

#### Form 13: Report of voting on ISO/DIS

ISO/DIS 37122							
Closing date of voting: 2018-08-31	ISO/TC 268 <b>N 415</b>						
Secretariat:	Secretariat:						
AFNOR							

A report shall be returned to ISO/CS no later than 3 months after the closing date of voting on the DIS.

#### 1. Result of the voting

The above-mentioned document was circulated to member bodies with a request that the ISO Central Secretariat be informed whether or not member bodies were in favour of registration of the DIS for publication.

The vote closed on the date indicated above. Please attach the results of voting to this form as annex A.

2.	Comments received	
3.	Observations of the secretariat	Please attach as annex B (if appropriate)
4.	Decision of the Chairman	

Whe	re the approval criteria are met:
	A revised text is to be submitted to ISO/CS for publication (there have been no technical changes made to the DIS draft)
$\boxtimes$	A revised text is to be submitted to ISO/CS for the approval procedure, FDIS (there are technical changes to be made)
Whe	re the approval criteria are not met:
	A revised text is to be submitted to ISO/CS for a further enquiry (DIS) vote
	The project is to revert to the Committee Stage (a new committee draft will be developed)
	The enquiry draft and comments will be discussed at the next meeting

### Remarks:

The ISO/DIS 37122 resolution of comments is available in Annex B.

#### Enclosed:

Annex A (DIS results from ISO electronic balloting portal)

Annex B (comments received with observations of the secretariat)

Date:	Signature of TC/SC Secretary:	Signature of Chair:
2018-11-29	Cailleau, Etienne M.	Gindroz Bernard Mr

Ballot Information			
Reference	ISO/DIS 37122	Committee	ISO/TC 268
Edition number	1		
English title	Sustainable cities and communitie	s Indicators for smart c	ities
French title	Villes et communautés territoriales intelligentes	s durables Indicateurs o	le performance pour les villes
Start date	2018-06-06	End date	2018-08-29
Opened on	2018-06-06 00:32:50	Closed on	2018-08-31 00:02:49
Status	Closed		
Voting stage	Enquiry	Version number	1
Note			

#### **Result of voting**

P-Members voting: 19 in favour out of 20 = 95 % (requirement >= 66.66%)

(P-Members having abstained are not counted in this vote.)

Member bodies voting: 1 negative votes out of 21 = 5 % (requirement <= 25%)

# Approved

Votes by members							
Country	Member	Status	Approval	Disapproval	Abstention		
Australia	SA				Х		
Austria	ASI	P-Member			Х		
Barbados	BNSI	P-Member			Х		
Belgium	NBN	O-Member			Х		
Brazil	ABNT	P-Member	X *				
Canada	SCC	P-Member	X *				
China	SAC	P-Member	Х				
Czech Republic	UNMZ	P-Member	Х				
Denmark	DS	P-Member			Х		
Ecuador	INEN	P-Member			Х		
Egypt	EOS	P-Member			Х		
France	AFNOR	Secretariat	X *				
Germany	DIN	P-Member		X *			

Greece	NQIS ELOT	P-Member			Х
ndia	BIS	P-Member			Х
Iran, Islamic Republic of	ISIRI	P-Member			Х
Ireland	NSAI	P-Member			Х
Israel	SII	P-Member			Х
Japan	JISC	P-Member	X *		
Kazakhstan	KAZMEMST	P-Member			Х
Kenya	KEBS	P-Member	Х		
Korea, Republic of	KATS	P-Member	X *		
Mauritius	MSB	P-Member	Х		
Mexico	DGN	P-Member			Х
Netherlands	NEN	P-Member			Х
Nigeria	SON	P-Member	X		
Norway	SN	P-Member			Х
Philippines	BPS	P-Member	Х		
Poland	PKN	O-Member	Х		
Romania	ASRO	P-Member	Х		
Russian Federation	GOST R	P-Member	X *		
Rwanda	RSB	P-Member	Х		
Serbia	ISS	P-Member	Х		
South Africa	SABS	P-Member			Х
Spain	UNE	P-Member			Х
Sri Lanka	SLSI	P-Member	X		
Sweden	SIS	P-Member			Х
United Kingdom	BSI	P-Member	X *		
United States	ANSI	P-Member	X *		
Viet Nam	STAMEQ	P-Member	X		
P-Member TOTALS Total of P-Members voting:	20		19	1	17
TOTALS			20	1	19

Comments from Voters							
Brazil	ABNT	P-Member					
Canada	SCC	P-Member					
France	AFNOR	Secretariat					
Germany	DIN	P-Member					

Japan	JISC	P-Member	
Korea, Republic of	KATS	P-Member	
Russian Federation	GOST R	P-Member	
United Kingdom	BSI	P-Member	
United States	ANSI	P-Member	

## Comments from Commenters

ISO

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
** 001		Title		Ed	Document title should reflect the title of TC 268, Sustainable cities and communities	Title revised at DIS edit: Sustainable cities and communities — Indicators for smart cities	Agree.
CA 002			Title Page	Ed	The title is incorrect	"Sustainable development in communities — Indicators for Smart Cities" should be replaced by "Sustainable development of cities and communities — Indicators for Smart Cities" – here and anywhere else it occurs in the main text of the document.	Agree.
KR1 003	whole	whole		Ed	According to the ISO directives, this "International Standard" is not allowed but this "document" shall be used.	Replace this "International Standard" and this "standard" with this "document" in the whole text.	Agree.
DE 004		Whole Document		Ge	We got this feedback from one of our communities involved in standards work: The indicators are not suitable for European, especially German cities. They seem to focus on the principle of "measuring what can be measured". Indicators to measure the benefits of digitisation in smart cities also have to refer e. g. to social impacts, i.e. choosing soft indicators. These are missing.		Disagree. No proposals have been provided. These indicators are useful for European cities. Soft indicators are included in ISO 37120. This standard should be used with ISO 37120. European cities are using ISO 37120 and they have been consulted on DIS 37122.
DE 005		Whole document		Ge	The definition of regional authorities is formulated in such a general way that all municipalities, re- gardless of their size and number of inhabitants, have to be taken into account, although a part of the indicators and key figures relates to larger cities.	Limitation to administrative districts and larger cities that are not part of an administrative district (kreisfreihe Städte), particularly as part of the indicators is only available for administrative dis- tricts and larger cities that are not part of an ad- ministrative district.	Disagree. Indicators are relevant for all cities regardless of size. The indicators can be normalize based on per 100,000 which can then be scaled down.
DE 006		Whole document		ge	<b>Germany disagrees for the following reasons:</b> The Association of German Cities (DST) does not consider the indicators to be suitable for achieving	There are two possible solutions: - Either the standard is fundamentally revised or	Disagree. We have had many

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					the goal of measuring the quality of life in cities. The survey of local authorities in Germany showed a large number of suggestions for improvement. The indicators proposed so far do not show conclusively how "smartness" can be integrated into the framework of sustainability. So far, all previous indications in this direction have not been taken into account in the preparation of this draft.	- it is completely withdrawn. During the revision, only individual indicators have been modified or newly included. There was no fundamental discussion on the meaningfulness or application of the standard.	meetings and discussions regarding the development of this draft standard. National committees have made multiple suggestions and WG2 have discussed all proposals during the meetings. We have had many versions of this document.
US/ 007 ANSI	General	Entire Document		ge	We have followed the development of this standard and its various spin-offs for several years and admire how it has been administered and developed by the ISO and NFPA. In recent years we have submitted recommendations to several of the committees developing the core committee document that there should be a paragraph or two recognizing the interaction of "smart and sustainable cities" with large research university campus infrastructure with host cities (large research universities being fairly common in the United States, but less so in Europe). Many research universities have significant interoperability requirements with host city security, water, sewer, traffic control, transportation, power and telecommunication systems. This condition could be identified as an indicator of a smart city apart from the metrics about the education industry already contained in Section 6 and scattered in 58 locations elsewhere in this draft. We are happy to help the drafting committee find the appropriate location and develop the appropriate		Noted. This to be provided by US for the next amendment. We need a proposal. US to send proposal for the next amendment.

1 MB = Member body / NC = National Committee (enter the ISO 3166 two-letter country code, e.g. CN for China; comments from the ISO/CS editing unit are identified by \*\*)

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					text. Thank you for the opportunity to comment.		
US/ 008 ANSI	General	Entire Document		ge	For the vast majority of the proposed indicators there is no discussion of how the data will support an analysis of whether a smart city is sustainable or not.		Noted. Need to be used in relation to ISO 37120. WG2 family of standards are used to provide methodology to help cities measure but not determine how cities are smart or sustainable.
CA 009				ge	A number of the current set of Smart Cities indicators are difficult for cities to measure based on the city consultation, so many of the comments that follow are based on measurability of indicators by cities and if it is practical for cities to collect data on a particular indicator		Noted. Indicators are optional and users can select the ones they can report on.
FR 010				Ge	The link between ISO 37120 and ISO 37122 is very strong. Despite the fact they two different standards we are considering that ISO 37120 could be revised as a series of standards in order to clearly highlight the fact that ISO 37122 is not a standalone document.	Please consider the opportunity to consider ISO 37120 as a series of standards in which the current ISO 37122 will be ISO 37120-2 or consider the opportunity to ask to ISO to sell ISO 37122 along with ISO 37120 as a package.	Noted. We have requested ISO TC 268 to ask ISO CS. ISO 37120 is a normative reference. It is important to push them to buy both and to have a special price for both.
					It should be consider to ask to ISO if, as edition solution, ISO 37122 could be published or promoted as package along with ISO 37120 in order to encourage buyers and cities to see ISO 37122 as an addition of ISO 37120		

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FR 011				Ge	This document is good addition to ISO 37120:2018. Most of our comments are focused in linking SO 37122 with ISO 37101. Some indicators has to be revised in order to be clarified or because they are currently not appropriate or calculable. During the editing process Annex A and Annex B has to be revised and edit properly to have a consistent and relevant document.	As far as ISO/DIS 37122 will probably be modified and enrich by all these comments, it might be relevant to establish an editing committee in order to ensure the entire integration of DIS results. France will be happy to be part of this process that has to be handled prior to the launch of the FDIS ballot.	Agree. Editing committee with 2 or 3 countries to ensure that everything is included and correct. We will check Annex A and Annex B. Committee is only editorial and to ensure the comments agreed on is incorporated. Canada and France.
DE 012		General		ge	It seems not clear how to handle the 100 000 nominator for smaller cities Seems still to be unclear how to do the calculation for less than 100 k	Give an explanation or create an additional docuemtn, which gives additional explanations and introductions.	Disagree. This is clearly explained and tested. Can be scaled down based on a simple calculation for smaller cities.
** 013		General		Ed	The document has been written by a non-native English speaker. There are a substantial number of grammatical errors and the meaning is sometimes unclear.	Please ensure that a native English speaker proofreads and revises the text to ensure clarity and improve the grammar, otherwise the document could be rejected at the next stage.	Noted. Editing committee will have native English speakers.
** 014		General		Ed	Smart City should be smart city.	Please change smart city/smart cities to lowercase throughout.	Agree.
** 015		General		Ed	ISO documents use UK English rather than American English.	Please change 'center' to 'centre' and correct any other American spellings throughout.	Agree. Will ask UK for review and editing.
** 016		General		Ed	ISO documents use 'conformance' not 'compliance', unless speaking about regulations.	Please change all relevant instances of comply/compliance to conform/conformance.	Agree. Will double check that it doesn't refer to regulation.
** 017		General		Ed	Please ensure all URLs are active and up-to-date.		Agree. Will check all URLs.

