

NOTE: Cells on the gray background include more text that is displayed (1.024 characters are display). The complete text is displayed in the formula bar.									
Date:		07-12-08							
DS - D 2.7 - Guidelines for the Encoding of Spatial Data: Comments and Resolutions Table									
Progressive comment number	SDIC ID	LMO/SDIC	1 Comment ID	2 Chapter, section or clause no./ Subclause No./Annex	3 Paragraph/Figure/Table/Note	4 Type of comment	5 Comment (justification for change)	6 Proposed change	7 Draft resolutions after the Comment Resolution Workshop
1	General Administration of Patrimonial Documentation	LMO	3			Q	How does the translation from UML to GML work for the developer who must have in memory the UML model, the exchange format and the translation rules at the same time?		A - add brief discussion about implementation aspects
2	Royal Netherlands Meteorological Institute (KNMI)	LMO	1			G	We are no ISO experts and did not have the relevant ISO-19118 document available, so it was hard for us to to evaluate this document.	Please make relevant ISO documents available for SDICs and LMOs, this also applies for other reviews of documents	NA - INSPIRE and the European Commission is not in the position to influence the national standardisation bodies to change their business rules or funding schemes. The standards necessary for developing the IRs are being made available to the experts that develop the specifications. However, see also #18. NOTE: Similar comments are #14, #28, #87.
3	Royal Netherlands Meteorological Institute (KNMI)	LMO	2			Q	What is the connection with OGC observation and reference model (OGC-07-022-rt and OGC-07-002-r3) and service standards (WMS, WCS, WFS)? It is not clearly specified in this document, only ISO is mentioned.	Please specify the relations with OGC models and services	O&M is a conceptual model that is expected to be used/useful as the basis of thematic models. This is recognised in the Generic Conceptual Model. The O&M encoding annexes (which are informative) would be the likely candidates for encoding O&M-based data. Regarding services, D2.7 is related to the encoding of data. The details about the services are specified in the Implementing Rules and Guidance documents related to network services. A requirement for the download service will be that it supports all encodings of spatial data. NOTE: O&M is now a New Work Item Proposal in ISO, too.
4	Royal Netherlands Meteorological Institute (KNMI)	LMO	3			Q	Are there alternatives for the ISO 19118 standard? Did the standard prove itself in practical implementations?	Please provide better arguments on why to use ISO 19118	Ap - From ISO 19118 only the general concepts of encoding and its role in a model-driven approach are used. And yes, these concepts and principles are proven in practical implementations.
5	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 1				Document D2.7 constitutes a good framework for encoding, and is well based upon international standards. The "Foreword" states the basic principles of INSPIRE; that it is possible to combine spatial data and services from different sources across the Community in a consistent way and share them between several users and applications, and that it is possible for spatial data collected at one level of public authority to be shared between all the different levels of public authorities. Encoding is vital to fulfil this requirements, and the following comments is an attempt to give even more stringent requirements and reduction of options to achieve this scope.		See individual comments below

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6	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 2			G	This document refers to ISO 19118 for details regarding the encoding process, and the scope states that the appropriate encoding rule(s) for each INSPIRE application schema will be determined based on the specific characteristics of the data. ISO 19118 Annex A states that different use cases result in different encoding rules. Currently, the ISO 19100 series of International Standards specifies two XML based encoding rules: (1) ISO 19136 Annex E specifies a XML based encoding rule for ISO 19109 conformant application schemas that can be represented using a restricted profile of UML that allows for a conversion to XML Schema. The encoding rule has mainly been developed for the purpose of application schemas specifying feature types and their properties. The encoding rule uses XML Schema for the output data structure schema. (2) ISO/TS 19139 specifies a XML based encoding rule for conceptual schemas specifying types that describe geographic resources, e.g. metadata according to ISO 19115 and feature catalogues according to ISO 19110. The encoding rule supports the UML profile a	This document should emphasize the importance of applying the two first scenarios, to enable interoperability in INSPIRE context. The last scenario states that different XML based encoding rules may be required and specified by an information community. Examples for such requirements include but are not limited to: -support for the XML based encoding rule specified in the ISO 19118 - revision 1, informative Annex C (this encoding rule is in use by communities); - support for a different UML profile not covered by an existing XML based encoding rule; - support for a different output data structure schema than XML Schema (e.g. Relax NG); -support for new XML technologies or new versions of existing XML technologies; - support for specific conversions to optimize the use of the capabilities of XML; - support for other XML-related requirements which are established in a community. The application of such community profiles should not be allowed or kept at a minimum in INSPIRE. See later comments	Ap - this is the motivation for the default encoding rule. However, since there may be more than one encoding for an application schema (examples: full or simplified representation; GML and KML; different encodings of gridded data; etc). Also, the 34 themes represent very diverse themes and those involved in the development of the document are not familiar with all the themes. Therefore, the current approach in general seems to represent the appropriate balance. To address the valid concerns raised by the comments (and similar comments, e.g. #99 and #101) the following amendments will be made: - A requirement will be added: All data specifications shall specify a mandatory encoding rule that has to be supported for the spatial data of that theme (to ensure that data for the theme is available in the same encoding across Europe) (note: different encoding rules may apply to different "download use cases", see #56, although this should be avoided, if possible). - A recommendation will be added: All data specifications should use the default encoding rule for the mandatory encoding rule.
7	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 1				Document D2.7 constitutes a good framework for encoding, and is well based upon international standards. The "Foreword" states the basic principles of INSPIRE; that it is possible to combine spatial data and services from different sources across the Community in a consistent way and share them between several users and applications, and that it is possible for spatial data collected at one level of public authority to be shared between all the different levels of public authorities. Encoding is vital to fulfill this requirements, and the following comments is an attempt to give even more stringent requirements and reduction of options to achieve this scope.		d

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8	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 2			G	This document refers to ISO 19118 for details regarding the encoding process, and the scope states that the appropriate encoding rule(s) for each INSPIRE application schema will be determined based on the specific characteristics of the data. ISO 19118 Annex A states that different use cases result in different encoding rules. Currently, the ISO 19100 series of International Standards specifies two XML based encoding rules: (1) ISO 19136 Annex E specifies a XML based encoding rule for ISO 19109 conformant application schemas that can be represented using a restricted profile of UML that allows for a conversion to XML Schema. The encoding rule has mainly been developed for the purpose of application schemas specifying feature types and their properties. The encoding rule uses XML Schema for the output data structure schema. (2) ISO/TS 19139 specifies a XML based encoding rule for conceptual schemas specifying types that describe geographic resources, e.g. metadata according to ISO 19115 and feature catalogues according to ISO 19110. The encoding rule supports the UML profile	This document should emphasize the importance of applying the two first scenarios, to enable interoperability in INSPIRE context. The last scenario states that different XML based encoding rules may be required and specified by an information community. Examples for such requirements include but are not limited to: -support for the XML based encoding rule specified in the ISO 19118 - revision 1, informative Annex C (this encoding rule is in use by communities); - support for a different UML profile not covered by an existing XML based encoding rule; - support for a different output data structure schema than XML Schema (e.g. Relax NG); -support for new XML technologies or new versions of existing XML technologies; - support for specific conversions to optimize the use of the capabilities of XML; - support for other XML-related requirements which are established in a community. The application of such community profiles should not be allowed or kept at a minimum in INSPIRE. See later comments	d
9	National Survey and Cadastre, Denmark	LMO	KMS-1			G	Document 2.7 is a good document for the future work. However, one should be aware of the fact that the guidelines in this document only is concerned with the encoding of geographic information and not the theme related features that need to be communicated. In the context there might also be a need for a semantic reference model to link the thematic information together.		? - features are geographic information and covered by D2.7, too.
10	LMV - Lantmateriet, National Land Survey of Sweden	SDIC	1			G	One main goal for both Inspire and the Guidelines is interoperability. Therefore this document should be more precise on which part of the standard that should be used in Inspire. The document is too general. It is more important to document the specific regulations concerning the content than to describe methods on how to create a schema. If the guidelines is just a copy of the standard, it will not be of any help in guiding the user.	The document should focus on the parts in the standard that are common for all themes and shall be used.	? - the proposed change has not been understood. It must also be pointed out that this document is not directed towards the "user".
11	Lenkungsgrremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	1			G	It is very much appreciated that in most cases the ISO standards are being used, this will very much facilitate the work with D 2.7.	none	-

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12	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	2			G	We would like to draw your attention upon the fact that the wording seems very abstract and technical and maybe difficult to understand for future users.	Perhaps plan a less technical version later for use in the contributing organisations.	Ap - the target audience is mainly groups developing data specifications. Future users will more likely have to deal with the concrete theme specific encodings.
13	IDEE Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	17			Q	This documents is about the data encoding of the three Annex of INSPIRE (I, II and III) but in the diferents chapter only mention Annex I and II, Why don't mention the Annex III?		Ap - if not already done, clarify this by references to the differences in requirements in the Directive
14	IDEE Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	18			Q	Annex and chapters of ISO standard are specified in several part of the text ,by example if you want to confirm that your data pass the Abstract Test Suite, you must to have the ISO 19118. This document should include more literal text of standards and so it is not forced to have the standard to interpret this document		See #2
15	METEO-FRANCE	LMO	MF_01	General		G	We understand that D2.7 cannot prevent meteorological services from going on using BUFR and GRIB codes, i.e. codes developed according to their needs and constraints, under the auspices of WMO. BUFR and GRIB codes are not totally compliant to ISO 19118. Adapting these codes – although technically feasible – to UML, GML and namespace requirements will give way to such difficulties in terms of size and time of download that it will prove impracticable.		Ap - the current wording of D2.7 allows the use of encodings where the default encoding is proven to be impractical. However, at the same time it is important to agree on common approaches where practical.
16	DI ICSP - DI ICSP	SDIC	24	Document		G	The approach of platform-independent (PIM) / platform-specific (PSM) models is clearly based on an MDA style (even if only in concept). Does D2.7 make any recommendations regarding whether: - The PIM -> PSM transformation should be automated (INSPIRE's use of ISO 19136 Annex E suggests PSM -> GMLAS should be but what about PIM -> PSM)? - How the transformations are specified (language)?	Clarification required regarding automatic transformations and specification of transformations.	A - add more clarification also based on Annex I experiences

