirements defined through  
3560 appropriate EU standards and robust, independent third party certification  
3561 mechanisms.

3562 The approach of standards-based privacy protection and the possibility of  
3563 certification is acknowledged in existing legislation and by the proposed Data  
3564 Protection Regulation.

3565 **(2) Legislation and policy documents**

3566 *(2.1) European legislation and policy documents*

3567 The ePrivacy Directive. Article 14(3) provides that "*Where required, measures*  
3568 *may be adopted to ensure that terminal equipment is constructed in a way that is*  
3569 *compatible with the right of users to protect and control the use of their personal*  
3570 *data, in accordance with Directive 1999/5/EC and Council Decision 87/95/EEC*  
3571 *of 22 December 1986 on standardisation in the field of information technology*  
3572 *and communications)".*

3573 ○ The Data Protection Directive includes provisions which indirectly, in  
3574 different situations, suggest the implementation of privacy by design. In  
3575 particular, Article 17 requires that data controllers implement appropriate  
3576 technical and organization measures to prevent unlawful data processing.

3577 ○ Proposed Data Protection Regulation. Article 23 requires data protection by  
3578 design and by default<sup>53</sup>.

3579 ○ The 1999/5 RTTE Directive, and as proposed amended in 2012. Article 3(3)  
3580 (c) of the 1999 wording enables the Commission to decide (which it has not  
3581 so far) that equipment is constructed to incorporate privacy safeguards. The  
3582 2012 proposed amended RTTE (COM (2012) 584) makes privacy safeguards  
3583 an essential requirement on radio equipment.

3584 *(2.2) Additional information on legal documents in Member States if available*

3585 The Internet Architecture Board (IAB) provides a list of the national  
3586 transpositions, see <http://www.iabeurope.eu/policy/e-privacy>.

---

87 <sup>53</sup> Having regard to the state of the art and the cost of implementation, the controller shall, both at the time  
88 of the determination of the means for processing and at the time of the processing itself, implement  
89 appropriate technical and organisational measures and procedures in such a way that the processing will  
90 meet the requirements of this Regulation and ensure the protection of the rights of the data subject.  
91

3587

3588 I

3589 **(3.) Member States and Stakeholder input on policy context**

3590 *(3.1) Input from Member States*

3591 For information available in the Member States please see the documents listed in  
3592 Annex I to this Rolling Plan. There is no additional information at this point in  
3593 time for this Rolling Plan

3594 *(3.2) Input from other Stakeholders*

3595 No specific or additional input to this Rolling Plan

3596 **(4.) Standardisation needs to implement the legislation and policy**

3597 *(4.1) Commission perspective*

3598 The focus will be on establishing a number of reference standards and/or  
3599 specifications relevant to privacy in the electronic communications environment,  
3600 including, where relevant, harmonised standards, to serve as a basis for  
3601 encouraging the coherent adoption of standardisation practises across the Union.

3602 *(4.2) Member States and Stakeholder perspective*

3603 For information available in the Member States please see the documents listed in  
3604 Annex I to this Rolling Plan. There is no additional information at this point in  
3605 time for this Rolling Plan

3606 **(5.) Related ongoing standardisation and research activities**

3607 *(5.1) At European level*

3608 Due account should be taken of the activities of the recently-formed DG ENTR  
3609 Working Group on “Privacy by Design”, which includes standardisation  
3610 participants as well as other stakeholders.

3611 *(5.2) Other relevant work*

3612 There are some related EU level existing initiatives, although none specific to this  
3613 topic, including a standardisation mandate to CEN, CENELEC and ETSI in the  
3614 field of RFID and systems.

3615 The W3C has an ongoing initiative to develop specifications by which Internet  
3616 users may express their permission (or the withholding of their permission) to  
3617 have their presence and activities on websites tracked (the "Do Not Track"  
3618 concept): <http://www.w3.org/2011/tracking-protection/>.

3619 W3C has also an ongoing standardisation initiative to help Internet users to  
3620 express their agreement or disagreement to be tracked on the Internet.

3621 OASIS hosts multiple specification development projects for privacy  
3622 functionality, including the Privacy Management Reference Model (PMRM)  
3623 project: <https://www.oasis-open.org/committees/pmrm>, and the Privacy by Design  
3624 Documentation for Software Engineers standards project (PbD-SE):  
3625 <https://www.oasis-open.org/committees/pbd-se>

3626

3627 In IETF, the Internet Architecture Board has established a [Privacy Program](#)<sup>54</sup> to  
3628 serve as a forum for synthesizing privacy thinking within the technical standards  
3629 community and to create privacy design considerations for use within the IETF. A  
3630 document developing various [privacy considerations](#)<sup>55</sup> is under development by  
3631 the IAB.