Template for comments and	d secretariat observations
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** 018		General	'may'	Ed	<b>ISO/IEC Directives, Part 2, 2018, Table 5</b> "May" signifies permission expressed by the document, whereas "can" refers to the ability of a user of the document or to a possibility open to him/her.'	Please update any incorrect uses of 'may'.	Agree. Will check.
** 019		General	Figures	Ed	Please provide separate, editable image files so we can make any necessary corrections to text, figures, fonts, etc. See <u>https://www.iso.org/drafting-standards.html</u> for Guidelines for the submission of text and graphics to ISO/CS. Please also prepare figures according to ISO guidelines.		Agree.
DE 020			Figure 1	ge	Questions raised by a first user: Indicator Smart city and resilient city are complementary? Opposite? Different? Contradicting? A city could be smart and resilient?	Specify the context of complement ISO better it seems still not easy to grasp by people first approaching the indicators.	Noted. Will make the figure more clear, will add a line under the title and add a title referring to the family of standards. Will make it the same as the figure in ISO 37120. This figure is referring to the family of standards.
DE 021		Table of content		ge	number of indicators per topic are imbalanced. Energy and environment or another example transportation and safety	Change accordingly	Disagree. WG2 has worked hard on ensuring indicators are balanced for each theme but this is also dependent on proposals received. The indicators included have been discussed and agreed upon by the committee. No proposal has been provided.
CA 022			Table of Contents	ed	The third level headings are not required – it makes the Table of Contents unnecessarily and	Only include 1 <sup>st</sup> and 2 <sup>nd</sup> level headings in Table of Contents	Agree. Must be consistent with ISO 37120. Will check

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					excessively long and hard to read.		and ensure consistency.
** 023		Foreword	All	Ed	Text should reflect ISO simple template: <u>https://www.iso.org/drafting-</u> <u>standards.html</u> .	Text updated at DIS edit.	Agree.
** 024		Introduction		ed	ISO/IEC Directives, Part 2, 2018, 10.6, References in a document to itself 'For an individual document, the form "this document" shall be used.'	Please change 'this International Standard', 'this standard' and 'ISO 37122' to 'this document' throughout.	Agree.
BR 025		Introduction	Page xii	ge		<ul> <li>Include the following items at the end of Introduction (in line with the Smart City DEFINITION purposed on 3.1):</li> <li>"This International Standard when used in conjunction with ISO 37120 will help cities to identify indicators for applying city management systems such as ISO 37101 and to implement Smart City policies, now and for the foreseeable future, without unfair disadvantage of others or degradation of the natural environment, to:"</li> <li>Increase the pace at which social, economic, and environmental sustainability outcomes are provided to citizens;</li> <li>Respond to challenges such as climate change, rapid population growth, and political and economic instability by fundamentally improving how they engage society;</li> <li>Apply collaborative leadership methods, work across disciplines and city systems;</li> <li>Use data, information and modern technologies to deliver better services and quality of life to those in the city (residents, businesses, visitors)</li> </ul>	Agree. This text is already included in paragraph 2 but have moved text down to bullets to make more clear.
CA 026		Introduction	Second paragraph	ed	The second paragraph is an excessively long sentence that is hard to follow.	Suggest breaking into several sentences.	Agree. See above.

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CA 027		Introduction	Third paragraph	te	The standard is not only about smart city policies – it also covered implementation of programs and projects	"and to implement Smart City policies to:" should be replaced by "and to implement Smart City policies, programs and projects to:"	Agree.
CA 028		Introduction	Third paragraph	ed	The distinction between the first two bullet points is unclear	Make the difference between the first two bullet points clearer	Agree. See above.
CA 029		Introduction	Third paragraph	ed	"Identify the need for smart infrastructure" – suggest ISO 37123 could also help to quantify the benefits of investing in smart infrastructure as well	Replace with "Identify the need for and benefits of smart infrastructure"	Agree.
BR 030		Introduction – 1 Scope	Page 1 – Fig. 1	ge		Figure 1: Relate ISO 37101 and the other TC268 Standards to ISO 37120, forming a general, wide diagram. This should have been added as an annex in the new version (DIS), but it has not.	Disagree. Will not change Figur 1 as this only refers to ISO 3712x series of standards. Will include how ISO 37122 relates to ISO 37101 in Annex.
BR 031		1 Scope	Page 1	ge		Consider to include a "Note: each city has different perspective about "life quality", considering political, climate, economics, culture and other aspects. The main assets to measure "life quality" and "innovation" can be different for Dubai and New York, p. ex. This International Standard is more focused in a wide approach without regional and local concerns."	Disagree. We cannot add notes to the scope. This note is already considered in Paragraph 2, under section 4 on City Indicators.
** 032		01		ed	<b>ISO/IEC Directives, Part 2, 2018, 14.2,</b> The scope is a normative element. It shall not contain requirements, permissions or recommendations.	Text updated at DIS edit.	Noted. Already edited.
**		01	Figure 1	Ed	Please ensure that all document titles are correct		Agree.

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Text updated at DIS edit.

sentences, e.g.

Please rewrite without articles, full stops or new

'city that increases the pace at which it provides

social, economic, and environmental sustainability

standards.html

(e.g. lowercase letters, 'and' not '&').

Introductory text should reflect ISO simple

template:https://www.iso.org/drafting-

ISO/IEC Directives, Part 2, 2018, 16.5.6

'The definition shall be written in such a form that it

can replace the term in its context. It shall not start

with an article ("the", "a") nor end with a full stop. A

Ed

Ed

02

03.01

033

034

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035

Template for comments and secretariat observations

Agree.

Agree.

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					definition shall not take the form of, or contain, a requirement.'	outcomes'	
CA 036		03.01		ed	The acronym "TMB" should be explained	Write out TMB in full	Agree.
** 037		03.02		Ed	<b>ISO/IEC Directives, Part 2, 2018, 16.5.6</b> 'The definition shall be written in such a form that it can replace the term in its context. It shall not start with an article ("the", "a") nor end with a full stop. A definition shall not take the form of, or contain, a requirement.'	This definition doesn't work, and I would suggest is self-explanatory. Suggest removing 3.2.	Disagree. Many find this calculation unclear and the formula is needed. Please see comment DE 12. Make sure it is consistent with the definition in ISO 37120.
BR 038		Introduction – 4 City Indicators	Page 2	ge		<ul> <li>We strongly insist in the following proposed change. The disagreement affirming that "this criteria is in alignment with ISO 37120" is not comprehensible, once the change did not suppressed any of the criteria, only added <u>"ETHICS"</u> to it.</li> <li>Should we understand that "Ethics" is not criteria in alignment with ISO 37120, 37122, and all the others? Even if the criteria is not in one Standard, shouldn't we include in others? Acting like that would seem like an intentional error propagation.</li> <li>Consider adjusting the criteria as follows:</li> <li>The list of indicators is based on the following criteria:</li> <li>Completeness: indicators must aim to measure all possible relevant aspects for evaluation of the smart city.</li> <li>Technology neutral: be careful not to favor one technology over another, existing or future, as much as possible, what must be done through participation and collaboration of many points of view (all that can be used</li> </ul>	

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						<ul> <li>an understandable and clear way.</li> <li>Validity: indicators must be the most accurate reflection of the facts and data can be collected using scientific techniques (or other local heuristic techniques openly accepted by the community in question, and submitted to public scrutiny), in a transparent way.</li> <li>Verifiable: indicators are verifiable and reproducible. Methodologies are rigorous to give enough certainty to the level of implementation of the criteria.</li> <li>Availability: quality data is available or it is feasible to initiate a monitoring process that will make it available in the future.</li> <li>Ethics: adopt an ethical approach that can overcome the reductionist, segregating, exclusionary, limiting and constraining tendencies of urban environment, digital technologies and industrial production systems. This approach must pursue the open circulation of information and influences in a comprehensible, accessible and transparent way, aiming the improvement of services and quality of life in the cities, besides the formation of a critical conscience in citizens.</li> </ul>	
						When interpreting the results of a particular service area, it is important to review the results of multiple types of indicators <b>and points of view</b> across themes; focussing on a single indicator <b>or interpretation</b> can lead to a distorted or incomplete conclusion. Elements of aspiration must also be taken into consideration in the analysis.	
BR 039		Introduction – 4 City Indicators	Page 2	ge		Consider adding a justification to: "Cities using this International Standard shall report at least 50% of the indicators in this standard." (Why is it different from others Standards of TC268, which require 100%? Just because it is a "new concept" justifies it? How?).	Disagree. Every standard is different. ISO 37120 has core and supporting standards.
						This suggestion was accepted in the last interaction ("Agreed. Further clarification added"), but no changes were made.	

1 MB = Member body / NC = National Committee (enter the ISO 3166 two-letter country code, e.g. CN for China; comments from the ISO/CS editing unit are identified by \*\*)

Template for comments an	d secretariat observations
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BR 040		4 City Indicators	Page 2	ge	Most of indicators are structured including topics such as: General, Indications, Requirements, Data sources and Data Interpretation. However, some indicators have no Data Interpretation topic. Despite the fact this standard has the goal to measure the progress towards a Smart City, the Data interpretation could be a mandatory topic, considering <u>helping</u> <u>each city to understand how the indicator might be related to</u> <u>municipality milestones.</u> It is not comprehensible the criteria to define which indicators need further clarification to have a "Data interpretation" section. We believe this unclearness seems like an inconsistency to the Standard that needs to be repaired.		Disagree. Some indicators require data interpretation notes and others do not because they are self-explanatory.
CA 041		04		Ed/te	The sentence: "Cities using this International Standard shall report at least 50% of the indicators in this standard as it is meant to be used in conjunction with ISO 37120" is hard to follow. The first statement is clear, but the rationale provided by the second half is not clear.	Rewrite for clarity.	Agree. Text revised during WG2 meeting in Moscow.
** 042		04	3	Ed	'Shall' is used to express requirements of the document.	'Completeness: indicators have to measure all relevant aspects for evaluation of the smart city.' changed to 'Completeness: indicators shall measure all relevant aspects for evaluation of the smart city.'	Noted. Changed to should as it is not a requirement.
DE 043		04	List of indicators	te	<ul> <li>ISO 24510, 24511, 24512 and ISO 24523 are explaining how to work with performance indicators. These standards also clearly state, that</li> <li>"service to users cannot be reduced to a single or universal set of performance indicators."</li> <li>"the principle of adaptability to local contexts, facilitating local implementation" is respected.</li> </ul>	Instead of "Completeness" state "Balance: indicators have to balance the relevant aspects for evaluation of the smart city." State clearly the principle of adaptability by adding the criterion: "Adaptability: the principle of adaptability to local contexts, facilitating local implementation is respected."	Partially agree. Balance is added to completeness definition. Adaptability is already explained in other parts of the standard.
CA 044		05		ge	There are gaps in the current set of Economy indicators in terms of economic expenditures, such as R & D expenditures as a % of GDP (although GDP may be difficult to calculate, this is a	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of	Noted.