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17	DI ICSP - DI ICSP	SDIC	25	Document		G	The document identifies GML and ISO/TS 19139 as the default encodings in INSPIRE. These essentially cover vector data and ISO 19115 metadata. Are there any recommendations for default encodings for handling raster data such as imagery?	Clarification required for default encodings for raster data.	Ap - An earlier draft of the document contained a proposal for this, but was removed again as it was not mature and requires further research which is out-of-scope for the Drafting Team. However, the current lack of any part of the document addressing this topic is insufficient. The general idea how coverage data (or any existing file-based data) can be integrated into the default encoding rule will be outlined in a new informative annex (Andrew Woolf to prepare a draft for review by the CRW participants until Nov 4) and the need for further research and pilot about this topic will be highlighted. Other activities like the ECMWF workshop in November 2008 may be an opportunity to move this topic forward with respect to the Annex II/III data specification which will require encodings of gridded data. To complement this, a proposal for a study/pilot about this subject will be prepared and submitted to the Consolidation Team.
18	DI ICSP - DI ICSP	SDIC	26	Document		G	INSPIRE relies heavily on ISO 19118 for many of its core encoding rules. This specification is dated 2005. The next revision is due in 2009 and D2.7 mentions ISO 19118 DIS. Are there any significant changes to ISO 19118:2005 that INSPIRE will use?	Clarification of dependencies on ISO 19118 and its present version.	A - clarify that D2.7 is based on the emerging revision and provide a longer overview of the important concepts that are used by D2.7
19	DI ICSP - DI ICSP	SDIC	27	Document		G	INSPIRE identifies coverages as a requirement of data specifications. However, the handling of coverages in the ISO 19100 framework is not clearly understood, in particular, the rules for modelling coverages in ISO 19109 application schemas using the General Feature Model. Are there any plans to provide recommendations on handling coverages?	Clarification of handling coverages.	Ap - the GCM provides this (maybe not in great detail, but this should be addressed in the upcoming revisions of 19109 and 19123)
20	DI ICSP - DI ICSP	SDIC	28	Document		G	The grammar of the document is sometimes peculiar.	The grammar of the document needs to be thoroughly checked.	A - a native speaker will review the language of the document
21	Royal Netherlands Meteorological Institute (KNMI)	LMO	4	Foreword	8	G	What is the status of the Guidance Documents? Formal status is that there is no obligation to follow it. This introduces a high risk for interoperability		The guidance document aims to assist all players in the establishing of infrastructure for spatial information to better understand and to apply correctly and in a uniform way the INSPIRE Directive and the INSPIRE Implementing Rules. However, the guidance document has no formal legal status and in the event of a dispute, ultimate responsibility for the interpretation of the law lies with the Court of Justice.
22	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 3	Foreword		G	Encoding will not be part of the implementing rules and will be addressed in guidance documents. It is not clear who this guidance documents are designed for. Is it the TWG's and/or the network services drafting team?	Clarify	A - The guidance documents on encoding are expected to be technical specifications. The target audience are parties implementing them in software components.
23	Institut Géographique National	LMO	1	Foreword	p 3, last sentence	E	"it is expected that encoding will not be part of the IR and addressed in guidance documents" Formulation may be confusing	Replace by "it is expected that encoding will not be part of the IR but will be addressed in guidance documents"	A

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24	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 3	Foreword		G	Encoding will not be part of the implementing rules and will be addressed in guidance documents. It is not clear who this guidance documents are designed for. Is it the TWG's and/or the network services drafting team?	Clarify	d
25	Lenkungsgrremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	3	Foreword		E	D2.3, D2.5, D2.6 and D2.7 should contain a common Foreword	Harmonise Forewords.	AwM - Forewords are document specific. In the case of INSPIRE data specifications development framework documents (D2.3, D2.5, D2.6, D2.7), the forewords already include some common parts related to INSPIRE or INSPIRE Directive (adopted in 2007). When the INSPIRE Directive is cited, the exact text from the INSPIRE Directive should be used (for example: INSPIRE should be based on the infrastructure ... instead of: INSPIRE will be based on the infrastructures ...). The documents were developed and adopted within the different time scale, they address different and specific issues, therefore the forewords can not be completely harmonised. See also #37.
26	Lenkungsgrremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	4	Foreword	3rd paragraph, 4th sentence.	G	Possibly faulty content: "Implementing Rules are adopted as Commission Decisions, and are binding in their entirety.". In general, other forms of adoption are possible, too, e.g. Regulations.	Add other possible legal forms - or state, if applicable, that all Implementing Rules for Data Specifications will have the form of Commission Devisions.	Ap - Use the following words: "Implementing Rules should be adopted as Commission legal act and are binding in their entirety."
27	Lenkungsgrremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	5	Foreword	4th paragraph	E	The date of entry in force of the INSPIRE Directive is missing	Insert „(15th May 2007)“ after „date of adoption“	A
28	Met Office	LMO	MetO01	Intro p6	below fig 1	G	...in-depth knowledge about this series is required in every team developing an INSPIRE data specification. This is also required of the SDICs and LMOs to analyse the D2.5/6/7 documents, and particularly where communities have decades of data modelling experience and results in a modelling paradigm which pre-exists UML and ISO 191xx, this is a severe constraint. Lack of resource means that oversight and comment, specifically in the Met Community, will be very limited.		See #2. Also note that the same applies to other communities besides the Met Community, too.

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29	Met Office	LMO	Met002	Intro p6	last line	G	All valid encoding rules will conform to ISO 19118 lack of access to this and other 191xx standards means that fully informed comment will not happen in the Met Community. Since this is a requirement, and encoding rules changes impact the existing interoperability of the WMO bulk delivery of data, lack of widespread oversight is contrary to the Directive intentions.	The quick summary of 19118 in clause 6.2 is insufficient explanation of 19118, particularly as it applies to existing encoding standards of WMO.	A - list the requirements inherited from ISO 19118 as a result of the one requirement in D2.7. See also #18.
30	Met Office	LMO	Met003	Intro p7 also section 5.1.1.2	last line p7 and 2nd line p 11	Q	"... will be published in guidance documents." What will be IRs and what will be guidance is further confused here. A clear description of what is IR and what is guidance is URGENTLY needed.	where and which documents? Aren't D2.8.x.x IRs rather than guidance?	The CT is currently investigating with the legal service of the commission on what should be in the legal text (IR). In general all elements/provisions that are necessary for achieving interoperability as defined in chapter III of the Directive shall be included in the IR, which will be based on data specifications proposed by the TWG. Data specifications in their entirety will be published as guidance documents.
31	Royal Netherlands Meteorological Institute (KNMI)	LMO	5	Introduction		G	Please include a positioning on how OGC standards for models and services are related to the to be used ISO standards	Provide a positioning	NA - See #3. In principle, we could add "our understanding" with respect to WFS and WCS, but this rather a task for DT NS and their proposal for the download service.
32	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 4	Introduction		G	The approach to encoding in this document states that encoding of the spatial data in INSPIRE depends on the particular encoding rule chosen for the data. We assume that the TWG's will chose the particular encoding, and the only requirement is that it shall be conformant to ISO 19118 revision 1. With respect to well known community encodings the choice should be restricted, to enable interoperability.	Add a paragraph that states that in spite of existing community encodings the number of choices should be reduced, preferable one default encoding . Additional encodings may apply due to performance requirements. Only in very specific situations the default encoding should be omitted.	Ap - the recommendations already capture this to the extent that seems appropriate, see #6
33	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 4	Introduction		G	The approach to encoding in this document states that encoding of the spatial data in INSPIRE depends on the particular encoding rule chosen for the data. We assume that the TWG's will chose the particular encoding, and the only requirement is that it shall be conformant to ISO 19118 revision 1. With respect to well known community encodings the choice should be restricted, to enable interoperability.	Add a paragraph that states that in spite of existing community encodings the number of choices should be reduced, preferable one default encoding . Additional encodings may apply due to performance requirements. Only in very specific situations the default encoding should be omitted.	d
34	DI ICSP - DI ICSP	SDIC	1	Introduction	Footnote	E	Typo: ... and "m" the sequential number of ...	Change: ... and "n" the sequential number of ...	A
35	DI ICSP - DI ICSP	SDIC	2	Introduction	Paragraph 8, item 3	T	Where are data types managed within INSPIRE? Just at application schema level? Since properties are not presently managed at the dictionary level, there may not be a need to manage data types at this level either. However, the DFDD (baseline 2007-1) does include data types.	Clarification required.	A - just at the application schema level
36	DI ICSP - DI ICSP	SDIC	3	Introduction	Paragraph 11, item 4	E	Typo: A default GML/19139-based ...	Change: A default GML/ISO 19139-based ...	A

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37	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	6	Introduction		E	D2.3, D2.5, D2.6 and D2.7 should contain a common Introduction	Harmonise Introductions.	See #25
38	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	7	Introduction	2nd paragraph	E	Logic connection of sentences	Change to "Here, it is important to note that interoperability has to go beyond any particular community, but and has to take the various cross-community information needs into account."	Ap - "... but has to take ..."
39	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	8	Introduction	2nd paragraph	E	Logic	Change to "... requirements of and for interoperability ..."	? - this is what is stated in paragraph 2
40	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	9	Introduction	3rd paragraph	G	Logic connection to previous sentence missing. "This includes agreements about the different interoperability components."	Change to: "This includes requires agreements about the different interoperability components."	NA - current wording seems to be correct and logically connected.
41	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	10	Introduction	3rd paragraph	G	It will not necessarily be the download service, that will perform the transformation.	Change to: "In other words, by enabling interoperability data can be used coherently, independent of whether the existing data set is actually changed (harmonised) or "just" transformed by a download service, for publication in INSPIRE depending on the approach taken by the Member State."	Ap - but check by native speaker

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42	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	11	Introduction	Figure1	E	The figure should clarify how and where the encoding rules are applied. It should not just indicated where D2.7 is located within the data specification framework, but also the encoding rules themselves. Are encoding rules part of the registers or part of the application schema?	Add the encoding rules to the diagram	NA - this would overload the diagram which mainly provides the context and relationships (note: a register of encoding rules could be established and referenced from the data specifications; the encoding rules are not part of the application schema itself)
43	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	12	Introduction	page 6, footnote 2	E	Typo	Change second "m" to "n"	A
44	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	13	Introduction	last paragraph, second bullet point	T	What does "particular encoding rule" mean? Are there potentially different encoding rules for different themes? That should not happen, at least for annex I and II themes	Clarify the meaning	A - The text in the introduction should already clarify and explain that additional encoding rules may be adopted - and why
45	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	14	Introduction	last paragraph, third bullet point	T	"Additional or alternative" encoding rules for each application schema may not be allowed. Otherwise interoperability cannot be achieved.	Remove at least "alternative"	NA - see other comments on this issue, in particular #103
46	IDEA Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	1	Introduction	Paragraph 7	Q	Which "transfer process" is exactly referring? In the previous lines of text there is no explicit mention to any transfer process. It's not clear which transfer process is mentioned here. The transfer process involved in download services? Or the transfer process from an old non INSPIRE conformant DB to an INSPIRE conformant DB? In other words: Is this document aiming to harmonize only transfer encoding or internal encoding too?	Clarify which transfer process is referring the text. Transfer from where to where. Change: "...for the transfer process..." to "...for the transfer process involved in download and other services giving access to data..."	A

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47	IDEA Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	4	Introduction	Paragraph 3	E	Mistake and terminological consistency with EN ISO 19115	Change "data sets" by "datasets"	NA - Directive uses "data set"
48	IDEA Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	5	Introduction	Paragraph 8	E	Between INSPIRE partner documents don't have found the document is D 2.8, would be a mistake in the sentence?	Change "Besides the partner documents D2.3, D2.5, D2.6 and D2.8.m.n2" by "Besides the partner documents D2.3, D2.5, D2.6.m.n2"	NA - D2.8.m.n is correct
49	IDEA Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	6	Introduction	Paragraph 9	E	Mistake and terminological consistency with EN ISO 19115	Change "code list" by "codelist"	NA - ISO/TS 19103 uses "code list"
50	IDEA Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	7	Introduction	Footnote	E	"m" is the number of the annex and "n" the sequential number of the theme within the annex.	Change "'m" is the number of the annex and "m" the sequential number of the theme within the annex." by "'m" is the number of the annex and "n" the sequential number of the theme within the annex."	A
51	Ordnance Survey	LMO	1	Introduction	5th paragraph	G	The sentence "This document specifies the process" is confusing. We suspect it may be a copying error from the introduction of D2.6.	Delete this sentence, or replace with "D2.6 describes the process" (but the next paragraph expands on that).	A
52	Ordnance Survey	LMO	2	Introduction	3rd bullet point at end of Introduction	T	"All valid encoding rules will conform to ISO 19118"; we suspect this will not be true (at least, until the current revision of ISO 19118 is concluded), because there are contradictions between ISO 19136 / 19139 and ISO 19118. Guidance provided by an employee who is a member of the ISO 19118 revision committee is that these contradictions may not be sorted out even in the revised version.	Delete this sentence.	(comment withdrawn after study of the current draft revision of ISO 19118)
53	Ordnance Survey	LMO	10	Introduction	4th bullet point at end of Introduction	E	It would be less confusing to talk about "19136/19139"-based encodings, than "GML/19139"	use "19136/19139" instead of "GML/19139"	A
54	Ordnance Survey	LMO	13	Introduction	2nd paragraph	E	The word 'but' in the third line would be better replaced with 'and'.	Replace 'but' with 'and'.	A