3632 **(6.) Proposed new standardisation activities**

3633 *(6.1) Proposed standards developments*

3634 No concrete proposals at this point in time.

3635 *(6.2) Proposed other activities around standardisation*

3636 Proposed areas to focus are:

- 3637
- standardising browser functionalities and defaults and
  - standardisation of Do Not Track. Current standardisation initiatives in the area of Do Not Track are not in line with the EU provisions. There is therefore scope for the elaboration of an entirely new European standard that would meet the requirements of the ePrivacy Directive in such field. Doing so would contribute to harmonising concepts and legal provisions.
  - location data used by mobile applications
  - Methodologies for interrogating, testing and assuring privacy functionality.
- 3643
- 3644

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92 <sup>54</sup> <http://www.iab.org/activities/programs/privacy-program/>

93 <sup>55</sup> <http://tools.ietf.org/html/draft-iab-privacy-considerations-09>



3645 **4. TECHNOLOGY AREAS AND STANDARDISATION ACTIVITIES**

3646 **4.1. Horizontal technologies for ICT infrastructures**

3647 On the basic infrastructure for ICT systems work is done in a number of standards  
3648 organisations that may be applicable to the various policy areas, i.e. of horizontal  
3649 relevance. This may refer to work done in global open standards organisations which  
3650 develop standardised technology components that are widely deployed or work done in  
3651 formally recognised standards organisations including the ESOs. Rather than mapping  
3652 these standards developed one-to-one to specific policy areas the standards should be  
3653 considered as building blocks. Metaphorically, one could see these technologies such as  
3654 lego pieces that can be utilised to build complex architectures.

3655 These technologies and the respective standards are not necessarily considered in the  
3656 specific policy areas listed in chapter 3 of this Rolling Plan. To this end, the sections  
3657 under chapter 3 are consequently incomplete. Therefore, the relevant aspects will be  
3658 addressed below in order to draw the attention to these horizontal technologies.

3659 It is quite often the case that technologies standardised and maintained by one of the  
3660 standards organisations depend on one another. Therefore, in order to specify a  
3661 standardised solution for a specific policy requirement one might need to use, for  
3662 example, a scripting standard (ECMA) with specific object security (IETF) to be used  
3663 within a web service (W3C) that runs on top of a transport layer using specific security  
3664 architectures (both IETF) which in turn runs on Ethernet (IEEE) and communicates with  
3665 other systems over wireless networks (IEEE and ETSI).

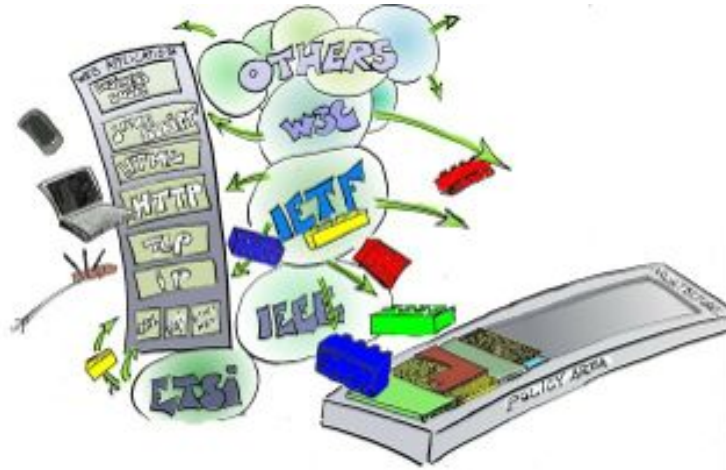
3666 Utilising relevant specifications will lower the costs of the implementation and reduce  
3667 specification overhead, thereby significantly lowering costs and risks in reaching results  
3668 for the key policy goals. It is therefore recommended that, while solutions in these policy  
3669 areas are being standardised, elements that have been or are being standardised by the  
3670 respective standards organisation are being considered for use, and that those who  
3671 partake in developing the solutions bring their requirements and/or solutions to those  
3672 global open standards development organisations when appropriate.

3673 Architects and implementers are encouraged to seek applicable building blocks and have  
3674 them submitted for identification if they have not been identified yet

3675

3676 The following drawing illustrates those horizontal technology layers which provide  
3677 building blocks for ICT infrastructures and systems:

3678



3680 **4.2. Technology Areas, Major Building Blocks and Relevant Organisations**

3681 The chapter below provides a very high level illustrative outline<sup>56</sup> of the relevant  
 3682 horizontal technology areas.

3683 For each area examples of major technology building blocks that are covered are listed.  
 3684 Moreover those standards development organisations are listed which have major  
 3685 activities ongoing in the respective technology area and which can act as a source for  
 3686 further information as well as for providing relevant specifications.

3687 This section serves to illustrate the wealth of commonly available and globally deployed  
 3688 building blocks without the intention of providing a detailed inventory or roadmap.

3689 **Technology area: Physical and Link**

3690 Covers technologies that allow devices to connect to other devices, physical and  
 3691 transmission specifications.

---

94 <sup>56</sup>In order to achieve better comprehension, the areas are somewhat aligned with the OSI  
 95 or Internet Layer model, but the mapping is not necessarily exact nor is the positioning of  
 96 technology blocks in the areas.