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					suggestion), and employment, such as percentage of the labour force in self-employment demonstrating entrepreneurship or the average income or persons employed in the ICT sector.	indicators.	
FR 045		05.01		Те	NOTE 1: when translating in French "business data" is confusing	Please replace "business data" by "data of urban services" or delete" business"	Partially agree. Indicator revised during WG2 meeting in Moscow. Difficult to report on as cities do not have control over open data policy of companies. It is often up to the cities to provide open data to citizens. Need to modify this. It's about urban services and utilities. The idea is to measure the number of urban services that the data is open to citizens. Percentage contracts of urban services that have policy around open data. Will revise definition.
FR 046		05.01		Те	The link with ISO 37101 needs to be improved. In fact, data are also useful for innovation and governance	Modify NOTE 2 such: This indicator reflects the "Governance, empowerment and engagement", "Innovation creativity and research" and "Economy and sustainable production and consumption" as definedcontribution to	Agree. Indicator revised during WG2 meeting in Moscow.

Temp	Cemplate for comments and secretariat observations						Document: TC 268/N415	Project: ISO/DIS 37122
MB/         Line         Clause/         Paragraph/         Type of         Comments           NC <sup>1</sup> number         Subclause         Figure/Table         comment <sup>2</sup> Comments					Comments		Proposed change	Observations of the secretariat

					"Attractiveness" and "Responsible resource use"	
US/ 047 ANSI	05.01		te	The concept of "data openly available" is too vague. The requirement to provide be able to download data is too vague. What kind of company data must be available to meet this requirement?		Agree. Indicator revised during WG2 meeting in Moscow.
DE 048	05.01		te	Here and in the following the term "population" is often used in a general way. Which inhabitants are meant by which indicator? Is it about inhabit- ants at the place of their principal residence or about inhabitants at their place of principal and secondary residence?	Definition to be revised.	Disagree. Not clear and this is not referring to indicator 5.1
CA 049	05.01		te	The rationale and value of this indicator is very unclear This indicator is also impossible to measure.	Delete indicator.	Disagree. Indicator revised during WG2 meeting in Moscow.
DE 050	05.01	05.1	te	Percentage of local businesses contracted to provide city services which have data openly available. This indicator might be difficult to calculate.	Test or consider removing the indicator	Disagree. Indicator revised during WG2 meeting in Moscow.
FR 051	05.02		Te	The link with ISO 37101 needs to be improved. In fact, start-ups contribute to creativity. Start-up is either an innovative company or a new company.	Modify NOTE 2 as such: this indicator reflects the "Economy and sustainable production and consumption" and "Innovation, creativity and research	Agree. Note 2 modified.
US/ 052 ANSI	05.02		te	The definition of a "start-up" company should include all new businesses, not those with "innovative business processes and/or products." That is a better measure of economic breadth.		Noted. Indicator revised during WG2 meeting in Moscow.

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DE 053		05.02		te	No data available at municipal level. The data sources are partly on a regional level, partly on a municipal level and therefore could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. Indicator revised during WG2 meeting in Moscow.
CA 054		05.02		te	Currently, the way a start-up is defined, any business can qualify and be counted in the calculation of this indicator. IN addition: the definition of Start-ups shall refer to those businesses which have been founded and registered in the city during the last year and can be considered <u>to have innovative business</u> <u>processes and/or products</u> ." Is impossible to objectively measure.	This indicator should focus on new business starts.	Noted. Indicator revised during WG2 meeting in Moscow.
** 055		05.02.2	2	Ed	'ISO 37120: 2018 indicator, Number of businesses per 100 000 population'	Please provide precise clause or subclause number.	Agree.
FR 056		05.03		Te	The link with ISO 37101 needs to be revised. The percentage of high ICT labour force is not a factor of living together and doesn't correspond to a higher social cohesion. Concerning "well-being" the link is too much indirect. And moreover some ICT work can lead to burn out. On other hand, the issue "Innovation creativity and research" could be added as ICT can attract innovators. Moreover "Education and capacity building" is concerned	Moditfy Note 2 by deleting "living together, interdependence and mutuality" and "social cohesion"; "well- being"; Add "Innovation creativity and research" in the list of issues. In addition, add also the issue "education and capacity building"	Agree.
DE		05.03		te	No data available at municipal level. The data sources are partly on a regional level, partly on a	The use of this indicator should be given up be-	Disagree. This data is often available through labour

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057					municipal level and therefore could not guarantee comparability	cause of methodological reasons.	surveys, statistics bodies and labour departments.
CA 058		05.03		ge	While the indicator is well defined in an objective sense, it may be benefit from a very more examples to make it clearer some of the key occupations covered by this indicator	Include examples	Disagree. This is clear.
US/ 059 ANSI		05.03, 5.4		te	Why are the Information and Communications Technology and Education and Research & Development the only two sectors being tracked as a measure of Sustainable Development?		Disagree. No proposal was received for additional sectors. ICT and education and R&D and important components of Smart Cities.
CA 060		05.03.2		te	The link to the UN Statistics Division doesn't work	Update link	Agree to update link.
FR 061		05.04		Те	The link with ISO 37101 needs to be revised. As for ICT labor, this indicator concerning R&D labour force has a link with "Economy and sustainable production and consumption" and "Innovation creativity and research" issues and "Attractiveness", and "Resilience" purposes	Moditfy Note 2 by deleting "living together, interdependence and mutuality" issue and "social cohesion"; "well- being" purposes Add "Innovation creativity and research" in the list of issues.	Agree.
DE 062		05.04		te	No data available at municipal level. The data sources are partly on a regional level, partly on a municipal level and therefore could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. Data is available at the municipal level. This is usually gathered by national statistics offices and by municipalities.
CA 063		06		ge	There are gaps in the current set of Education indicators in terms of education pertaining to	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented	Noted.

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					programming languages, mathematical ability and numeracy.	in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators.	
FR 064		06.01		Те	The indicator 6.1 is questioning. In fact, if the public library is viewed on line by non- citizens located outside of the city but is not viewed by the inhabitants of the city, what does the indicator show about the smartness of the city? Moreover, the results will be very difficult to compare from one city to another In any case there no link with "Social cohesion" and "Well-being"	restriction for interpretation)	Agree to delete. Difficult to measure who is accessing the database.
US/ 065 ANSI		06.01		te	Is the concept of "visits to online databases offered by public libraries" meant to imply people physically visiting the libraries? If so, a high value for this indicator would make me think that internet connectivity in a community is low.		Agree to delete. See above.
CA 066		06.01		te	The rationale and value of indicator is very unclear. This indicator will also be difficult to measure and is confusing because the purpose of on-line resources is they are available to people everywhere (both inside and outside the administrative boundary).	Delete indicator	Agree to delete. See above.
FR 067		06.02		Те	The problem of this indicator is that it could be misunderstood and considered as a discriminatory indicator. The idea is to know how foreign languages are developing in a country, not to assess the immigration level. Foreign languages are in favor of	in line 325, delete in NOTE 1 "a high degree of immigration" Add in NOTE 2 the "Attractiveness" purpose.	Agree.

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					attractiveness		
US/ 068 ANSI		06.02		te	How would you define "professional proficiency" in a foreign language and how would you measure it? Test people, rely on surveys?		This is already defined in the indicator requirements.
DE 069		06.02		te	No data available at municipal level. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. This data is available for many cities. If this data is not available for German cities, they do not have to report this indicator.
CA 070		06.02		te	The indicator focus on "foreign" languages is problematic (especially evident in the example given relating to a bi-lingual country like Canada). The core focus of this indicator is to measure capabilities in multiple languages.	Suggest to revise indicator title to the follow: Percentage of city population with professional proficiency in more than one language	Agree.
FR 071		06.03		Те	There is a debate concerning the positive impact of the Number of computers, laptops, tablets or other digital learning device for primary school students. Scientific studies are contradictory on this topic. The number of tools is not the right indicator. We should replace at least it by an indicator concerning the number of students that are trained to computer, latops, tablets In any case, purposes mentioned in NOTE 2 are not the right ones	Delete the indicator or propose a new one concerning the training in ICT In any case, replace in NOTE 2 "Social "cohesion, well-being, and resilience" by "Attractiveness"	Agree. Combine 6.3 and 6.4 as a table as primary and secondary. Add note regarding data interpretation relating to correlation of technology availability in primary schools may not necessarily be a benefit. Internet speed is also important. Educational program is also important. It's not about the equipment but the technology infrastructure.
							18.1 defines sufficient internet speed. Add note linking to 18.1

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							Revise 6.03 to reflect educational programing in the next amendment.
CA 072		06.03		te	It needs to be clarified if this is referring to "school owned/provided' devices. Guidance needs to be provided on how student owned devices are considered under this indicator.	Additional clarity required in the indicator definition	Agree. Will clarify this is only relating to school provided devices.
FR		06.04		Те	The link with ISO 37101 needs to be revised.	Replace "social cohesion, well-being, and	Agree.
073					The impact is on "Attractiveness"	resilience" by "Attractiveness"	
CA 074		06.04		te	It needs to be clarified if this is referring to "school owned/provided' devices. Guidance needs to be provided on how student owned devices are considered under this indicator.	Additional clarity required in the indicator definition	Noted. See above.
DE 075		06.05		Ge	No data available at municipal level. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. This data is available.
FR 076		06.05.		te	In France, this indicator was deeply discussed by certain parties that criticize the fact that having a high degree of education is a factor of social cohesion and city intelligence. The risk is to create intellectual ghettos versus lower educated districts. What	Delete the indicator	Disagree. This is a very important indicator that measures innovation as reflected during city consultations. This indicator measures the skill set of the population.
					happens in territories with low educated people.?		Add note on data interpretation for cities so it is generic and to consider the impact on surrounding

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							cities.
FR 077		06.05.1		Ed/Te	The sentence "Those implementing this International standard should report on this indicator in accordance with the following requirements" is missing for this indicator	"Those implementing this International standard should report on this indicator in accordance with the following requirements"	Agree.
FR 078		06.05.1		Те	Only STEM disciplines are considered in the indicator and mentioned in the NOTE 1. In fact, social sciences are also important. It could be added in the NOTE 1 that social sciences are also important and multi- disciplinary education contributes to smartness	Open the indicator to social science. At least Add after the sentence "critical to the technological development and innovation of a city." The sentence "Nevertheless social science, not considered in this indicator, are also a key issue"	Noted. See above. Will add to note.
FR 079		06.05.1		Те	The link with ISO 37101 needs to be revised This indicator has not a link with "social cohesion" and "well-being". It has a link with "innovation creativity and research issue	Add in NOTE 2 : "Innovation, creativity and research" Delete "social cohesion" and "well-being"	Agree.
FR 080		06.05.1		Ed		Add the first paragraph as follows: "Those implementing this International Standard should report on this indicator in accordance with the following requirements."	Agree.
CA 081		06.07		te	The definition of STEM is broad/open. Should this be more specifically defined for the purposes of the indicator to help ensure more comparative data is produced through its application.	Consider defining STEM more specifically (ideally drawing on an international established definition).	Disagree. This is clear.