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
55	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 5	Scope		G	This document specifies requirements and recommendations for the encoding of spatial data for the purpose of transfer between systems in INSPIRE. According to the directive, 'spatial data' means any data with a direct or indirect reference to a specific location or geographical area (Article 3.2). This excludes other kind of data like required registers, portrayal and other kind of data which not necessary have a direct or indirect reference to a specific location. Such kind of data may also be required to transfer, and an encoding should be defined. Transfer as defined in the document is movement of data from one point to another over a medium [ISO 19118], and covers more than spatial data. With systems in INSPIRE we understand all interoperable systems that handles data where transfer is required.	Clarify that this document describes the encoding of all data required to be transferred between systems in INSPIRE.	NA - This comment raises an interesting point. The scope of D2.7 is the encoding of spatial data. However, there must be agreements on the encoding of items in registers, too. Currently there is no document in the work programme that addresses this topic. We recommend to the CT to address this issue in the ongoing work on the registers and registries.
56	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 6	Scope	NOTE 1	G	This note states that no requirements and recommendations regarding the encoding of updates are currently known. However, there are business requirements for updates that requires encoding of updates to be handled: 1. Users that have added value to the data accessed earlier (for example added new attributes) and they do not want to download the entire dataset again. 2. Since data are not available free of cost it should not be necessary to buy the entire dataset again, if there are only a few updates. In document D2.5 Generic conceptual model the use of UUID is encouraged, also as a requirement for updating.	Article 8(2) in the directive states that the implementing rules shall address the updates of the data. It is also stated in document D.5 version 3 that while Article 8(2)(e) is not specifically addressed by this document (D2.5) it will be addressed by document D2.7 and by the implementing rules on network services, it should be noted that unique object identifiers and life-cycle rules as discussed in this document play an important facilitating role in exchange of updates. To address encoding of updates life cycle information and object identifiers should be addressed more specifically in the data specifications. Since life cycle information and object identifiers are elements that should be part of the applications schema, the need for specific encoding rules should be reduced, and should follow the rules in ISO 19136 Annex E.	Ap - we agree in principle; on the other hand, no specific requirements beyond those that can already be addressed by the application schemas themselves could be identified from the work on user requirements. However, it is the understanding that general update requirements can already be addressed with the current data specifications (this is not clear from the current wording in D2.7 and the document will be improved to address this and provide examples): If spatial objects contain temporal information, e.g. about the creation or last change to the object, then this information can be used to select/request/identify updated spatial objects. As an example, most spatial objects modelled in the current drafts of Annex I data specification may contain such information. This already allows to address the requirements for updates submitted as comments to D2.7. At this time, it is not clear, whether the download service will contain specific support to request spatial objects changed since a specific date/time (the draft document for this service is still discussed within DT NS and has no

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57	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 5	Scope		G	This document specifies requirements and recommendations for the encoding of spatial data for the purpose of transfer between systems in INSPIRE. According to the directive, 'spatial data' means any data with a direct or indirect reference to a specific location or geographical area (Article 3.2). This excludes other kind of data like required registers, portrayal and other kind of data which not necessary have a direct or indirect reference to a specific location. Such kind of data may also be required to transfer, and an encoding should be defined. Transfer as defined in the document is movement of data from one point to another over a medium [ISO 19118], and covers more than spatial data. With systems in INSPIRE we understand all interoperable systems that handles data where transfer is required.	Clarify that this document describes the encoding of all data required to be transferred between systems in INSPIRE.	d
58	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 6	Scope	NOTE 1	G	This note states that no requirements and recommendations regarding the encoding of updates are currently known. However, there are business requirements for updates that requires encoding of updates to be handled: 1. Users that have added value to the data accessed earlier (for example added new attributes) and they do not want to download the entire dataset again. 2. Since data are not available free of cost it should not be necessary to buy the entire dataset again, if there are only a few updates. In document D2.5 Generic conceptual model the use of UUID is encouraged, also as a requirement for updating.	Article 8(2) in the directive states that the implementing rules shall address the updates of the data. It is also stated in document D.5 version 3 that while Article 8(2)(e) is not specifically addressed by this document (D2.5) it will be addressed by document D2.7 and by the implementing rules on network services, it should be noted that unique object identifiers and life-cycle rules as discussed in this document play an important facilitating role in exchange of updates. To address encoding of updates life cycle information and object identifiers should be addressed more specifically in the data specifications. Since life cycle information and object identifiers are elements that should be part of the applications schema, the need for specific encoding rules should be reduced, and should follow the rules in ISO 19136 Annex E.	d
59	Royal Netherlands Meteorological Institute (KNMI)	LMO	6	1.	NOTE1	Q	Updates of requirements for encoding updates is unknown. When will this be specified?	Specify when these requirements are known. It is very relevant for meteorological data which may be dynamical and therefore must be very often updated.	A - See #56 for a clarification on providing data updates. For meteorological data the encoding rules for updated spatial objects are understood to be the same as for the "first version" of a spatial object.
60	Royal Netherlands Meteorological Institute (KNMI)	LMO	7	1.	NOTE2	G	Implementing Rule for Download services is not available. As this document has impact on D2.7, another review will be needed.		Ap - D2.7 should be considered when reviewing the Download service proposal in the future
61	IDEE Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	2	1.	Paragraph 3	T	Why Annex III themes are not considered? It would be wise to extend harmonisation benefits to all INSPIRE themes.	Change "For spatial data that belongs to a theme listed in Annex I or Annex II..." to "For spatial data that belongs to a theme listed in Annex I, Annex II or Annex III..."	NA - The Directive only requires this for Annexes I and II

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
62	METEO-FRANCE	LMO	MF_02	1.	3rd para	T	Risk of confusion on the meaning of 'Update'. For current weather data, we generally talk of the "updated" forecast. However, this is a total replacement of the weather data with more recent data, not a partial modification which is what is intended here.	An explanation in section 4.1 Terms for "update" is required. (9) Update An update is when only parts of a dataset have been modified, and rather than transferring the whole dataset, a partial dataset containing only the modified data is used. The concept does not apply where the data are totally replaced on a regular basis, such as current weather data, which in these terms, are not updated.	AwM - The supported "update" use case should be clarified. The general understanding of update in the Drafting Team was not limited to parts of a data set, but could be a single spatial object, a complete data set or anything in between. A definition for "update" on this basis will be added to the document. See also #56, which may further help to clarify the issue. The application schema will allow to specify known requirements, e.g. modelling at the conceptual level a dataset with timeseries and 'latest' component, or else as single snapshots that get replaced, etc.
63	Met Office	LMO	Met004	1 also in 5.1.1.3	3rd para	E	update is mentioned in Directive 8(2)e. This is the place and the document where update must be properly defined, and an entry in terms and abbreviations is required. For current weather data, we generally talk of the "updated" forecast. However, this is a total replacement of the weather data with more recent data, not a partial modification which is what is intended here.	An explanation in section 4.1 Terms for "update" is required. (9) Update An update is when only parts of a dataset have been modified, and rather than transferring the whole dataset, a partial dataset containing only the modified data is used. The concept does not apply where the data are totally replaced on a regular basis, such as current weather data, which in these terms, are not updated.	d
64	IDEE Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	8	1 AND 2		Q	In the conformance clause, the definition of the purpose of the document is more restrictive than in the scope Clause.	Change the definition in Scope: "This document specifies the requirements" by "This document specifies the minimum requirements"	AwM - remove "the minimum" in clause 2
65	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	19	2.		Q	The aim of this document is to establish minimum requirements for the encoding (cf. 2 Conformance). But the document defines only one requirement. All Others are recommendations.	With a view to uniform "INSPIRE data specifications", more recommendations should be changed in requirements.	NA - see other comments on this issue, e.g. #6
66	Royal Netherlands Meteorological Institute (KNMI)	LMO	8	3.		E	Please add ISO 19135 to the references	Add ISO 19135	AwM - add ISO 19135 to a bibliography. ISO 19135 is not referenced in a normative way
67	IDEE Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	9	3.		E	In the document appears more standards that isn't described in the normative	Add " ISO 19109- Rules for Application Schema"	AwM - add them to the bibliography, they are in general not referenced in a normative way

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
68	General Administration of Patrimonial Documentation	LMO	1	4.1		T	It's rather the standard ISO 19109 which gives a definition of the term application schema. ISO 19101 is currently mentioned as source.	conceptual schema for data required by one or more applications [ISO 19109]	NA - the original source is ISO 19101
69	Royal Netherlands Meteorological Institute (KNMI)	LMO	9	4.2	7	Q	Is XML Schema referring to the W3C schema definition language XSD? There are alternative schema definition languages such as RELAX NG and Schematron. These languages are supported by DSDL: Document Schema Definition Language (ISO 19757)	Please explain why XML schema (XSD) is chosen	A - XML Schema is chosen because of its usage in the geo community. This is also reflected in its usage in OGC and ISO/TC 211 (e.g. 19110, 19118, 19136, 19139). XML Schema is much more used than RelaxNG in current SDIs and SDI-related international standards. Schematron can also be used together with XML Schema. It is an option to express further constraints that could not be represented in XML Schema, but so far this has been considered as too demanding at this stage of the INSPIRE development.
70	Institut Géographique National	LMO	2	4.2		E	KML is missing	Add KML	A
71	LMV - Lantmateriet, National Land Survey of Sweden	SDIC	2	4.2		T	KML is used in clause 6.3, but not explained.	Add KML in the list of abbreviations	A
72	DI ICSP - DI ICSP	SDIC	4	4.2	ISO	E	This stands for "International Organisation for Standardisation" and not "International Standardisation Organisation"	Amend	A
73	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	20	4.2		E	The abbreviation IETF was in the text, but not explained.	Insert „IETF Internet Engineering Task Force“	A
74	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	21	4.2		E	The abbreviation IANA was in the text, but not explained.	Insert „IANA Internet Assigned Numbers Authority“	A

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
75	IDEЕ Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	10	4.2		E	Mistake and terminological consistency with EN ISO 19115	Change "International Standardisation Organisation" by "International Organization for Standardization"	A
76	IDEЕ Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	11	4.2		E	Abreviation "URL" appears in the document but isn't in the Abbreviations Clause	Add "URL" "Uniform Resource Locator"	A
77	IDEЕ Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	12	4.2		E	Abreviation "IETF" appears in the document but isn't in the Abbreviations Clause	Add "IETF" "Internet Engineering Task Force"	A
78	IDEЕ Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	13	4.2		E	Abreviation "IANA" appears in the document but isn't in the Abbreviations Clause	Add "IANA" "Internet Assigned Numbers Authority "	A
79	Ordnance Survey	LMO	3	4.2		E	ISO is not an abbreviation; the organisation's name in English is "International Organisation for Standardization"	Replace "International Standardisation Organisation" with "International Organisation for Standardization"	A
80	Met Office	LMO	MetO05	5.1.1.2 and 5.1.2	"international standards"	G	WMO data is transferred using International Standards mandated by WMO, including to JRC who, I quote, "do not need more weather data". Although in this document, GML has been assigned a recommended, rather than required, current international interoperability requires keeping WMO standards, which are not referenced and in D2.5 are required to be modified.	An explicit recognition of existing international standard exchange data as the "default" is required where it exists.	Ap - "default" is used as the default within INSPIRE "across" all themes. Where impractical, thematic data specifications may specify alternative or additional encodings. The wording will be improved to explicitly recognise the role of international standards, see #110.
81	Institut Géographique National	LMO	3	5.2	Second sentence	E	"This documents extends ..."	Replace by "This document extends..."	A
82	Institut Géographique National	LMO	4	5.3	last sentence	E, Q	What is meant by "for the range part" in the sentence "Coverage data is expected to use existing encodings for the range part"? This is not clear.	Clarify the meaning of this sentence, possibly reformulate or illustrate with an example.	A - add an example
83	IDEЕ Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	14	5.3	Paragraph 5	E	The redaction is confused	Change "spatial objects are expected to be primarily in XML/GML for the transfer of spatial data" by "spatial objects are expected to be primarily encoded in GML and the metadata in XML for the transfer of spatial data"	Ap - "for the transfer of spatial data, spatial objects are expected to be primarily encoded in GML and metadata according to ISO/TS 19139". However, this is a quote and the change would have to be applied to D2.5 first.