3692

Technology blocks covered	Cabling, USB, BUS specifications,, Ethernet, WIFI, GSM, LTE, Signalling and framing specifications
Organisations active in these areas	CENELEC ETSI IEEE ISO/IEC ITU-T JEDEC TIA USB-IF

3693

3694 **Technology area: Internet-working technologies**

3695 Covers technologies that allow hosts or applications on independent networks to  
3696 communicate to each other.

Technology blocks covered	IP level technologies. For example, Binding to lower layers, Mobility solutions, Rendez-Vous, Locator/Identifier splits, Home networks, Tunnelling, and DNS, intra and inter domain routing, virtual networking, multi-cast, congestion control mechanism, TCP maintenance, and various traffic optimisation mechanisms
Organisations active in these areas	ETSI IETF ITU-T

3697

3698 **Technology Area: Applications**

3699 The Applications area covers the session presentation and application layer in the OSI  
3700 model. The ordering below is somewhat arbitrary.

3701

3702 ***Applications: Messaging and Media***

3703 Covers session protocols and architectures, and Platform technologies.

Technology blocks covered	Application layer protocols. For example, various e-mail standards, HTTP, ldap Internet based telephony (SIP and RTP), internet messaging (XMPP), emergency services, geolocation, and web platform (HTML, Cookies, XML, EcmaScript).
Organisations active in this area	Ecma ETSI IETF IEEE W3C XMS

3704

3705 ***Applications; Presentation and Interfacing***

3706 Covers interfacing and human interaction

Technology blocks covered	Fonts, Internationalization, Audio and Video Codecs, Accessibility standards, Fileformats (jpeg, SVG), APIs, Cascading style sheets
Organisations active in this area	ETSI IETF ITU-T MPEG Unicode W3C

3707

3708 **Applications: Business logic**

3709 Covers area specific communication aspects that are specific to application areas

Technology blocks covered	XML based document definitions, business semantics, and Modelling Languages (e.g. invoicing standards)
Organisations active in this area	CEN OASIS OMG UN/CEFACT W3C

3710

3711 **Technology Area: Security and Privacy:**

3712 Description

3713 Security and Privacy is the broadest of the technology areas. It is part of horizontal but  
3714 also part of the complete vertical stack and, therefore, may be seen as “cross-area”. The  
3715 building blocks herein can be solutions by themselves or be applied as part of solutions.

Technology blocks covered	Internet Public Key Internet infrastructure (x.509 based) web authorization javascript signing and encryption transport layer security mechanism ( TLS) Authentication information exchange mechanisms (SAML) Privacy enhancement mechanisms
Organisations active in these areas	CEN ETSI ISO/IEC ITU-T IEEE IETF OASIS W3C

3716

3717

3718 **5. CLOSING REMARKS**

3719 This is the first version of the Rolling Plan. It has been produced in a consensual  
3720 and open way, between the Commission and the MSP. For the first time, with this  
3721 Rolling Plan there is a comprehensive strategy document available covering policy  
3722 making across different Directorates-General of the European Commission and  
3723 consolidating their input with the advice given by the MSP based on its broad  
3724 stakeholder representation.

3725 It will be necessary to gather further experience in the usage and implementation of  
3726 the Rolling Plan to fine-tune the development process.

3727 In any case, the Rolling Plan is not conceived to be a finalised document ever, but a  
3728 snapshot reflecting the policy needs and stakeholders' advice reflecting at a given  
3729 moment and subject to the information that was available to the authors at that  
3730 point in time.

3731 The Rolling Plan provides the opportunity for policy makers on EU and on national  
3732 level to move towards closer collaboration and a closer common understanding  
3733 regarding the objectives of policy making in the various areas. The Rolling Plan  
3734 aims at giving a concise overview on available standards and ongoing  
3735 standardisation activities of relevance to the respective policy context. This should  
3736 facilitate effective policy making by providing information on the global  
3737 standardisation landscape per area. And it shall avoid any duplication of work and at  
3738 the same time bring global standards into the focus of policy making.

3739 The Rolling Plan is both a work plan of the European Commission, a guideline for  
3740 the implementation of policies supported by standardisation and a source of  
3741 information for stakeholders about policy priorities and envisaged actions. The  
3742 Rolling also relies on the decidedness of standardisation organisations to take up  
3743 work which is relevant in specific policy contexts and thus contribute to driving the  
3744 technologies in the identified policy priorities.

3745 The fast evolution of needs in the ICT field requires an equally fast adaptation of the  
3746 Rolling Plan, including new topics and updating or even removing the topics  
3747 already mentioned in the document. Therefore the Rolling Plan will regularly be  
3748 reviewed by the Commission with the collaboration of the ICT Standardisation  
3749 Multi-Stakeholder Platform. It will be updated at least once a year.

3750

3751

3752

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3757 **6. ANNEX I - LIST OF MEMBER STATES' WORK PLANS AND STRATEGIES**

3758