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DE 082	07		ge	The proposed indicators are general indicators on energy, not specific indicators on what makes a city SMART. Additionally the energy indicators should adapt to all kind of cities in the world, not only western style. If it deals with general energy consumption in cities, it should be very clear that by energy, the standard includes all form of energy (not only electricity and gas), but also heat and fuels for transportation. Hence, all type of distribution networks, and all form of final energy (liquid and solid). The biggest amount of energy consumed in cities are for transportation. So the set of indicators must be balanced between all kind of energy and all kind of use of energy (not only heating) and balanced between origin of energy, distribution networks and use - It lacks indicators about : • General CO2 equivalent emissions due to the consumption/distribution of energy (includes CH4 leaks, fuel evaporation and so on) • Number of people connected to heat grid or cold grid • Number of liquid fuel station for transport or amount of liters of liquid fuels distributed each year • Amount of solid energy distributed in the city : wood or coal (or number of delivery places for solid state energy) If it deals really with SMART city, it should concentrate on SMART energy, means SMART energy production, SMART distribution and SMART consumption, so you should count : • Electric vehicles or smart charging stations • Smart meters for provisioning of	Reconsider the energy indicators	Noted. These topics are interesting, Germany to submit proposals for next amendment. Canada prepared definition on this proposed new indicator on Number of electric charging stations as per Germany comment. Add new indicator as per WG2 discussion in Moscow. If the charging station relies on coal, it's not sustainable. Could add note on data interpretation.

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					<ul> <li>different resoruces (electricity, water, gas)</li> <li>Storages : electricity, heat, gas, liquid fuel</li> <li>Renewables might not be considered smart per se, unless it is dispatchable</li> </ul>		
CA 083		07		te	There is currently no indicator relating to the smartness of the electricity grid. A smart electricity grid is a fundamental component of smart city infrastructure, providing many key benefits: The benefits associated with the Smart Grid include: More efficient transmission of electricity Quicker restoration of electricity after power disturbances Reduced operations and management costs for utilities, and ultimately lower power costs for consumers Reduced peak demand, which will also help lower electricity rates Increased integration of large-scale renewable energy systems Better integration of customer-owner power generation systems, including renewable energy systems Improved security	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators.	Noted. Already covered in 7.4
CA 084		07		Ge	Indicators 7.2 and 7.3 are sub elements of 7.1 – and are explicitly included in the reporting table for Indicator 7.1. It is not necessary to have this level of duplication.	Indicators 7.1, 7.2 and 7.3 should be combined into one indicator.	Disagree. Cannot combine, the approach and units are different. Indicators are optional, they might only be able to report on one of the indicators. Some cities are more interested in one approach

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							than to another.
CA 085		07		te	Indicator 7.1 (and 7.2. and 7.3) need to be clearer on the definition of which uses of the recovered energy are counted. Is on-site use of recovered electrical and thermal energy at the wastewater/waste facilities counted? Or does it only include use by external parties? What if the reuse of thermal energy isn't metered?	More clarity provided on the definition relating to the recovery/reuse of energy?	Agree. Will need to add sentence to further clarify that both on-site and external are included.
FR 086		07.01		Те	Keep the reference to City energy mix reference that provide insight on energy production inside the city. The question behind the indicators is which share energy among energy produced to meet the City need is issued from waste heat, waste water and other waste treatment.	Add a note to Clarify energy mix concept The term energy mix refers to the combination of the various primary energy sources used to meet energy needs in a given geographic region.	Agree. Will add note (also see above).
FR 087		07.01		Те	The link with ISO 37101 needs to be improved The indicator concerns also "Community infrastructures" issue"	Add in NOTE 2: "Community infrastructures" issue	Agree.
FR 088		07.01		Те	This indicator considers only solid waste except wastewater whereas there is other liquid waste that could be added (ie waste oil)	Add other liquid waste in the definition Revise the definition	Agree. Will add "other liquid waste".
DE 089		07.01		te	No data available for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. Data may be sourced from utility providers which should be accessible by local authorities.

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CA 090		07.01		ed	Wastewater is currently spelled as two words in the indicator title: 7.1 Electrical and thermal energy ( <i>kWh</i> ) produced from <b>waste water</b> treatment, solid waste treatment and other waste heat resources, as part of the city's energy mix (%)	7.1 Electrical and thermal energy (kWh) produced from <b>wastewater</b> treatment, solid waste treatment and other waste heat resources, as part of the city's energy mix (%)	Agree.
						Also, review the indicator and the Standard as a whole to ensure consistency of spelling.	
DE 091		07.01	07.1	ed	Different versions of writing for wastewater: In the title: Waste water => wastewater	Change accordingly	Agree.
DE 092		07.01/7.2/7.3	07.1/7.2/7.3	te	Choose one of these indicators 7.1 Electrical and thermal energy (kWh) produced from waste water treatment, solid waste treatment and other waste heat resources, as part of the city's energy mix (%)	Suggestion to either delete all or keep 7.1 only. See as well chapter 22.	Disagree. See above. Each indicator requires a different approach and units.
					7.2 Electrical and thermal energy (kWh) produced from wastewater treatment per capita per year		
					7.3 Electrical and thermal energy (kWh) produced from solid waste treatment per capita per year		
FR 093		07.02		te	The link with ISO 37101 needs to be improved The indicator concerns also "Community	Add in NOTE 2: "Community infrastructures" issue	Agree.
					infrastructures" issue		
DE 094		07.02		te	No data available for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. This data can be sourced from utility providers.

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GB 095		07.02 Electrical and thermal energy (kWh) produced from wastewater treatment per capita per year		te	The draft is inconsistent in units of energy. It sometimes uses joules (or prefixed versions such as gigajoules or GJ) and sometimes uses watt hours (or prefixed versions such as kilowatt hours or kWh). I propose the draft standardises on joules (or prefixed versions such as gigajoules). A suitably qualified reader is capable of using joules and is capable of converting into any other energy unit if required for local needs.	Replace each instance of "kWh" with the equivalent in joules.	Agree. Will ensure consistency and check for GJ. Add link for converter.
** 096		07.02.1 8.1.2 11.1.2 13.5.1 16.5.1 16.6.2 23.3.1	NOTE	Ed	<b>ISO/IEC Directives, Part 2, 2018, 24.5</b> 'Notes shall not contain requirements or any information considered indispensable for the use of the document, for example instructions (imperative mood), recommendations or permission. Notes should be written as a statement of fact.'	NOTE changed to body text at DIS edit.	Agree. Will check.
FR 097		07.03		Те	This indicator considers only solid waste except wastewater whereas there are other liquid waste that could be added (ie waste oil)	Add other liquid waste in the definition Revise the definition	Agree. Will add "other liquid waste"
DE 098		07.03		te	No data available for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. Indicators are optional.
FR 099		07.04		te	Decentralized production of energy is not correctly defined. With the present definition	Revise the definition of decentralized	Noted. Specify that one plant cannot cover all electricity.

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					city near a nuclear plant could be considered as 100% decentralized . "irrespective of size" is not adapted	electricity production system.	
FR 100		07.04		te	The link with ISO 37101 needs to be improved This indicator has a link with resilience. It concerns also "Community infrastructures" issue	Please add in NOTE 2 : "Resilience" in the list of purposes concerned And "Community infrastructures" issue in the list of issues concerned	Agree.
FR 101		07.04		Те	Change electricity by energy. Considering electricity as well as heat is more relevant	Percentage of the city's energy that is produced using decentralized energy production systems	Disagree. Can consider new proposal on energy for the next amendment.
FR 102		07.04		Те	Modify the Note 1 to provide a more accurate definition of "decentralized Energy"	NOTE 1 The ISO 52000-1 "Energy Performance of Buildings – Overarching EPB assessment — Part 1: General framework and procedures" define three perimeters regarding energy delivered to the buildings: onsite, nearby ( at the district scale), Distant (Traditional Power Plants distant from cities). A decentralized energy production refers to the nearby energy production perimeter. These decentralized energy production technology are connected to the power grid, natural gas supply network or urban heating/cooling networks to generate energy	Noted. Proposal for next amendment as above.

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						from renewable sources at local level rather than sourcing electricity from a regional electricity production facility that is most likely distant from a city. Although a relatively new approach for the power industry and utility providers, a decentralized system may potentially lead to more optimal use of renewable energy sources, which in turn can reduce fossil fuel use and increase energy efficiency and sustainability of a region. Therefore, tracking the amount of decentralized energy production can be used to assess a region's potential for utilizing renewable energy sources, such as Combined Heat, that may not otherwise have been available due to distance from centralized energy production facilities.	
US/ 103 ANSI		07.04		te	It is understood the desired intent of the indicator, but it can be argued that thereis no way to reliably evaluate the resulting data from the metric of if a city is sustainable. A city could be located near an abundant source of renewable energy, such as hydroelectricity. There might then be no need to have small grids with in the city, thus giving this metric a low value. Would that be interpreted as"bad" for the city?		We are interested in the structure of the energy source. It's not about interpreting if it is bad or good.