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84	METEO-FRANCE	LMO	MF_03	5.1.1.3		T	Risk of confusion on the meaning of 'Update'. For current weather data, we generally talk of the "updated" forecast. However, this is a total replacement of the weather data with more recent data, not a partial modification which is what is intended here.	An explanation in section 4.1 Terms for "update" is required. (9) Update An update is when only parts of a dataset have been modified, and rather than transferring the whole dataset, a partial dataset containing only the modified data is used. The concept does not apply where the data are totally replaced on a regular basis, such as current weather data, which in these terms, are not updated.	d
85	Ordnance Survey	LMO	11	6.	Recommendation 3	Q	About encoding rules as well as adding/managing those: How will the encoding rules be managed? Isn't another register needed for that and isn't this actually another harmonisation component?		Ap - The encoding rules applied in INSPIRE have to be managed so effectively this will result in another register (as it is stated in the document). An additional interoperability component is not necessary, this is covered by "data transfer" (which arguably could have been named better, e.g. to reflect the encoding topic)
86	Royal Netherlands Meteorological Institute (KNMI)	LMO	10	6.1	EXAMPLE	Q	What about WCS and WMS? WCS is internationally the preferred service for meteorological data (gridded data), as shown by THREDDS (http://www.unidata.ucar.edu/projects/THREDDS/) and UNIDATA initiatives	Please explain also how WMS and WCS can be used.	See #3 and #31
87	Royal Netherlands Meteorological Institute (KNMI)	LMO	11	6.1	1	G	ISO 19118 is clearly needed to perform a proper review of D2.7. We do not have this document available.	Please make ISO 19118 available for SDICs and LMOs.	See #2
88	Met Office	LMO	MetO06	6.1	service or message based	G	are both "traditional data transfer model" and the service-based "interoperability model" to be mandated under INSPIRE. The Proportionality principle surely does not allow INSPIRE to demand duplicate services where one already exists?	Clarify whether both Traditional and service-based will be required under INSPIRE.	A - It is our understanding that the Download service will specify both. We do not know at this time, if all download service instances have to support both modes. Eventually, it depends on the theme-specific requirements which modes are relevant for specific data. For some, a full dataset download may be the only aspect needed. On the other hand, for all Annex I data specifications, support for the "interoperability model" is expected. A requirement that a data specification shall specify all mandatory download modes in the delivery clause of the data specification. This has to be taken into account in the preparation of version 2 of the data specifications. Forward this information also to DT NS because it may be relevant for the specification of the Download Service.

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89	Met Office	LMO	MetO07	6.1	service or message based	E	"message-based" means something specific to WMO community where data is disseminated in "message switches" in a traditional data transfer model. The terminology is not sufficiently clear. Also WMO data transfer is highly interoperable - claiming "interoperability model" for a service exchange is tendentious.	The naming of message-based or "interoperability model" is partisan and should be clarified in this document. The Met community have used message based data transfers interoperably for 50 years.	Ap - the terms are used/introduced by ISO 19109. We have already put them into quotes as we were also not that comfortable with them. We will remove them from the document altogether and clarify the terminology used.
90	Royal Netherlands Meteorological Institute (KNMI)	LMO	12	6.2	1	T	Replace 'below' with a figure number. The figure is on the next page	Replace 'below' with a figure number.	A
91	Royal Netherlands Meteorological Institute (KNMI)	LMO	13	6.2	2	Q	What is meant by visa versa? Should the encoding rule provide the ability to reconstruct the input data using the output data? This may be a heavy requirement for the encoding service.	Please clarify what is meant with 'visa versa'	A - "vice versa" indeed refers to converting an output data structure back to an input data structure. If possible, the conversion would be bijective, but this is not a requirement, in particular in an INSPIRE context. An example where this is not achievable are conversions where the input data structures are richer than the output data structure. Also, it has to be understood that two conversions have to be distinguished: * between an encoding and the corresponding standardised application schema and vice versa (this what GML aims at with its Annexes E and F) * between an encoding and the structure of the internal data set (in general, it is not expected to derive the full internal data structures from an INSPIRE encoding) Add a clarifying note.
92	Met Office	LMO	MetO08	6.2	3rd para	E	In the light of the limited availability of 19118, it should be emphasised here that 19118 does not mandate GML, but that its Annex A is "informative"	Clarify that 19118 Annex A is "informative" not normative.	? - How is this related to the third paragraph. GML is used as an example and it is not stated anywhere that ISO 19118 mandates GML (this is also true in the proposed revision, by the way).
93	DI ICSP - DI ICSP	SDIC	5	6.2	Figure 2	T	The proximity of the UML application schema to the input data, compared to the output, is confusing - shouldn't it assume the same role in both the input and output? More specifically, the UML application schema is (typically) a platform-independent conceptual model with platform-dependent data structures being used to describe both the input and output data. It seems odd to show only one data structure schema and place the UML closer to the input data. Example - a UML application schema is transformed to a relational data structure schema and a GML data structure (application) schema; the input instance data is transformed to output instance data (GML). This may be a misunderstanding of what the section is trying to convey. It is also noted that this is taken from ISO 19118.	Clarification required.	A - It is our understanding that the input data structure schema is not shown here as it is "private" to the data provider. Still it is important for the encoding process. There are other figures in ISO 19118 that make that clear. As discussed in #2 we will extend the discussion of the ISO 19118 concepts used in this document.

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94	IDEE Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	15	6.2		T	It's necessary to explain or to add some comment about the figure2- "Overview of the encoding process [ISO 19118]", for example the letters i, l, d and D.	Add "An encoding service shall at least provide interfaces for encoding and decoding functionality. Examples of such interfaces are for encoding: d = encode (i, l), and for decoding: i = decode (d, l). Here, i is a reference to an application schema specific data structure, l is a reference to the application schema and d is a reference to the system independent data structure" (ISO 19118)	A - See also #93 and #2.
95	Geonovum	LMO	1	6.2, 6.3	requirement 1	Q	Are ISO 19118 Encoding and GML (ISO 19136) fully synchronised, or is there still work to be done by ISO and OGC?		The current final CD of ISO 19118 is consistent with ISO 19136 (GML) and ISO/TS 19139. (In fact, even the current edition of ISO 19118 is consistent as ist Annex A is informative and furthermore allows that any changes to the encoding rule in that Annex is valid as long as the changes are documented.)
96	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	23	6.3		T	We also very much recommend to use the default encoding rules provided by GML (ISO 19136) and ISO/TS 19139.	Use default encoding rules provided by GML (ISO 19136) and ISO/TS 19139.	
97	General Administration of Patrimonial Documentation	LMO	2	6.3		Q	In the draft, GML serves only as an exchange format and GML is deduced automatically from the UML model. The correspondence between UML and GML is not envisaged in ISO 19136. So, is it true that certain specificities of GML could not be used?		The correspondence between application schemas in UML and GML application schemas is specified in detail in ISO 19136 (see clause 6, Annex D/E). It is correct that in this approach, not all capabilities of XML Schema and GML would be used. Note that this is recommendation.
98	Royal Netherlands Meteorological Institute (KNMI)	LMO	14	6.3		Q	Has the feasibility of GML (ISO 19136) and ISO/TS 19139 as the INSPIRE default encoding rule been studied (including meteorological/gridded material)? (The first reason seems to suggest this.)		GML and ISO/TS 19139 are used in practice in a broad range of application domains. This includes also the meteorological domains (see CSML or work done in the UK MetOffice, as examples). On the other hand it is clear that more work/research/studies are needed in particular in relation to the encoding of gridded data and the use of existing file-based data in conjunction with XML. See also #17. We will also add a clarifying note about this here.
99	Royal Netherlands Meteorological Institute (KNMI)	LMO	15	6.3	7	G	The absence of obligations poses a risk to interoperability. The Recommendations included should get a more mandating status. Can it be made mandatory to use for TWGs, at least as a starting point?	Make the document mandatory as starting point for TWGs	Ap - See #6

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
100	Met Office	LMO	MetO09	6.3	all	T	Reading 19118, it is clear, that, WMO encoded data conforms fully to 19118, apart from having extensive and elaborate data models designed under modeling paradigms which predate UML. The difficulty in refactoring the WMO data models to UML, particularly where tools and implemented systems globally reflect the existing data models is far from trivial. Since the Directive mandates the use of existing International Standards, yet the DSDT mandate UML, our community needs some clarification as to INSPIRE requirements. The threat of undecided INSPIRE standards has already affected international procurement processes adversely.	Some clarification as to how much effort will be required by INSPIRE to refactor existing data models into UML is needed - and why.	It is not the TWG task to "refactor existing data models into UML"; instead it is to specify data models for INSPIRE purposes - guided by, but not constrained by, existing models (hence the "as-is" and "gap" analysis parts of the methodology). In principle, this comment is related to the Generic Conceptual Model and not the Encoding Guidelines. A similar comment has been discussed and resolved in the comment resolution of the Generic Conceptual Model (comment #10) and the resolution still applies: <i>"Article 7(1) of the Directive explicitly states that the standards adopted by organisations under the international law, if appropriate, shall be integrated and the existing technical means shall be referred. This reference is more appropriate in the context of a given data theme. WMO is welcome to take the lead and put forward the specifications for INSPIRE.</i> <i>The Directive and the Implementing Rules do not affect any existing standards process of any SDIC, LMO or other organisation.</i> <i>In general, in an infrastructure like INSPIRE there is a</i>
101	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 7	6.3	1st para	G	It is stated that encoding rules are not expected to become part of the implementing rule, therefore this document states recommendations instead of requirements. However, to enable interoperability detailed specifications and requirements are essential. Fulfilment of such requirements needs to be achieved wherever these requirements are specified, implementing rules of guidance document. This document should focus on requirement on encoding that needs to be fulfilled to ensure interoperability, the CT should consider where these should be documented and what legal status it shall have.	Change first paragraph to the following: The following clauses defines requirements and recommendations on encoding rules that must be fulfilled to enable interoperability.	AWM - Change text to: "This document defines requirements and recommendations on encoding rules that are the basis for the interoperability of spatial data." See also #6 and #99
102	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 8	6.3	Note	G	This requirement should be binding and be part of implementing rule for the interoperability of spatial data sets and services. First of all, it is not clear which implementing rules "the interoperability of spatial data sets and services" refers to. Does this mean all the TWG implementing rules and the 'network services' implementing rules?. Secondly, this interdicts the first paragraph that states that encoding rules is not expected to become part of the implementing rules.	Clarify and rewrite.	NA - Firstly, the IR referenced addresses the requirements of Chapter III of the Directive (not Chapter IV), this is clear from the wording in D2.7 and the Directive. Secondly, there is no contradiction between the requirement/note and the first paragraph; the requirement/note is about the role of encoding rules in general and the first paragraph discusses specific encoding rules.

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
103	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 9	6.3	Last para before Recommendation 2.	GGGG	It is stated that "while a default encoding rules is provided, the diversity of themes and practise in the communities is recognized by allowing the use of additional or alternative encoding rules". Additional encoding rules (for example for performance requirements) is acceptable, but alternative encoding rules should be avoided. Only in very specific situations, for example where it is not possible to specify the data by creating an UML application schema, or if the encoding rules from such a schema to the GML applications schema is impossible or creates an impractical GML application schema, alternative encoding rules should be allowed. It should be notified that such encoding rules will complicate the process of combining spatial data from different sources and share them between users and applications, and in such a way prevent interoperability.	Remove alternative from the sentence and add a new paragraph based upon left column.	AwM - Since we are not in a position to rule out that there may be themes where the default encoding rule is not applicable (as also stated in the comment), alternative encoding rules must be allowed. We will add a discussion about when alternative encoding rules may be used based on the comment. See also #6.
104	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 10	6.3	Recommendation 2	G	Should be rewritten and changed to requirement.	Change from recommendation to requirement and rewrite to: "Encoding and encoding rules should be based upon standards"	NA - "should" is recommendation, not requirement. This is the appropriate level as also indicated by the proposed change.
105	Institut Géographique National	LMO	5	6.3	Global	T, Q	This paragraph strongly relies on ISO 19118, ISO 19115, ISO 19139, XML and GML. It should be noticed that: 1- present version of ISO 19118 does not provide specifications for imagery / coverage data. 2- for metadata, ISO 19115-2 should be mentionned as well. The use of GML for imagery / coverage is not yet standardised. This paragraph gives the impression / illusion that everything is stated and ready for imagery / coverage. This is unfortunately not the case. Future works on ISO 19118 should address imagery / coverage better.	Add some clarification or information dedicated to imagery / coverage, or add a reservation to the statements. Mention ISO19115-2 as well as 19115.	A - see #98. ISO 19115-2 will be referenced.
106	Institut Géographique National	LMO	6	6.3	p 13, Paragraph after NOTE	Q	Is it still expected that encoding won't be included in IR? During Maribor meeting, it was said that components to be included in IR or guidance documents will be decided after testing, based on feasibility.		Most likely the encoding will not be part of the IR. The CT is currently investigating with the legal service of the commission on what should be in the legal text (IR). The legal text will be based on what proposed in the data specifications, but the data specifications will remain as guidance documents.
107	Institut Géographique National	LMO	7	6.3	p 14, second paragraph	Q	"that clause with the recommendations is expected to eventually form part of the GML guidance document". What about this document? Who will write it? Who will have to apply it?		The data specifications will remain as guidance documents. It is expected that recommendations in D2.7 that are relevant for the guidance documents will be included in them or published as a separate guidance document. The guidance documents will have no legal value but are a suggested approach to help MS to comply with the IR.
108	Institut Géographique National	LMO	8	6.3	p 14, third paragraph	Q	"it may use the same encoding" (for GetFeatureInfo operation) A recommendation would be more appropriate?	May be, replace by "t should use the same encoding"	A
109	Institut Géographique National	LMO	9	6.3	p 14, fourth paragraph	E	"the use additional or alternative encoding rules"	replace by "the use of additional or alternative encoding rules"	A

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
110	Institut Géographique National	LMO	10	6.3	P 14, recommendation 2	T	"Encoding rules should be based on open standards." Open standards do not include ISO standards as ISO standards access is pay-per-document based	Change recommendation to: "Encoding rules should be based on open standards or international (ISO/IEC, CEN) standards".	AwM - "Encoding rules should be based on international, preferably open, standards". We note there are some differences in the definitions of what an open standard is and a key point in most is a non-discriminatory consensus process, but some definitions also refer to an availability with charge or royalties. Since INSPIRE is a European Directive, we will add the definition used in the European Interoperability Framework to the document: <i>USE OF OPEN STANDARDS To attain interoperability in the context of pan-European eGovernment services, guidance needs to focus on open standards. The following are the minimal characteristics that a specification and its attendant documents must have in order to be considered an open standard:</i> <i>* The standard is adopted and will be maintained by a not-for-profit organization, and its ongoing development occurs on the basis of an open decision-making procedure available to all interested parties (consensus or majority decision etc.).</i> <i>* The standard has been published and the standard specification document is available either freely or at a nominal cost.</i> <i>* The intellectual property - i.e. patents possibly present in the standard - is either not used or is licensed on a non-exclusive, non-transferable, irrevocable, and non-assignable basis.</i>
111	Czech Office for Surveying, Mapping and Cadastre	LMO	1 to 2	6.3	Recommendation 2, 3 a 4	T	The requirements and recommendations are very general and it is very difficult to see the consequences of the scope of adjustments in application schemes of existing datasets and coding rules necessary for transformation into the unified European structure without knowledge of INSPIRE data specification for the Issue of Annex INSPIRE Directive. Should not be some recommendations more requests f.i. recommendations 2, 3, and 4? We consider these recommendations as well as request nr.1 essential for standardization of spatial datasets and their sharing not only among public authorities.		? - Proposed change unclear
112	Czech Office for Surveying, Mapping and Cadastre	LMO	2 to 2	6.3	Example 1	E	There is not the term KML in the chapter Terms.		A

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
113	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 7	6.3	1st para	G	It is stated that encoding rules are not expected to become part of the implementing rule, therefore this document states recommendations instead of requirements. However, to enable interoperability detailed specifications and requirements are essential. Fulfilment of such requirements needs to be achieved wherever these requirements are specified, implementing rules of guidance document. This document should focus on requirement on encoding that needs to be fulfilled to ensure interoperability, the CT should consider where these should be documented and what legal status it shall have.	Change first paragraph to the following: The following clauses defines requirements and recommendations on encoding rules that must be fulfilled to enable interoperability.	d
114	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 8	6.3	Note	G	This requirement should be binding and be part of implementing rule for the interoperability of spatial data sets and services. First of all, it is not clear which implementing rules "the interoperability of spatial data sets and services" refers to. Does this mean all the TWG implementing rules and the 'network services' implementing rules?. Secondly, this interdicts the first paragraph that states that encoding rules is not expected to become part of the implementing rules.	Clarify and rewrite.	d
115	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 9	6.3	Last para before Recommendation 2.	GGGG	It is stated that "while a default encoding rules is provided, the diversity of themes and practise in the communities is recognized by allowing the use of additional or alternative encoding rules". Additional encoding rules (for example for performance requirements) is acceptable, but alternative encoding rules should be avoided. Only in very specific situations, for example where it is not possible to specify the data by creating an UML application schema, or if the encoding rules from such a schema to the GML applications schema is impossible or creates an impractical GML application schema, alternative encoding rules should be allowed. It should be notified that such encoding rules will complicate the process of combining spatial data from different sources and share them between users and applications, and in such a way prevent interoperability.	Remove alternative from the sentence an add a new paragraph based upon left column.	d
116	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 10	6.3	Recommendation 2	G	Should be rewritten and changed to requirement.	Change from recommendation to requirement and rewrite to: "Encoding and encoding rules should be based upon standards"	d
117	Geonovum	LMO	2	6.3		Q	Does requirement 1 also account for coverage data?		Yes, the mapping between the concepts and the encoded data must be clear for all encodings.
118	Geonovum	LMO	3	6.3		Q	Text above recommendation 2. file-based data (binary or text) does this also refer to coverages (rasterdata)?		Yes
119	Geonovum	LMO	4	6.3	Recommendation 3: EXAMPLE	E	The abbreviation KML is not explained.	Add KML (Keyhole Markup Language) to the abbreviations list in 4.2.	A
120	DI ICSP - DI ICSP	SDIC	6	6.3	Paragraph 3	E	Typo: ... and be part of implementing rule for ...	Change: ... and be part of the implementing rules for ...	A

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
121	DI ICSP - DI ICSP	SDIC	7	6.3		T	Are not the encoding rules always consistent since they are not specified per data specification?	Clarification required.	There may be requirements to specify encoding rules specific to a (set of) data specification(s)
122	DI ICSP - DI ICSP	SDIC	8	6.3	Paragraph 6, item 6	T	Does INSPIRE recommend ISO/TS 19139 for the encoding of feature catalogues and data dictionaries? How does this relate to other encodings such as the Addendum to ISO 19110 to provide XML Schema for ISO 19110-compliant feature catalogues?	Clarification required.	The scope of this document is restricted to the encoding of spatial data. For the encoding of register items, it is expected that standardised encodings will be adopted where they exist (e.g. in the case of ISO 19110).
123	DI ICSP - DI ICSP	SDIC	9	6.3	Paragraph 9	E	Typo: ... by allowing the use additional ...	Change: ... by allowing the use of additional ...	A
124	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	15	6.3	Requirement 1	T	Following the rules in 4.3, "shall" means a requirement, mandatory for every data specification. In this context the NOTE below the requirement 1 does not make sense for us since a mandatory requirement should be binding automatically. Or are there some differences in detail. If yes, please explain.	Remove the NOTE	AwM - This note is intended to provide the motivation for the requirement. Change the note to "This requirement is intended to be part of the implementing rules for the interoperability of spatial data sets and services. Clear and unambiguous mappings from the concepts to the implementation level are considered a minimum requirement, otherwise the encoded data would no longer reflect the agreed application schema."
125	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	16	6.3	Recommendation 2	G	The usage of open standards will be supported, but the open standard should be specified	Requirement 1 contains the recommendation ISO 19118	? - ISO 19118 simply specifies the requirements for an encoding rule, but does not prescribe any particular encoding rule
126	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	17	6.3	Recommendation 1	T	There should be added some rules when encoding rules can be defined in a different way. Otherwise the expression "as consistent as possible" allows everything.	Add some examples or rules for clarification	Ap - The key statement is that the number of encoding rules should be kept at a minimum (recommendation 3). Remove recommendation 1.
127	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	18	6.3	Recommendation 2	E	Please clarify the meaning of "open standards". Are ISO standards open standards?	Clarify	A - see #110