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DE 104		07.04		te	No data available for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree.
CA 105		07.04		te	The justification for this indicator may need to be refined. A primary benefit of a more decentralised energy system is the potential for a more reliable electricity system and higher quality power supply (with the appropriate supporting systems in place) – this is currently not included.	Refine indicator justification	Note added.
					The opportunity for combined heat and power is important – but this generally has to be included in the design of these systems and is difficult to install retroactively.		
					Locating air quality within cities also may have adverse impacts on air quality.		
CA 106		07.04		te	There may need to be a more specific definition than "at or near the point of use" for the indicator to be implemented practically and consistently.	Review whether a more specific definition is available?	Noted.
FR		07.05		te	The link with ISO 37101 needs to be	Please add in NOTE 2 : "Resilience" in the list	Agree.
107					improved	of purposes concerned	
						And "Community infrastructures" issue in the	
					This indicator has a link with resilience. It	list of issues concerned	
					concerns also "Community infrastructures"		
					issue		
FR 108		07.05		te	The definition of storage capacity concerned is not clear	Please refine or delete the indicator	Agree to refine. To measure energy storage capacity per capita is not useful. But
					As formulated, this indicator doesn't address		better to express as use
					the challenge linked to energy storage as well		energy consumption.
					The charcenee initial to energy storage as well		The indicator becomes

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					as how to neutralize the energy consumption pikes. The mean to store are not necessarily networks or grids but to convert in another kind of energy.		storage capacity of the city's energy grid per total energy consumption. Specify the different kinds of energy consumption. Add as per French proposal. Will add data interpretation on the importance of having
US/ 109 ANSI		07.05		te	Does this indicator mean that the energy storage has to be within a city or available to a city? If the intent is that the storage be within a city, that can result in the loss of space for people and businesses.		it nearby. Noted. Add note to specify if the storage is not within the city boundaries, they should report the distance.
DE 110		07.05		te	No data available for local authorities.	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. Data can be sourced from utilities providers.
CA 111		07.05		te	The notion of storage on a 'city's electricity grid' can be problematic. Many/most cities will be connected to regional or national grids – and the best locations for locating storage may be outside the city's administrative boundary. Will this storage still be counted?	Review the definition and focus of this indicator through consultation with appropriate technical expertise.	Noted. See above.
GB 112		07.05.2 Indicator requirements		te	The draft is inconsistent in symbols used for gigajoules: it sometimes uses the SI-compliant symbol "GJ"; it sometimes uses the term "GJs" that is not SI compliant. I propose each instance of "GJs" is replaced with "GJ".	Replace each instance of "GJs" with "GJ".	Agree.
FR 113		07.06		te	The title is not sufficiently clear to express that we are talking about individually to	Replace the title : percentage of street lighting remotely managed by an individual or	Remote control is not accurate, all street lighting is remotely controlled. It could

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					district remote control.	district adaptative light management system	be adaptive to local needs. Change to: Percentage of street lighting managed by a light performance
							management system Add clarification on monitoring light points, adjust light levels and set schedules.
							Revised as per agreement within WG2 meeting in Moscow.
FR 114		07.06		Те	Give a more accurate title regarding remote light management system	Percentage of street lighting managed by a remotely management system individually or at a sector levels	Noted. See above.
FR 115		07.06.1		te	The link with ISO 37101 needs to be established The indicator reflects "Economy and sustainable production and consumption" and "Safety and security" issues. It concerns "Responsible resource use" purpose	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects "Economy and sustainable production and consumption" and "Safety and security" issues as defined in ISO 37101. It can allow an evaluation of the contribution to the "Responsible resource use" purpose of the city as defined in ISO 37101	Agree.
FR 116		07.06.2		Те	Requirement too restrictive regarding remote street lighting management systems. It excludes for instance street scales or	Controlled by a remote light management system shall refer to the switching off/on and dimming of light points that can be changed	Noted. See above.

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					district scales management system	individually or in a local group, such as a street or a district, and remotely with a ICT- based system, which is connected via a communication network to the light points. This system shall also be able to measure accurately the electrical energy consumed by the light points and indicate via the ICT-based system to the operator any occurring failure affecting the light performance of the light points	
FR 117		07.06.3		te	The end of the sentence is not useful as it does not correspond to a date source issue.	Delete "and tracking the number of the remotely managed light points and the number of existing light points"	Agree.
CA 118		07.07		te	Focusing on refurbishment assumes upgrading the infrastructure of an established city. For newer cities/growing cities new light points may be installed using the latest efficient technologies (and not requiring refurbishment).	Refine indicator or make clear that light-points installed using the latest efficient technologies are also included.	To revise the indicator title to include both refurbished and newly installed streetlights. Add a table for the number of street lights that have been refurbished, newly installed, and replaced. Add note on energy efficient (replacement), must consider life cycle.
FR 119		07.07.1		Те	Refurbishment mainly applied to street lights when historical & esthetics issues exist. It seems to restrictive regarding a smart city	Propose an indicator that refers to energy efficiency rather than refurbishment. "Percentage of street lighting that improve its	Noted. See above.

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					standard.	energy efficiency"	
FR		07.07.1		te	The definition of refurbishment is not	Delete sentence "refurbishment shall not	Agree.
120					sufficiently clear. If we don't include the	include the removal and /or replacement of	
					removal and /or replacement of street lights,	street lights.	Will update reference and
					we'll miss an issue.		further clarify acceptable condition as per reference.
					Replacement of street lights can have a	Revise the reference	
					positive impact on energy savings		
						Precise what is an acceptable condition	
					Reference TR 15686-44:2014 doesn't exist		
					(.TR15686-11?)		
					What is an acceptable condition for		
					refurbishment of street ligthings ?		
**		07.07.2	SOURCE	Ed	ISO/TR 15686-44:2014 doesn't exist.	Please update references and indicate which	Agree.
121					ISO 6707-1:2014 is a withdrawn version, replaced by ISO 6707-1:2017.	sections of these documents have been sourced.	
FR		07.07.3		te	The end of the sentence is not useful as it	Delete "and tracking the number of the	Agree.
122					does not correspond to a date source issue.	remotely managed light points and the	
						number of existing light points"	
FR		07.08		Те	In the title, (by floor area) might confuse the	Delete "by floor area" Add "owned public	Agree.
123					reader. It is clear in 7.8.2 that the calculation	buildings" in the title.	0.00
					is not based on a number of buildings but on		Add notes from ISO 37120
					floor area of buildings. It is not necessary to	Add a note in7.8.2: The definition is of public	revision so it is the same definition. Not to include
					precise it in the title.	building is different from the one used in §7.5	rented.
						of ISO 37120 as the indicator is limited to the	
					The definition of public buildings is not	buildings where the city has the power to	Further clarify by adding

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					consistent with ISO 37120 because it is limited to the building where the city has capacity to refurbished. It would be explained in a note and be clear in the title	refurbish	institutional use.
US/ 124 ANSI		07.08		te	The intent of the indicator is understood, but perhaps it needs additional clarification to understand why a building needs to be refurbished - gain better energy use, structural integrity, new safety standards, etc.		Agree to add to rationale.
CA 125		07.08		te	The definition of the refurbishment needs to be more specific for this indicator to be practically applied. The focus of the indicator appears to be relating to energy efficiency/performance – so there should be clear benchmarks or criteria to define a minimum state or level of performance.	Develop a specific/workable definition of refurbishment, or explore alternative measures for assessing the energy performance/condition of the public building stock (consulting the appropriate expertise), or consider deleting this indicator.	Noted. Wording as US wording above can be incorporated. Add definition to Remodelling, refashioning and general renovation of a building to gain better energy use, improvements to structural integrity and conformance to safety standards.
FR 126		07.08.1		Те	The link with ISO 37101 needs to be improved This indicator has a link with "Attractiveness". It reflects also "Living and working environment" issue	Please add in NOTE 2: Living and working environment"" issue in the list of issues concerned And "Attractiveness" in the list of purposes concerned	Agree.
GB 127		07.08.2 Indicator requirements		te	The draft uses the term "square footage". I propose this is replaced with the term "floor area". Floor area is measured in square metres in most countries and the standard shouldn't imply that it's measured in square feet. Using a unit of measure as the name of a quantity	Replace each instance of "square footage" with "floor area". Ensure there are no other instances of a unit of measure	Agree with square metres but not replacing with floor area.

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					is contrary to ISO 80000.	being used as the name of a quantity.	
FR 128		07.09		te	There is in §12.2 an indicator that concerns also electricity for households. It should be mentioned in a NOTE that this indicator exists so that people could refer to it if interested. Add a sentence just after the title	Before 7.9.1, Add a NOTE : Considering the smart electricity management at household scale refer to §12.2	Agree. Be careful of numbering if it changes.
FR 129		07.09		Те	Why are dwellings excluded from this indicator	Explain and/or add dwellings in the calculation of this indicator	Noted. Add note referencing 12.2 and 12.3 for dwellings.
DE 130		07.09 & 12.2	07.9 & 12.2	te	smart electricity meters is to specific a lot of building are heating with gas or district heating.	Replace it by smart meter	Agree to change to smart energy meter.
FR 131		07.09.1		Те	The link with ISO 37101 needs to be revised This indicator has no link with "Well-being". It reflects also "Economy and sustainable production and consumption" issue	Please add in NOTE 2: "Economy and sustainable production and consumption" issue in the list of issues concerned And delete "Well-being" in the list of purposes concerned	Agree.
FR 132		07.09.2		Те	The definition of public buildings is not consistent with the definition of public buildings given in §7.8	Align definition of public buildings between 7.8 and 7.9 Replace "commercial and industrial	Agree. See above. Agree with replacing properties by buildings.