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128	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	22	6.3	Requirement 1	E	There is no requirement 2.	Change „Requirement 1“ in „Requirement“	NA - All requirements are numbered, even if there is only one.
129	IDEE Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	3	6.3	Paragraph 3	Q	Only GML and ISO/TS 19139 are mentioned as default encoding. The question is what happen with raster data, that's mean that GMLJ2 is also the default encoding for raster data?	Clarify this point.	A - The encoding of gridded data is an open issue (not only in INSPIRE, but also in OGC and other initiatives) and requires further work. This will be made clear. See also #17 and #98.
130	IDEE Working Group of the Commission on Geomatics (National Geographic High Council)	LMO	16	6.3		E	Mistake in the setence	Change "CEN TR 15449 " by "CEN/TR 15449"	A
131	Ordnance Survey	LMO	4	6.3	paragraph below long set of bullet points	G	Sentence reads "Therefore, guidance documents specifying an XML based encoding on the basis of GML and ISO/TS 19139 will be developed for all INSPIRE data specifications." On the one hand, this makes sense for vector data - and should become a requirement "shall" instead of "will". On the other hand, the GML part is less appropriate for any gridded data - the following paragraph describes some exceptions. Also, the Metadata IR falls short of mandating ISO 19139... And what about WMS - is this data interchange at all?	Strengthen this sentence to be a requirement for vector data "Therefore, guidance documents specifying an XML based encoding on the basis of GML and ISO/TS 19139 shall be developed for all INSPIRE vector data specifications."	NA - Only requirements for data specifications should be highlighted as requirements. Requirements for creating INSPIRE documents are on a different level. This distinction has also been made in D2.5 and D2.6, for example.
132	Met Office	LMO	MetO10	6.4	last para p 13 and into p14	T	The Directive mandates that International Standards should be used (Art 7(1), Recital 16, 28), and while all WMO encoding standards conform to 19118 (with the exception of being modelled in UML), the focus is on GML solely. GML cannot be used in bulk data transfer of WMO data which is already delivered each day to appropriate EC organisations, for example JRC.	WMO encoding standards apply to 5 or 6 Annex III themes, in whole or in part (7,12,13,14,15,16) and data or products are already delivered in other Annexes (3,4,5,8,9,20). These are international standards rather than just European. Recognition of WMO standards is due. This reflects the Recommendations 1 and 2.	? - No disagreement in principle, but the proposed change is unclear. Would another example using WMO encodings address this? Also, see the general discussion in #100 highlighting that existing models and encodings will be considered in the context of INSPIRE requirements.
133	METEO-FRANCE	LMO	MF_04	6.4	last para page 13 and into page 14	T	The Directive mandates that International Standards should be used (Art 7(1), Recital 16, 28), and while all WMO encoding standards conform to 19118 (with the exception of being modelled in UML), the focus is on GML solely. The GML "wrapper" cannot be used in bulk data transfer of WMO data in real time.	WMO encoding standards apply to 5 or 6 Annex III themes, in whole or in part (7,12,13,14,15,16) and data or products are already delivered in other Annexes (3,4,5,8,9,20). These are international standards rather than just European. Recognition of WMO standards is due. This reflects the Recommendations 1 and 2.	d

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
134	Royal Netherlands Meteorological Institute (KNMI)	LMO	16	7.		G	Chapter 7, compared to chapter 6, holds very detailed implementation issues. This should be part of a guidance document or put into an annex.		Ap - We expect that the content would eventually become part of a guidance document. Move to a normative annex for now.
135	Ordnance Survey	LMO	12	7.	Text after Recommendation 6	Q	About encoding rules as well as adding/managing those: How will the encoding rules be managed? Isn't another register needed for that and isn't this actually another harmonisation component?		See #85
136	Royal Netherlands Meteorological Institute (KNMI)	LMO	17	7.1	5	T	Since it is unknown ...Consolidation Team' Please consider rephrasing this line. It is not clear	Rephrase line	A
137	Met Office	LMO	MetO11	7.1	Below Rec 6	Q	The document recognised that parts of the transfer of GCM to 19136 and 19139 are "unknown at this time". Not recognised is the difficulty of refactoring existing data models into UML under the GCM, particularly where these models are extensive.	How does the DT envisage refactoring existing data models into UML under the GCM?	See #17 and #100, also with respect to the "refactoring" comment.
138	Met Office	LMO	MetO12	7.1	Rec 8	Q	Does INSPIRE envisage adopting and maintaining through versioning existing code tables from International bodies? There are 450 code tables for WMO BUFR alone.	Clarification of how INSPIRE intends to use existing international standards code tables is needed.	A - Clarify that if required code lists (or other items) are already maintained as part of international standards, then INSPIRE should simply adopt and reference them (not duplicate them and maintain them as part of INSPIRE!)
139	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 11	7.1	Recommendation 4	G	This is important for interoperability, but should be reworded in a more normative way.	Change from recommendation to requirement and rewrite to: For every INSPIRE application schema, a GML application shall be specified. However, there is one exception. If the characteristics of the data makes it impossible to specify the data by creating an UML application schema, or if the encoding rules from such a schema to the GML applications schema is impossible or creates an impractical GML application schema, alternative encoding rules could be allowed.	Ap - However, there may be other reasons for exceptions. See #6.
140	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 12	7.1	Recommendation 5	G	To apply tagged values to mark elements in the application schema where the rules in ISO 19136 GML annex E should be replaced with the rules of ISO 19139 complicates the software that derives the GML application schema from the UML model. An example of this is when the application schema adds quality information which is defined in ISO 19115 with a predefined encoding stated in ISO 19139. But what is actually the consequence of applying the rules in GML also on these elements, like quality?. The result will be that these elements are encoded in a different way in the GML application schema than in the XML metadata implementation. What is the impact? On the other side, this mechanism of tagged values obviously works, and maybe the complication is minor.	At this stage a direct change proposal will not be proposed, but consider the complication of this approach.	Ap - This is the result of using multiple encoding rules. Of course, using a single encoding rule would be simpler, but the complication is not expected to be huge. Furthermore, it is part of the MDA concept to support multiple encodings.

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141	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 13	7.1	Figure 3	G	The UML profile supported by the Generic Conceptual Model is more general than the UML profile specified in ISO 19136 Annex E. Where this is the case, an implementation UML model should be derived from the conceptual model. Theoretically, this approach is feasible. The problem, however, with this approach is that part of the semantics will not be maintained in the data. Why is it necessary to model for example multiple inheritance at the conceptual level when this is not represented at the implementation level. The generic conceptual model also has another principle, make it as simple as possible. It is stated in D2.7 that when an application schema requires additional encoding rules, such additional rules will be developed and maintained under the responsibility of the Consolidation team. These additional rules will bridge the Gap between the UML concepts allowed according to the Generic Conceptual Model and the rules of GML Annex E, and minimize the need for an additional implementation model.	Add a new recommendation stating that the concepts applied in the conceptual UML model should be as close as possible to the implementation model, to ensure that the required semantics will be maintained. Only in specific situation an additional implementation UML model should be required.	NA - Recommendations on the conceptual model belong to the GCM and there such recommendations are already stated. Also, we have to be aware that we may be aware of particular implementation models at this time, but this will change over time. The conceptual models should not be limited to a particular implementation model.
142	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 14	7.1	Recommendation 7	G	Theoretically, this approach is OK, but could it be simplified? Could we make a rule stating that all associations except composition should be handled by reference, just to avoid all the tagged values.	Consider a simplification (KENT, ER DET DETTE DU MENER???)	NA - The tagged values are required per the GML encoding rule.
143	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 15	7.1	Recommendation 8	G	To reference the INSPIRE register for code lists seems to be a good idea. But what about versions?. Example 1. A new code is added to the register. Does this mean that the models that reference this register with an 'open' value domain, automatically accepts this new code. Example 2. If a specific code in the referenced register is deleted, and the existing data applies this code, it will not validate correctly. And not all code lists will be maintained in this register, only INSPIRE code lists.	Change "All code lists" to "All INSPIRE code lists". Consider versioning of code lists in this register.	A - change text as proposed. Since INSPIRE-managed code lists will be maintained in a register, they will automatically be versioned.
144	Institut Géographique National	LMO	11	7.1	p 15, recommendation 5	T	"For every INSPIRE application schema, a GML application schema should be specified." While it is still a recommendation, it should be wider by including ISO 19136 (Geographic Markup Language) and 19110 (Feature Cataloguing) as GML holds several versions.	Change recommendation to : "For every INSPIRE application schema, an ISO 19136 or ISO 19110/19139 application schema should be specified."	NA - Since this document deals with the encoding of spatial objects only, the current wording is appropriate.
145	Institut Géographique National	LMO	12	7.1	recommendation 7	T	Requiring one first level GML object for each spatial object (featureType) seems to me reasonable. However, requiring one first level object for any object of any class may end in very complex GML files if data modeler prefer splitting information in meaningful parts (as noticed in Note 2 indeed, that already authorises to not apply this recommendation outside spatial objects).	I don't know how to translate what I said in formal GML constraints	Ap - the recommendation only applies to spatial objects (features) already. Other objects like geometries are not subject to this recommendation.

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
146	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 11	7.1	Recommendation 4	G	This is important for interoperability, but should be reworded in a more normative way.	Change from recommendation to requirement and rewrite to: For every INSPIRE application schema, a GML application shall be specified. However, there is one exception. If the characteristics of the data makes it impossible to specify the data by creating an UML application schema, or if the encoding rules from such a schema to the GML applications schema is impossible or creates an impractical GML application schema, alternative encoding rules could be allowed.	d
147	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 12	7.1	Recommendation 5	G	To apply tagged values to mark elements in the application schema where the rules in ISO 19136 GML annex E should be replaced with the rules of ISO 19139 complicates the software that derives the GML application schema from the UML model. An example of this is when the application schema adds quality information which is defined in ISO 19115 with a predefined encoding stated in ISO 19139. But what is actually the consequence of applying the rules in GML also on these elements, like quality?. The result will be that these elements are encoded in a different way in the GML application schema than in the XML metadata implementation. What is the impact? On the other side, this mechanism of tagged values obviously works, and maybe the complication is minor.	At this stage a direct change proposal will not be proposed, but consider the complication of this approach.	d
148	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 13	7.1	Figure 3	G	The UML profile supported by the Generic Conceptual Model is more general than the UML profile specified in ISO 19136 Annex E. Where this is the case, an implementation UML model should be derived from the conceptual model. Theoretically, this approach is feasible. The problem, however, with this approach is that part of the semantics will not be maintained in the data. Why is it necessary to model for example multiple inheritance at the conceptual level when this is not represented at the implementation level. The generic conceptual model also has another principle, make it as simple as possible. It is stated in D2.7 that when an application schema requires additional encoding rules, such additional rules will be developed and maintained under the responsibility of the Consolidation team. These additional rules will bridge the Gap between the UML concepts allowed according to the Generic Conceptual Model and the rules of GML Annex E, and minimize the need for an additional implementation model.	Add a new recommendation stating that the concepts applied in the conceptual UML model should be as close as possible to the implementation model, to ensure that the required semantics will be maintained. Only in specific situation an additional implementation UML model should be required.	d
149	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 14	7.1	Recommendation 7	G	Theoretically, this approach is OK, but could it be simplified? Could we make a rule stating that all associations except composition should be handled by reference, just to avoid all the tagged values.	Consider a simplification (KENT, ER DET DETTE DU MENER???)	d

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
150	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 15	7.1	Recommendation 8	G	To reference the INSPIRE register for code lists seems to be a good idea. But what about versions?. Example 1. A new code is added to the register. Does this mean that the models that reference this register with an 'open' value domain, automatically accepts this new code. Example 2. If a specific code in the referenced register is deleted, and the existing data applies this code, it will not validate correctly. And not all code lists will be maintained in this register, only INSPIRE code lists.	Change "All code lists" to "All INSPIRE code lists d" Consider versioning of code lists in this register.	
151	Geonovum	LMO	5	7.1		Q	Recommendation 4. Are coverages included in this. GML application schema for coverages? Is this in line with recommendation 3?		Yes and yes.
152	Geonovum	LMO	6	7.1		T	Recommendation 8: Does this not imply that enumeration values used in XML docs can not be validated against the application schema?		No. First, the allowed enumeration values are encoded in the XML Schema; this is not the case for code lists where the allowed values are managed outside of the application schema. Second, also code list values can be validated, but not using standard XML Schema validation; code list values could be validated using other means, e.g. using Schematron.
153	DI ICSP - DI ICSP	SDIC	10	7.1	Paragraph 7	E	Typo: ... Generic Conceptual Model that are outside ...	Change: ... Generic Conceptual Model are outside ...	A
154	DI ICSP - DI ICSP	SDIC	11	7.1	Recommendation 8	E	Typo: ... the value "true". Instance should ...	Change: ... the value "true". Instance data should ...	A
155	DI ICSP - DI ICSP	SDIC	12	7.1	Recommendation 8	T	Since it is likely that enumeration and codelist values shall be maintained in a registry, it may be more practical to handle both in the same manner within GML i.e. reference the INSPIRE registry. With the present ISO 19136 rules, enumerations would be specified inline within the GML application schema but codelists externally. In many real examples, the distinction is somewhat subjective. The issue is with the present ISO 19136 rules for handling enumerations.		NA - the proposal effectively means to prohibit the use of <<enumeration>> in application schemas. This seems unjustified as the distinction between the two is useful. On the other hand, the comment emphasises that the usage of the stereotypes <<enumeration>> and <<codeList>> must be consistent across the different data specifications. This should be taken into account in the review of the draft data specifications.
156	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	24	7.1	Recommendation 4	Q	Is it necessary to have for every INSPIRE application schema a GML application schema?		Yes. If not how would the data for that application schema be encoded in GML?

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
157	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	25	7.1	Recommendation 4	T	If each theme leads to an individual application schema there are at the end several (different?) GML application schemas. Wouldn't it make sense to put different GML application schemas together to just one INSPIRE GML application schema?	Clarify or explain the necessity for separated GML application schemas	A - The different application schemas are managed independently. As a result there must be separate GML application schemas using different XML target namespaces.
158	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	26	7.1	Recommendation 5	E	The notation for identifying encoding rules (tagged value) is a technical issue and should be removed from the document.	Delete the paragraph	NA - It is part of the encoding rule. Technical issues are within the scope of this document, too.
159	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	27	7.1	Figure 3	T	By avoiding the modelling specialities given in annex B it maybe possible to develop just a UML model for GML without modelling an additional conceptual UML model.	Explain the meaning of having a conceptual UML model with different UML notation but expressing the same	The application schema is a conceptual model, not just a UML model for GML. While it is easier to implement application schema that do not make use of advanced modelling concepts (not only with a view to implementations in GML, but also KML, SQL, etc), it is sometimes justified to express the concepts appropriately. Thus the current wording in the GCM and the requirement to address this issue in D2.7. For v1 of the Annex I data specifications, only one single case is known where the minimal UML profile was not sufficient (and multiple inheritance was used).
160	Ordnance Survey	LMO	5	7.1	paragraph below recommendation 6	E	The first sentence is incomplete. Simply completing it (inserting "will be used in INSPIRE data specifications") would make the sentence too complex.	Replace "Since it is unknown at this time which parts of the UML profile of the Generic Conceptual Model that are outside of the UML profile specified by ISO 19136 Annex E and ISO/TS 19139, new rules will be developed once a new extension is used in a model by a Thematic Working Group." with "The Generic Conceptual Model defines a UML profile which includes elements that are outside of the UML profile specified by ISO 19136 Annex E and ISO/TS 19139, for which those standards provide conversion rules to GML/XML. It is unknown at this time which of these additional elements will be used in INSPIRE data specifications. Some initial conversion rules are described by example in Annex B; these will be developed into rules, and further new conversion rules may be developed as required."	A

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161	Ordnance Survey	LMO	6	7.1	Recommendations 7 onwards	Q	Do these recommendations cover all the places where ISO 19136 leaves encoding options?	Check.	Not all, but those that were considered the most important.
162	ND - Digital Norway (Norw.: Norge Digitalt)	SDIC	SK/ND 16	7.2	Recommendation 9	G	Is UTF-16 really required in Europe. GML does not support UTF-16. Is this intended for other encodings than GML, preferable additional encoding???	Clarify	? - ISO 19136 allows the use of UTF-16. But see #163
163	Institut Géographique National	LMO	13	7.2	p 16, recommendation 9	T	"XML documents should be encoded using UTF-8 or UTF-16 as character encodings." What is the reason why UTF-16 is needed in the EU? Without a clear statement, UTF-8 is most commonly used	Change recommendation to : "XML documents should be encoded using UTF-8 as character encodings."	A
164	Norwegian Mapping and Cadastre Authority	LMO	SK/ND 16	7.2	Recommendation 9	G	Is UTF-16 really required in Europe. GML does not support UTF-16. Is this intended for other encodings than GML, preferable additional encoding???	Clarify	d
165	Lenkungsgrremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	28	7.2	Recommendation 9	T	UTF-8 should be sufficient for Europe. Why there is an additional UTF-16? Are there some rules to be followed when UTF-16 must be used?	Remove UTF-16 or clarify the requirement for it	A - see #163
166	Lenkungsgrremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	29	7.2	Recommendation 9	G	The usage of UTF-8 or UTF-16 is not practicable	The recommendation should contain only one UTF-Version	A - see #163
167	Royal Netherlands Meteorological Institute (KNMI)	LMO	19	7.3	NOTE	G	This note should be at the start of section 7.3		AwM - The last sentence of the note in 7.3.2 will be moved to 7.3.1
168	Institut Géographique National	LMO	14	7.3		T	Namespace for INSPIRE schemas is not a sub-space in ISO but a space by itself. There may be an issue for interoperability with INSPIRE without ISO. But ISO is doing nothing to put in place such a namespace.		? - comment not understood
169	Royal Netherlands Meteorological Institute (KNMI)	LMO	18	7.3.1	1	T	Add IETF/IANA to the abbreviations (chapter 4.2) or put full name in a footnote	Add IETF/IANA to the abbreviations (chapter 4.2) or put full name in a footnote	A
170	DI ICSP - DI ICSP	SDIC	13	7.3.1	NOTE 2	E	Typo: This is general rule for URNs ...	Change: This is a general rule for URNs ...	A

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Progressive comment number	SDIC ID	LMO/SDIC	Comment ID	Chapter, section or clause no./ Subclause No./Annex	Paragraph/Figure/Table/Note	Type of comment	Comment (justification for change)	Proposed change	Draft resolutions after the Comment Resolution Workshop
171	Met Office	LMO	MetO13	7.3.2	Rec 10	G	WMO and ICAO cannot accept INSPIRE namespaces for international protocols. parallel namespaces are not sustainable		Ap - this is understood and why these are recommendations. Add another note in 7.3 to make this clear and change note 2 in 7.3.5 to "The use of other URIs is intended to support the usage of URIs that are already commonly used and supported by software components or specified in other standards." However, where application schemas are originally specified in INSPIRE, the namespaces should follow the rules specified in the document (INSPIRE is not proposing that, for example, civil aviation systems be replaced to use INSPIRE data; INSPIRE namespaces can be used OK without affecting existing systems).
172	Geonovum	LMO	7	7.3.2		Q	Not better to assign a text format to a name of an application schema and to a version identification?	Assign a text format if it is not already done in 2.5	A - The use of a colon will be prohibited in names
173	DI ICSP - DI ICSP	SDIC	14	7.3.2	Recommendation 10	T	The URN component "specification" is vague - there are many types of specifications. Indeed, a particular conceptual model may have several specifications (paper, UML, etc.). Why is "specification" particular to GML application schemas?	Recommendation: Make the URN more specific to GML AS, for example: urn:x-inspire:specification:<specification type>:<name>:<version> e.g. urn:x-inspire:specification:gmlas:VMAPO:0.1 e.g. urn:x-inspire:specification:featureCatalogue:VMAPO:0.1	A
174	DI ICSP - DI ICSP	SDIC	15	7.3.2	Recommendation 10	E	Examples are missing.	Provide some concrete examples.	A
175	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	30	7.3.2		Q	We suggest testing the stability of URNs. Has this been done already? Are they really more stable than URLs? Examples would be helpful and are missing.	Test the stability of URNs in test cases and provide examples.	URNs are by definition stable. Once a URN has been registered it will exist forever. See RFC 2611 for more details.
176	Met Office	LMO	MetO14	7.3.3	Rec 11	G	WMO and ICAO cannot accept INSPIRE external object identifiers for international protocols.		Ap - see #171. This will be clarified and it will be explicitly stated that data specifications may specify their own mechanisms where such mechanisms are already established. Also note that external identifiers are - according to the Directive - rather for spatial objects of the Annex I and II themes. Moreover, some Annex I TWGs are proposing to base the external INSPIRE identifiers on existing thematic identifiers (e.g. TWG AU); in principle, this might be done also with other existing thematic identifiers, where appropriate.
177	Geonovum	LMO	8	7.3.3		Q	Recommendation 11: Are there rules for the implementation in gml of the Version qualifier?		No, not in GML itself, "only" in the GML application schemas - this refers to the concepts specified in the GCM.

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178	Geonovum	LMO	9	7.3.3	recommendation 11	T	If you do not say that the <local identifier> and <version> should not contain the ':' character it will be very hard to figure out which part is what (in the worst case it is possible that two objects end up with the same id).	State as a rule that <local identifier> and <version> must not contain the ':' character.	NA - this is already prohibited for namespace and localId in the GCM. There is no need for such a restriction in the version part (and if it is, then this would need to be stated in the GCM). Add a note referencing the constraints in the GCM.
179	DI ICSP - DI ICSP	SDIC	16	7.3.3	Recommendation 11	E	Examples are missing.	Provide some concrete examples.	A
180	METEO-FRANCE	LMO	MF_05	7.3.3	Rec 11	G	WMO and ICAO cannot accept INSPIRE external object identifiers for international protocols.		d
181	Met Office	LMO	MetO15	7.3.4	Rec 12	G	WMO and ICAO cannot accept having to use INSPIRE references for international protocols.		A - see #176
182	METEO-FRANCE	LMO	MF_06	7.3.4	Rec 12	G	WMO and ICAO cannot accept having to use INSPIRE references for international protocols.		d
183	DI ICSP - DI ICSP	SDIC	17	7.3.4	NOTE 2	E	Examples are missing.	Provide some concrete examples.	A
184	Met Office	LMO	MetO16	7.3.5	Rec 13	G	WMO and ICAO are unlikely to accept using INSPIRE registers for their international codes. At the minimum, INSPIRE cannot cope with following WMO.ICAO change control.		Ap - see also #138, #171, #176, #181. In principle, INSPIRE would adopt existing code lists that are managed in a structured way by an authoritative body, and accessible from the context of the INSPIRE SDI. In this context, several aspects will have to be considered/addressed: - Organisational: This creates a dependency and requires an agreement between INSPIRE and the other organisation. This includes IPR aspects, notification of changes, etc. - Operational: To address the interoperability requirements there must be ways how users of INSPIRE data will be able to understand items managed in external registers. This may require setting up registries for such registers to make these items available within INSPIRE. This will require further work and will be referred to the CT. - Technical: To allow referencing items in external registers, the URN scheme used in D2.7 will be adapted to allow this (the respective pattern for this used in the OGC URN scheme will be applied). It should be checked with the Annex I TWGs to which of
185	METEO-FRANCE	LMO	MF_07	7.3.5	Rec 13	G	WMO and ICAO are unlikely to accept using INSPIRE registers for their international codes. At the minimum, INSPIRE cannot cope with following WMO.ICAO change control.		d
186	Geonovum	LMO	11	7.3.5	recommendation 13	T	Use of the ':' in one of the free fields will make decoding of the reference very hard	Forbid use of ':' in all fields	A
187	DI ICSP - DI ICSP	SDIC	18	7.3.5	Recommendation 13	T	The use of ISO 19135 here (in brackets) is unclear. Does this scheme only apply to ISO 19135-compliant registers or are the brackets informative indications of the ISO 19135 case?	Recommendation: Change Recommendation 13 to make this explicit, e.g. 'URNs should be used to encode item identifiers of items in ISO 19135-compliant registers and to reference such items.'	A