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NC	number	Subciause	Figure/Table	comment			Secretariat
					Commercial and industrial properties is not the term used the table.	properties by commercial and industrial buildings"	
					Note : are we talking about properties or buildings ? Definition of public buildings should	Clarify why "properties" is used in this context taking into account that we are talking about buildings	
					consistent with the one used in §7.5 ISO 37120	Align definition of public buildings with ISO 37120 (same correction should be implemented for	
CA 133		07.09.2		ed	There is a misspelling of building in the table	§8.3 – §13.1- §23.4 – see below) Correct spelling	Agree.
RU 134		8 Environment and Climate Change		Ge	It is recommended to add a noise pollution indicator that reflects the quality of the city's environment	The new indicator 8.4. Number of real-time remote noise level monitoring stations per square kilometre	Noted. Noise pollution is already included in ISO 37120. Russia to send proposal for consideration to be included in next amendment.
CA 135		08		ge	The current set of indicators may not be a sufficient set of indicators to support cities to consider how the changing technologies affect the monitoring of the environment and climate change.	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators.	Noted.
DE 136		08	8	te	In the "Environment and Climate Change" chapter indicators about greenery, temperature evolution, disaster (even it should be in resilient city) are missing. Currently the proposal looks as if a smart city doesn't care about environment and climate 66 two-letter country code, e.g. CN for China; comments fro	Add additional indicators from the fields mentioned or precise the idea of using digital solution or devices (smart sensor about biodiversity, online services for green location) to e.g. complement the standard on resilient cities and sustainable	Noted. We need to consider all final versions to see linkages and

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					change thoroughly.	cities. Think to show a link between the indicator sets.	gaps.
US/ 137 ANSI		08.01		te	We understand the intent, but do not know if there are any universally agreed to concepts of what constitutes "green building."		Disagree. This is already well defined.
CA 138		08.01		te	The current definition of "green building principles" is not clear and open to interpretation.	Further clarify, revise, and standardize the definition of "green building principles."	Disagree. Already well defined.
FR 139		08.01.1		te	The link with ISO 37101 needs to be improved	Please add in NOTE 2: Living and working environment"" issue in the list of issues concerned	Agree.
					This indicator reflects also "Living and working environment" issue	Replace "city and community infrastructure" by "Community infrastructures" to be consistent with ISO 37101	
					Replace "city and community infrastructure"		
					by "Community infrastructures" to be		
					consistent with ISO 37101		
FR 140		08.01.2		Те	HQE has now an international brand.	Add "HQE" in the NOTE	Agree.
					It could be mentioned in the list of standard mentioned for green buildings		
US/ 141 ANSI		08.02		te	A more important indicator than the number of air quality monitoring stations per square kilometer is having the plans and procedures in place to force energy users and polluters to cut back when thresholds		Disagree. What is being proposed is not quantifiable. This is already implied.
					are reached.		
FR 142		08.02.1		te	The link with ISO 37101 needs to be revised	Please add in NOTE 2 : "Heath and care in community" and "Living and working	Agree.

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					This indicator reflects "Heath and care in the community" and "Living and working environment" issue and it does not reflect "Governance, empowerment and engagement". It concerns also "Preservation and improvement of environment" purpose	environment " issue in the list of issues concerned and delete "Governance, empowerment and engagement" And also add "Preservation and improvement of environment" in the list of purposes concerned	
FR 143		08.03		Те	The definition of public buildings is not consistent with the definition of public buildings given in §7.8	Align definition of public buildings between 7.8 and 7.9	Agree. Added public buildings to definitions section as 3.3. This is the same as the one used in ISO 37120.
					Definition of public buildings should consistent with the one used in §7.5 ISO 37120	Align definition of public buildings with ISO 37120	
CA 144		08.03		te	Further define indoor air quality monitoring, since a building with a smoke detector/carbon monoxide detector can be considered in the calculation of this indicator as the indicator is currently written.	Suggest to revise indicator or remove.	Agree to revise as per FR comments.
FR 145		08.03.1		Те	The link with ISO 37101 needs to be revised Buildings are not "Community infrastructures" (refer to definition 3.6.1 and 3.6.2 of community infrastructure in ISO 37100 terminology standard Therefore this indicator does not reflect "Community infrastructures" issue It has no link with resilience	Delete in NOTE 2: "Community infrastructures" issue and " resilience" purpose	Agree.
FR 146		08.03.2		te	The monitoring of indoor air quality shall not exclude buildings equipped with sensors	Refer to OMS standards for air quality to define a "a minima" list et revise the sentence	Agree.

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					monitoring other primary pollutants. The word only should be banned. Moreover the list of primary pollutants correspond to outdoor air quality and not indoor air quality. Revise the list of pollutants mentioned in order to define " a minima" list adapted to indoor quality. Use OMS recommendation OMS (2010), WHO guidelines for indoor air quality: selected pollutants, World Health Organization, Regional Office for Europe. xxv + 454 p. http://www.euro.who.int/data/assets/ pdf_file/0009/128169/e94535.pdf IN France only 3 pollutants are regulated : CO, radon and asbestos. Benzene and formaldehyde are also considered as very important Other pollutants usually measured are Acetaldehyde,Toluene, Ethylbenzene and Xylenes.	of second alinea. The list could include: CO, Benzene, formaldehyde, radon, asbestos, Acetaldehyde, Toluene, Ethylbenzene, Xylenes.	
FR 147		08.04		Те	Please consider the introduction of the proposed indicator on Percentage of urban area that reduce urban heat islands	Percentage of urban area that reduce urban heat islands 1. General Those implementing this International	Noted. To be considered for ISO 37123. France to submit this proposal for ISO 37123 DIS ballot. Agree in principle to be considered for inclusion in

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						Standard should report on this indicator in	ISO 37123.
						accordance with the following requirements.	Consideration to include
						NOTE 1: Urban heat islands affect health and well-being of the occupants. These impacts can affect a large number of occupants and especially sensitive persons such as children	green space and green roofs additions and conversions in the requirements.
						or elderly.	
						Urban heat islands influence the local climate of the city, aggravate atmospheric pollution, or have consequences on energy consumption.	
						To limit the health and economic consequences of urban heat islands smart cities could develop urban cool islands either by means of green infrastructures /green roofs considered in ISO 37120 or outdoor spaces:	
						<ul> <li>to allow city dwellers to limit the impact of high temperatures, searing heat or extreme heat events on their health and well-being</li> </ul>	
						<ul> <li>to limit urban temperatures during heat waves</li> </ul>	
						NOTE 2: This indicator reflects the "Health and care in the community", "Living and	

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	2. indicator requirements
	Percentage of urban area offering cold heat islands shall be calculated as :
	<ul> <li>the total surface of total city area, excluding green spaces as defined in ISO 37120 §21.1,built with cool pavements, clear color permeable/draining materials with a high aldebo,street trees(numerator) divided by the total surface of city area excluding green spaces (denominator). The result shall then be multiplied by 100 and expressed as a percentage</li> </ul>
	NOTE : Green roofs are already covered in ISO 37120 §21.1

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						3. Data sources	
						Information should be obtained from building owners and managers	
CA 148		09		ge	The current set of indicators may not be a sufficient set of indicators to support cities to consider how the changing technologies affect the monitoring of municipal finance.	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators.	Noted.
						One suggested indicator is, number of capital projects (or capital project dollars) categorized as smart city initiative.	
US/ 149 ANSI		09.01		te	As written, we have no idea how one would interpret this indicator.		Noted. Will add data interpretation.
FR 150		09.01.1		te	The link with ISO 37101 needs to be established The indicator reflects "Economy and sustainable production and consumption" It concerns "Attractiveness" and "Resilience" purpose	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects "Economy and sustainable production and consumption" issue as defined in ISO 37101. It can allow an evaluation of the contribution to the "Attractiveness" and "Resilience" purpose of the city as defined in ISO 37101	Agree.
FR 151		09.01.2		te	The definition of sharing economy is not sufficiently clear and sharing economy is not	The indicator must be deleted as it doesn't reflect sharing economy and will be	Disagree to delete indicator but will add a note on data interpretation. France will

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							into existing policy allows for taxation which supplements municipal capital budgets. Technology is a key driver and booster for the sharing economy.
							In a broad approach, the sharing economy is a socio- economic ecosystem built around the sharing of human and physical resources. It includes the shared creation, production, distribution, trade and consumption of goods and services by different people and organisations The sharing economy encompasses the following aspects: swapping, exchanging, collective purchasing, collaborative consumption, shared
							ownership, shared value, co- operatives, co-creation, recycling, upcycling, re- distribution, trading used goods, renting, borrowing, lending, subscription based models, peer-to-peer, collaborative economy, circular economy, pay-as- you-use economy, wikinomics, peer-to-peer lending, micro financing, micro-entrepreneurship, social media, the Mesh,
							social enterprise, futurology, crowdfunding, crowdsourcing, cradle-to- cradle, open source, open data, user generated content

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							(source : The local and regional dimension of the sharing economy', Committee of Regions Opinion Number: CDR 2698/2015., 3-4 December 2015) 9.2 For requirements, change the definition for a more restrictive definition : The sharing economy shall refer to the use of digital platforms or portals to reduce the scale for viable hiring transactions or viable participation in consumer hiring markets (i.e. 'sharing' in the sense of hiring an asset) and thereby reduce the extent to which assets are under-utilised for accommodation, transportation, consumer durables, labour and human capital, and intellectual property). Add reference.
US/ 152 ANSI		09.02		te	We do not understand how this indicator contributes to a sustainable community.		Disagree. Going paperless is sustainable and this is an important smart city movement for many cities.
FR 153		09.02.1		Те	The link with ISO 37101 needs to be revised completely The indicator reflects "Economy and sustainable production and consumption",	replace NOTE 2 as such: This indicator reflects "Economy and sustainable production and consumption", "Safety and security" and "Governance, empowerment and	Agree.

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					"Safety and security" and "Governance, empowerment and engagement". It concerns "Attractiveness" and "Responsible resource use" (ie: finance resource) purpose. It doesn't reflect "Living and working environment" and has no link with "Preservation and improvement of environment"	engagement" issues as defined in ISO 37101. It can allow an evaluation of the contribution to the "Attractiveness" and "Responsible resource use" purpose of the city as defined in ISO 37101	
CA 154		10		ge	The current set of indicators may not be a sufficient set of indicators to support cities to consider how the changing technologies affect the monitoring of Governance.	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators. New indicators assessing how technology has improved efficiencies within and between municipal departments/ministries and participatory governance should be developed.	Noted.
BR 155		10 Governance	Page 22	ge	36 two-letter country code, e.g. CN for China; comments fro	(NEW INDICATOR) 11.6 Annual number of online participations to the municipal participative portal per 100 000 population: The annual number of online participations to the municipal participative portal per 100 000 population shall be calculated as the total number of municipal participative portal participations (numerator) divided by one 100 000th of the city's total population (denominator). The result shall be expressed as the annual number of online participations to the municipal participative portal per 100 000 population. An participative portal shall refer to a portal operated by the city allowing real time participation of citizens in city's decision- making and permitting to identify the true demands of communities, in a georeferenced manner. This portal must be careful about how the generated data is used, taking all the Privacy and Security measures needed to insure that they will	Partially agree. Annual number of online participations to the municipal participative portal per 100,000 population, is in a way a subset of ISO 37122 (F)DIS Indicator 21.1 Annual number of citizens engaged in the planning process per 100,000 population, where citizen engagement can include virtual attendance or involvement through social media or formal engagement tools such as online surveys. A table will be added to ISO 37122 (F)DIS Indicator 21.1, where cities should report the mode of engagement, if possible (i.e., in person or online attendance).

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						be used only in favor of any citizen's participations. A participation counts all kinds of participations (commentaries, likes, dislikes, etc), no matter how many times the same visitor may have participated in the portal. Data on the number of participations to the participative portal should be obtained from websites hosting statistics obtained from the municipality's website administration or provided by the domain host(s). It shall incentive engagement and participation in the portal and feed all the data analysis tools it may have. It measures engagement and public participation in the governance.	Add a note that this includes social media such as facebook etc. Georeferenced will be difficult and there is a privacy issue. Not to include georeference.
BR 156		10 Governance (10.01)	10.1	te		It's imperative that we should measure the "number of datasets" in GB/TB; without a measurement unit the indicator does not make sense – because of the different size of datasets and because datasets may be only partially available (10.1).The suggestion was "Noted", but nothing has been done about it.	WG2 agreed to delete this indicator during meeting in Moscow. Counting the number of datasets will be difficult to measure. This is really to measure citizen use of datasets.
US/ 157 ANSI		10.01		te	As this is written, it implies data would be available from the "city's open data portal". However, many of data types referenced could be data that a city would not own or control. In addition, there are types of city data that cannot and should not be made public. That being the case, how would one interpret a result? We would suggest a better form this indicator would be to measure the percentage of shareable data.		Agree to delete. See above.
DE 158		10.01		te	The number of local-authorities datasets will rather be uncountable.	Indicator should be given up.	Agree. See above.
CA 159		10.01		te	While the general purpose of this indicator is important it will be practically difficult to measure. The definition of a dataset for counting purposes is	It is suggested that this indicator is deleted and replaced with an indicator measuring the number of downloads (per 100 000 population). This is an	Agree to delete. You can download a dataset many times but there may not be a

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					problematic. In practice defining the denominator - the total number of datasets compiled and held by all city departments – will also be highly problematic.	important indicator of the use of open data and is also a proxy for the volume of data available.	variety of datasets.
FR 160		10.01.1		te	The link with ISO 37101 needs to be revised This indicator reflects also "Innovation, creativity and research" issue It has no link with social cohesion	Delete in NOTE 2: "Social cohesion" purpose Add in NOTE 2: "Innovation, creativity and research" issue	Agree to delete. See above.
FR 161		10.01.2		te	The list of data sets mentioned in the second § is not exhaustive	Add in particular" before " geospatial datasets"	Noted. Indicator to be deleted. See above.
US/ 162 ANSI		10.02		te	How would you define "professional proficiency" in a foreign language and how would you measure it? Test people, rely on surveys?		Disagree. This comment is not referring to this current indicator.
CA 163		10.02		te	The indicator should measure unique visitors – this is the standard measure for assessing traffic to a website as it reduces the possibility of manipulation	Change indicator to focus on unique visitors	Disagree. Doesn't matter if it's unique visits, we want to measure how often the website is being used.
FR 164		10.02.1		te	The link with ISO 37101 needs to be revised It has no link with social cohesion	Delete in NOTE 2: "Social cohesion" purpose	Agree.
FR 165		10.03		te	Some services cannot be delivered on line. It should be mentioned that 100% is not an objective for this indicator	Add a Note: As some services cannot be delivered on line, a value of 100% is not an objective.	Agree. Noted added to data interpretation
US/		10.03		te	As this is worded with note 1, it implies getting services		Noted. Will further clarify the

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166 ANSI					online. Not all services can be provided online. Consider rewording this to say "percentage of city services that can be requested online?"		notes and requirements.
DE 167		10.03		te	What about services, that are offered by public- driven economies or by private firms, that are working by contract?	Pretest after re-definition	Disagree. Third party is mentioned.
FR 168		10.04.1		te	The link with ISO 37101 needs to be improved It reflects also "Living and working environment" issue	Add in NOTE 2: "Living and Working environment" issue	Agree.
FR 169		10.04.2		te	The problem is that the definition of "response" is not clear. Is it the reception of a message saying that the problem will be resolved and/or the problem solving itself. In France response time is 1 to 2 weeks depending on the topic and it doesn't imply systematically a problem solving. This indicator will be difficult to compare between cities and from one year to the other, depending on services concerned	Focus on the time considering the "taking into account" of the problem: Either a solution or a maximum delay to solve the problem. It is different from an automatic return receipt. Add a sentence specifying the response at the end of the Clause, a relevant response is different from an automatic return receipt it should include a personalized response (e.g. an immediate solution, a delay for resolving or a clear explanation of non-relevance)	Noted. Will modify to state "from initial call/form submission" Add note that it is not an automatic return receipt.

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Project: ISO/DIS 37122

MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
FR 170		10.04.2.		te	Usually, cities have to reply to every queries or questions raised. The relevance of the query should be deleted from this indicator. The relevance is not globally relevant. Nevertheless, the relevance has to be defined by cities.	Precise the content linked to the relevance of the query. It should be included into this indicator that a city could precise the average time for response and treatment of relevant questions.	Agree to delete relevant, cities have to respond to all inquiries. Disagree for précising the average time for response as that is what the indicator is measuring. We are not measuring the average time of treatment because all issues are different and depends on the issue how long it will take to solve.
CA 171		10.05		ge	The current methodology for, <i>Average downtime of the city's IT infrastructure</i> , is limited and further elaboration should be provided.	Suggest to further develop indicator or remove.	Disagree. This indicator is important to keep. Will define IT infrastructure.
FR 172		10.05.1		te	The link with ISO 37101 needs to be established The indicator reflects "Community infrastructures" and 'Safety and security" issue. It concerns "Attractiveness" and "Resilience" purpose	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects "Community infrastructures" and Safety and security" issues as defined in ISO 37101. It can allow an evaluation of the contribution to the "Attractiveness" and "Resilience" purpose of the city as defined in ISO 37101	Agree.
FR 173		10.05.2		te	IT infrastructure is not defined in this §.	Add a definition of « IT infrastructure »	Define IT infrastructure. Drafting committee can draft definition.

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CA 174		11		ge	Although the current set of indicators provides a high-level assessment of access to and use of healthcare services, this current set of indicators may not be a sufficient set of indicators to support cities to consider how the changing technologies affect the monitoring of Health.	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators.	Noted.
DE 175		11.01		te	No data available at municipal level. The data sources are partly on a regional level, partly on a municipal level and therefore could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Noted. Although data may be difficult to gather given that Health is not often under the jurisdiction of a city, data may be sourced from ministries/departments of Health.
CA 176		11.01		te	The justification for the indicator presented in the notes is weak. Health experts should be consulted to specifically identify the public benefits of online unified health files.	Improve justification with public health expert input.	Noted.
FR 177		11.02		Те	The link with ISO 37101 needs to be revised It has no link with resilience but it has a link with social cohesion	In NOTE 2: Delete "Resilience" and add "Social cohesion" purpose	Indicator to be deleted as per agreement in WG2 meeting in Moscow.
DE 178		11.02		te	No data available at municipal level. The data sources are partly on a regional level, partly on a municipal level and therefore could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Agree to delete this indicator as per WG2 discussion in Moscow.
CA 179		11.02		ge	It needs to be confirmed whether providing people access to their health records is an appropriate public health objective. There will be counter arguments that this will impede medical professionals' ability to make accurate records (without fear of patient mis-interpretation/backlash) – especially for areas like mental/sexual health. Where globally has this type of access provided	There needs to be further practical justification for this indicator or it should be considered for deletion.	This indicator will be deleted as per agreement in WG2 meeting in Moscow.

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					and has it had beneficial outcomes?		
FR 180		11.03		Те	The link with ISO 37101 needs to be improved	In NOTE 2: Add "Social cohesion" purpose	Agree.
					It has a link with social cohesion (a way to give new relationships and connections in particular in rural areas where practitioners are missing)		
DE 181		11.03		te	No data available at municipal level. The data sources are partly on a regional level, partly on a municipal level and therefore could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. Can be accessed from the Ministry/departments of health for cities.
CA 182		11.03		te	In the inclusion of a definition of a medical appointment (shall refer to a patient visit to a health care facility, in which a patient discusses their health needs and concerns with one or more health care providers.) is confusing – there should be one single definition of an online medical appointment. Many public health services now also have general advice lines that have the purpose of providing initial guidance to reduce the burden of low- importance health issues that can be dealt with in alternative ways. It needs to be clarified how these call are considered under the definition.	Revised definition	Change online to remote and ensure that it is an official consultation. Agreement to broaden scope to include other official consultations including telephone etc.
FR 183		11.03.2		Те	Definition of medical appointment in this context should exclude face to face appointment	modify the second § as such "in which a patient discuss, excluding face to face appointment, their health	Agree.

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DE 184		11.04		te	No data available for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. This indicator is important and cities who do not have this data may choose not to report this indicator.
CA 185		11.04		te	Are air quality advisory systems based on registrations? In many places the public is made aware through general public announcements distributed through local media channels.	Confirm this is relevant to systems actually used to announce air quality issues. If not this indicator should be considered for deletion. Air quality monitoring and alert systems is covered in ISO 37123 and under Indicator 8.2	Disagree to delete indicator. Agree to keep indicator. It's more about accessibility of information on water and air quality advisories. Register may not be the right word. Need to further clarify wording on registration (can delete wording on registration), it could be an app or any access to real time information. May not necessarily need to be registered.
CA 186		12		ge	The current set of indicators only provides a high- level assessment of housing in terms of development and smart electricity and water meters.	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators.	Noted.
RU 187		12 Housing		ge	It is proposed to supplement clause 12 of ISO 37122 with three new indicators, which are also relevant to ISO 37120.	The new indicator 12.4. <b>Percentage of affordable,</b> <b>social housing in the "mixed use zone" of the</b> <b>city.</b> <b>General.</b> This indicator is necessary to take into account the characteristics of mobility and social integration of the low-income part of the population in areas with a developed social and transport infrastructure. Given the economic value of mixed use areas, social housing development will receive an	Disagree. Very difficult to define mixed use zones. Condos are not important in this framework. Apartments are not relevant for small cities. Having many apartments does not make a city smart.

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						expressive architectural appearance and adapt easily if necessary to changes in the real estate market. A strategy that has the adaptability and social orientation of urban development can be called "smart."	
						Indicator requirements	
						The indicator is measured by the percentage of available housing space in m2 to the total area of housing in m2 in the "mixed development" zones of the city (or the percentage of the population living in affordable housing to the population in mixed-use areas).	
						The new indicator 12.5. Percentage of apartment, multi-storey housing stock in the total housing stock of the city.	
						General.	
						This indicator shows the degree of compactness, efficiency of population resettlement, the potential effectiveness of infrastructure in the city. Supplements the indicator 12.1 and 21.4.	
						Indicator requirements	
						The indicator is defined as the ratio of the area of apartment housing stock (m2) to the total area of housing (m2) X 100	
						Separately, we can distinguish the percentage of residential zones with a <b>FAR</b> of more than <b>1.2</b>	
						The new indicator 12.6. The percentage of condominiums within the city's total apartment fund.	
						General.	
						This indicator shows the degree of social activity and involvement of city residents in the formation and effective use of residential areas. The indicator also characterizes the existence of social prerequisites in the creation and operation of a "smart apartment building".	