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188	DI ICSP - DI ICSP	SDIC	19	7.3.5	EXAMPLE 2	E	The text states that 'OGC provides a URN namespace to reference coordinate reference systems'. It would be helpful to specify what this value is.	Recommendation: Provide the OGC URN namespace for coordinate reference systems.	A
189	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	31	7.3.5	Recommendation 13	E	Typo	Delete "item"	? - which "item" should be deleted. They all seem to be correct...
190	Met Office	LMO	MetO17	8.	updates	G	update is mentioned in Directive 8(2)e. This is the place and the document where update must be properly defined, and an entry in terms and abbreviations is required. For current weather data, we generally talk of the "updated" forecast. However, this is a total replacement of the weather data with more recent data, not a partial modification which is what is intended here.	An explanation in section 4.1 Terms for "update" is required. (9) Update An update is when only parts of a dataset have been modified, and rather than transferring the whole dataset, a partial dataset containing only the modified data is used. The concept does not apply where the data are totally replaced on a regular basis, such as current weather data, which in these terms, are not updated.	d
191	METEO-FRANCE	LMO	MF_08	8.		T	Risk of confusion on the meaning of 'Update'. For current weather data, we generally talk of the "updated" forecast. However, this is a total replacement of the weather data with more recent data, not a partial modification which is what is intended here.	An explanation in section 4.1 Terms for "update" is required. (9) Update An update is when only parts of a dataset have been modified, and rather than transferring the whole dataset, a partial dataset containing only the modified data is used. The concept does not apply where the data are totally replaced on a regular basis, such as current weather data, which in these terms, are not updated.	d
192	Geonovum	LMO	10	8.		G	If there are no general requirements for updates each separate theme is responsible that their model is capable of encoding updates.	State that each annex modeling theme is responsible to make sure their encoding can accommodate updates.	Ap - but only where requirements for updates are known and not already covered by the download service
193	National Survey and Cadastre, Denmark	LMO	KMS-2	8.		G	It is stated in the chapter that it is kept as a placeholder for future requirements. Nevertheless, the problems with updating and encoding of updating is something that should be dealt with at a much earlier stage i.e. now when the themes from Annex I and II are defined.	Develop guidelines for updating and encoding of updating	See #56
194	Royal Netherlands Meteorological Institute (KNMI)	LMO	20	9.	Recommendation 14	Q	Why are Xlinks not allowed here?		The recommendation is that where complete datasets are exchanged the data set metadata is provided, too, as it is a full delivery of a data set and users can expect to receive a complete "package". Admittedly this maybe more appropriate for some data sets (where metadata is usually a small fraction of the complete spatial data) than for others (where metadata may be quite large). Clarify that these "just" guidelines and can be adapted where needed.

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195	Met Office	LMO	MetO18	9.	rec 14	T	This metadata wrapper might be several times the size of many of the 400,000 WMO messages per day and 6M national messages. WMO members are designing protocols to recreate full WMO Core Metadata profile of 19115 through a service mechanism in the WIS vGIS. The INSPIRE solution does not scale to WMO volumes.	The INSPIRE solution does not scale to WMO volumes.	Ap - see #194. However, without preempting the future work on the relevant data specification, at this time we would not expect that these messages would form part of INSPIRE.
196	METEO-FRANCE	LMO	MF_09	9.	Rec 14	T	This metadata wrapper might be several times the size of many of the 400,000 WMO messages per day and 6M national messages. WMO members are designing protocols to recreate full WMO Core Metadata profile of 19115 through a service mechanism in the WIS vGIS. The INSPIRE solution does not scale to WMO volumes.	The INSPIRE solution does not scale to WMO volumes.	d
197	National Survey and Cadastre, Denmark	LMO	KMS-3	9.	Recomendation 14	Q/T	Why is recommendation only a recommendation? - Then content of this recommendation is very important and could very well be a requirement.	We suggest to change status from recommendation to requirement	We believe that at this stage a recommendation is more appropriate to allow other theme-specific solutions, too. See #194 and #195 for example.
198	DI ICSP - DI ICSP	SDIC	20	9.	EXAMPLE 1	T	Typo: </gml:MD_Metadata>	Change: </gmd:MD_Metadata>	A
199	Ordnance Survey	LMO	7	9.	Example 1	E	closing tag gml:MD_Metadata doesn't match opening tag gmd:MD_Metadata	replace gml:MD_Metadata with gmd:MD_Metadata	A
200	Met Office	LMO	MetO19	Annex A	A.1.c	E	19118 Annex B references clauses 6,7, and 8, and requires inspecting encoding ruules against clause 8.	Check against 19118 Annex B	A - will be done (but using the current draft revision of ISO 19118), but see #201
201	Ordnance Survey	LMO	8	Annex A		G	Given that this is a document intended to instruct/guide TWGs, is an Abstract Test Suite appropriate? If so, then it needs to be completed; however, I feel that is simply a replication of the requirements listed in the document.	Delete Annex A	NA - even though this is a simple Abstract Test Suite, it will be keep for consistency with other documents.
202	Ordnance Survey	LMO	9	Annex B		G	Why is Annex B described as informative? It starts the work, mentioned at 7.1, of creating the extra rules.	Make Annex B normative, re-working each example to provide a rule and refer to it at 6.1 (see proposed amendment there).	A - These were just examples. Make this normative for GML application schemas based on cases that actually occur in INSPIRE application schemas. This implies a mandate to update the Annex whenever new cases are used in the INSPIRE application schemas. These rules should be encoded in scripts to automate the transition from the platform-independent to the platform-specific models. (Post editing note: Annex I data specification currently do not have additional requirements, the Annex will therefore be removed for now.)

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203	Lenkungsgremium GDI-DE (Steering Committee GDI-DE) (explanation: GDI-DE = Spatial Data Infrastructure Germany)	LMO	32	B.1	1st paragraph	T	To prevent from misunderstandings and incorrect interpretations the figures in annex B shall reference the UML specification.	Add a reference of the specified UML version.	A - add UML reference to bibliography
204	DI ICSP - DI ICSP	SDIC	21	B.2		T	Although only an example, it may be worth showing an alternative approach to resolving the multiple inheritance problem, for example, moving the 'specialisation from A' to 'aggregation of A'. This also shows that general rules cannot always be applied - the PIM to PSM transformation may need to use rules specific to particular classes and/or relationships.	Recommendation: Provide alternative examples.	Ap - But see #202 which will result in converting Annex B to a normative annex reduced to the cases actually applied. Whenever alternative encodings for certain conditions apply, this will result in an amendment of Annex B.
205	DI ICSP - DI ICSP	SDIC	22	B.3		T	Another example worth considering would be qualified associations. However, this is probably a limitation with the ISO 19136 Annex E UML -> GML transformation.		? - what are qualified associations?
206	Institut Géographique National	LMO	15	B.5	whole	Q	I'm not sure that there is a so easy direct and doubtless transformation between TP objects and GM Objects in the ISO documents and in the ISO philosophy.	If this part is kept, it should explicit the required correspondances between TP and GM objects.	Ap - This is not a general rule for encoding topology, but an example for changes from a PIM to a PSM (taken from reference material). But see also #202
207	DI ICSP - DI ICSP	SDIC	23	B.6		T	Is this referring to the ISO 19136 stereotypes? It is not clear whether the mapping PIM -> PSM here is, for example, mapping between stereotypes <<FeatureType>> (from INSPIRE GCM) to <<FeatureType>> (from ISO 19136 - including specific tagged values that should be present in a PIM).	Clarification required with some concrete examples.	A - essentially the comment is correct, but see also #202
208	AGI	SDIC	1	Foreword	Paragraphs 8 & 9	G	States that this document is not a draft IR and that it will become part of the additional guidance documents. However, the Scope says that it specifies requirements and recommendations. For example, Requirement 1 is a mandatory requirement. Further, the document contains a conformance clause at 2 indicating that minimum requirements need to be met.	Clarify the exact status of the document and make it consistent with the content.	A - amend the foreword
209	AGI	SDIC	2	1	Paragraph 1	G	The Foreword states that the purpose of the document is to assist in the development of the thematic data specifications that will be input to the Implementing Rules and additional guidance documents. However, the Scope statement says that it is for the purpose of transfer between systems in INSPIRE, which implies that it is for use by data holders in the community.	Clarify the purpose and applicability of the document.	A - At this time it is to support the TWGs. Eventually, relevant parts will be moved to the IR or guidance document(s).
210	AGI	SDIC	3	1	Paragraph 1	G	The scope states that the document is for "the purpose of transfer between systems in INSPIRE". In view of the content of 6.1 it would be more appropriate to describe this as "data interchange" rather than implying the "traditional data transfer model".	Change to scope to reflect the types of interchange which are described in the document.	A

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211	AGI	SDIC	4	6.3	Recommendation 1	G	This does not appear to say anything very useful, specific or testable.	Remove this recommendation.	A - see #126
212	AGI	SDIC	5	6.3	Recommendation 2	G	This and subsequent recommendations need to be made mandatory, in what circumstances would these not be so?	Make the recommendations mandatory (see also the proposed changes to Foreword and Scope)	AwM - see #99 and #101
213	AGI	SDIC	6	7.1	Recommendation 5	G	More guidance is needed on the interpretation of ISO 19136 and 19139.	Where there is optionality in these standards then add guidance on the selection of options	? - Proposed change unclear. It must be noted that it is up to the application schemas to restrict options on the conceptual level. This document already provides guidance for options on the encoding level.
214	AGI	SDIC	7	7.1	Recommendation 5	G	More guidance is needed on the interpretation of ISO 19136 and 19139.	Where there is optionality in these standards then add guidance on the selection of options	
215	AGI	SDIC	8	7.1		G	The approach being proposed is a very heavy-weight one, and is at some remove from the current data exchange standards being used on the "geoweb". These alternatives would include GeoRSS, GeoJSON and potentially KML (now itself an OGC standard). Many successful data exchange and "mash-up" services are based around these standards, so they have a proven success rate. Is the continued emphasis on the richest set of technologies, standards and features, regardless of their complexity and expense to implement, justifiable?	To review the current approach and consider the use of other standards which might simplify implementation and reduce costs.	Ap - The approach has been reviewed also in the comment resolution workshop and was confirmed. The reasons for choosing the default encoding rule have been stated and are valid. It is also the case this encoding is not very heavy and complex (unless the underlying models are very complex, but in this case also a "simple" encoding may be complex, too). However, the usefulness of a KML encoding rule is already pointed out in the document. When a data specification will propose a KML encoding rule, it is expected that this would be added as a supported encoding rule.
216	AGI	SDIC	9	7.1	Recommendation 8	Q	There is intrinsic emphasis on the use of registers for recording schemas and dictionaries, this assumes that all such code lists will be found in registers managed by INSPIRE?	Confirm that this is the case or make changes if not.	Ap - see #138 etc
217	AGI	SDIC	10	7.3.3	Recommendation 11	Q	This states that "URNs should be used to encode unique identifiers..." Given that encoding is defined as, "conversion of data into a series of codes", is this meaning intended?	Clarify	A - change to "used as unique identifiers"