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FR 188		12.01		te	This indicator corresponds to a planning	Indicator requirements It is defined as the area of "self-managed" apartment building (m2) divided by the total area of the multi-unit housing stock (m2). The result is multiplied by 100. Delete the indicator. At least move to §21 and	Agree to delete as per WG2
		12.01			<ul> <li>instruction corresponds to a planning issue.</li> <li>There is a problem of calculation. Scale of 3 usages is not defined (what is the scale to define the zone ?)</li> <li>The usage of uses that are not compatible should be banned (ie pollutant activity next to a household)</li> </ul>	specify a definition for the scale of calculation and usage that are not compatible between themselves.	This is important for SDGs and Goal 11. We have an indicator on proximity in ISO 37120. The issue is to what scale? What is the ideal intensification? This is hard to define. It's also not comparable.
CA 189		12.01		te	This indicator should be moved to the urban planning theme.		Agree to delete indicator as per WG2 meeting in Moscow.
FR 190		12.01.1		te	The link with ISO 37101 needs to be revised It does not reflect "Living together" issue	Delete in NOTE 2: "Living together" issue	Agree.
FR 191		12.02		Те	It should be considered to replace electrical by energy for this indicator in order to include also Smart Gaz Meters. This indicator could be divided into 2 groups of meters: electricity meters and gaz meters.	Please replace electrical by energy when appropriate and add the possibility to measure both gaz and electricity meters.	Agree. Will create a table so they can report gas, heat networks (district heating) and electricity.

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DE 192		12.02		te	No data available for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. Data may be obtained through surveys and/or utility companies.
FR 193		12.02.1		te	The link with ISO 37101 needs to be revised It does also reflect "Economy and sustainable production and consumption" issue It has no link with "Well-being" Replace "city and community infrastructure" by "Community infrastructures to be consistent with ISO 37101	Add in NOTE 2: "Economy and sustainable production and consumption" issue Delete in NOTE 2: "Well-being" purpose Replace "city and community infrastructure" by "Community infrastructures" to be consistent with ISO 37101	Agree.
DE 194		12.03		te	No data available for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. This data can be obtained from utilities.
FR 195		12.03.1		te	The link with ISO 37101 needs to be revised It also reflects "Economy and sustainable production and consumption" issue It has no link with "Well-being" Replace "city and community infrastructure" by "Community infrastructures" to be consistent with ISO 37101	Add in NOTE 2: "Economy and sustainable production and consumption" issue Delete in NOTE 2: "Well-being" purpose Replace "city and community infrastructure" by "Community infrastructures" to be consistent with ISO 37101	Agree.

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CA 196		13		ge	The current set of indicators included in Population and Social Conditions only provides indicators around persons with disabilities and senior citizens, and does not consider social conditions pertaining economic vulnerability.	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators.	Noted.
DE 197		13 (POP. & SOCIAL COND.)		ge	Few indicators in this section. Proposal to add an indicator on fioul poverty	Consider adding of an indicator "Ratio of the population which is in energy poverty" (Household considered in energy poverty if 10% at least of its revenue is spent in the annual energy bill). Method will be proposed.	Noted. Not really relevant for Smart Cities but more relevant for ISO 37120 or ISO 37123. The link for smart cities is not clear. For next amendment of ISO 37120 and need full proposal for ISO 37123. Germany to provide full proposal.
GB 198		13 Population and Social Conditions		ed	The draft uses sentence case (upper case only used at start of phrase or for proper nouns) for heading by default. One or two headings such as this one contain upper case for common nouns. I propose the draft is reviewed to ensure all headings are sentence case.	Replace "Population and Social Conditions" with "Population and social conditions" Ensure all headings are sentence case.	Agree.
BR 199		13 Population and Social Conditions	Page 29	ge		(NEW INDICATOR) 14.5 Percentage of city's population registered on city's online portals (open data, participative, services, etc.) The percentage of city's population registered on city's online portals (i.e. via the Internet) shall be calculated as the total number of citizens registered on city's portals city (open data, participative, services, etc.) offered to people and businesses through a centralized Internet interface (numerator) divided by the total population of the city (denominator). The result shall then be multiplied by 100 and expressed as the percentage of city population registered on city's online portals. Information should be sourced from city departments, or institutions that provide the portal. Figures on online portals available through web or mobile should also be obtained from city departments, or institutions providing the portal, or from the municipal government website	Disagree. Already have a number of indicators that cover this issue. Indicator 10.1 measures the number of visits.

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						administrators. This indicator may be disassembled in others by type of portal or user (person, company, etc). It measures engagement and inclusiveness.	
FR 200		13.01		te	The definition of public buildings is not consistent with the definition of public buildings given in §7.8	Align definition of public buildings between 7.8 and 7.9	Agree. Will align with ISO 37120 definition. Also see discussion above.
					Definition of public buildings should consistent with the one used in §7.5 ISO 37120	Align definition of public buildings with ISO 37120	Public buildings definition is now added to definitions section as per ISO 37120.
DE 201		13.01		ge	What about rented or leased buildings?	Pretest after re-definition	Agree. Will further define and align. See above.
FR 202		13.01.1		Te/ed	There is a problem with this indicator as all indicator of this standard are optional. Probably a correction that was missed after last revision	Replace "shall" by "should" "Those implementing this International standard should report on this indicator in accordance with the following requirements"	Agree. Will do a search throughout the full document.
FR 203		13.01.1		te	The link with ISO 37101 needs to be established The indicator reflects "Living together, interdependence and mutuality" and "Living environment and working" issues and it	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects "Living together, interdependence and mutuality" and "Living environment and working" issues as defined in ISO 37101. It can allow an	Agree.

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Figure/Table comment<sup>2</sup>

NC<sup>1</sup>

number

Subclause

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					concerns "Social cohesion", "Attractiveness" and "Well-being" purpose	evaluation of the contribution to the "Social cohesion", "Attractiveness" and "Well-being" purposes of the city as defined in ISO 37101	
FR 204		13.02.1		Те	NOTE 1 should be completed by adding examples to support autonomy (and homecare) of persons with special needs including seniors.	Please introduce this idea at the end of the NOTE 1.	Agree.
						"all its citizens and visitors <u>and to support</u> <u>autonomy (and homecare) of persons with</u> <u>special needs including seniors</u> ."	
FR 205		13.02.1		Te/ed	Idem	Replace "shall" by "should" "Those implementing this International standard should report on this indicator in accordance with the following requirements"	Agree.
FR 206		13.03		te	In France we don't have the statistic per city of persons with special needs	Delete this indicator	Agree to delete indicator as per WG2 Moscow meeting.
DE 207		13.03		Ge	No data available for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Agree to delete indicator as per WG2 Moscow meeting.
CA 208		13.03		ge	While the underlying issue is important – this indicator is a convoluted way of asking how many people with special needs have access to a cell phone/internet.	Delete indicator and consider adding alternative indicator to support accessibility	Agree to delete indicator as per WG2 Moscow meeting.

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FR 209		13.03.1		ed	An "s" in missing in "community infrastructures"	Add "s" for "community infrastructures"	Agree to delete indicator as per WG2 Moscow meeting.
FR 210		13.04.1		ed	An "s" in missing in "community infrastructures"	Add "s" for "community infrastructures"	Agree.
FR 211		13.04.2	2nd alinea	te	People with special needs need non visual communication in addition and not in replacement of visual signals	Replace "visual method "by "as a complement to visual signal" in 2nd alinea	Agree.
FR 212		§13.05		te	The indicator does not reflect the reality of "digital divide" It would be better to consider budget allocated to bridging the digital divider rather consider a number of training programs for senior. The indicator could be similar the indicator 13.2 considering the budget allocated for provision of mobility aids, devices, assistive technologies to citizens for special needs For example: percentage of municipal budget allocated for provision of programs designated for bridging the digital divide. This indicator shall include in particular programs designated for senior citizens	Those implementing this International	Agree. Specify digital divide.

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					critical. Cities must address the consequences	
					of this unprecedented demographic shift	
					through age-friendly planning and city	
					services. Develop programs (for example	
					technology classes for senior citizens) is one	
					way to create an environment where senior	
					citizens, but also people with disabilities, can	
					develop technology skills to actively	
					participate in a technology-based society and	
					fight against digital divide. In addition, it could	
					empower citizens to become active users of	
					new technologies.	
					NOTE 2 This indicator reflects the	
					"governance, empowerment and	
					engagement" and "living together,	
					interdependence and mutuality issue as	
					defined in ISO 37101. It can allow an	
					evaluation of the contribution to "well-	
					being", "social cohesion" and "attractiveness"	
					purpose of the city as defined in ISO 37101.	
					purpose of the city as defined in 150 57 101.	
					13.5.2 Indicator requirements	
					The percentage of the municipal budget	
					allocated for provision of programs	
					designated for bridging the digital divide shall	

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						be calculated as the sum of the cost of	
						providing programs designated for bridging	
						the digital divide the city has to spend in one	
						fiscal year (numerator) divided by the total	
						city budget allocated for a given year	
						(denominator). The result shall then be	
						multiplied by 100 and expressed as a	
						percentage.	
						percentage.	
						13.2.3 Data sources	
						Data for the amount of the municipal budget	
						allocated for provision of programs	
						designated for bridging the digital divide	
						should be sourced from the municipal budget	
CA 213		13.05		ge	While the underlying issue is important – this indicator is difficult to measure and interpret and is patronising to senior citizens (i.e inferring training needs to be simplified for old people). Modern computer applications/devices are also now becoming highly intuitive – is training really an issue for accessibility?	Delete indicator and consider adding alternative indicator to support digital literacy/programming in public libraries	Noted. This is included in the new indicator above.
FR		13.05.1		te	The link with ISO 37101 needs to be	Rename NOTE as NOTE 1	Noted. See above.
214					established	Add a NOTE 2: This indicator reflects "Living	
					The indicator reflects "Living together,	together, interdependence and mutuality"	
					interdependence and mutuality"	issue as defined in ISO 37101. It can allow an	
					It concerns "Social cohesion",	evaluation of the contribution to the "Social	
					"Attractiveness" and "Well-being" purpose	cohesion", "Attractiveness" and "Well-being"	
						purposes of the city as defined in ISO 37101	

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 Type of comment: ge = general te = technical ed = editorial

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DE 215		14.01		te	Only a small part of the data required are availa- ble for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. Data may be sourced from a city quite easily with regards to recreation services data.
FR 216		14.01.1		Те	The link with ISO 37101 needs to be revised It does not reflect "living together" issue It has no link with "resilience" and "Social cohesion"	Delete in NOTE 2: "living together"" issue and " "resilience" and "social cohesion" purposes	Agree
FR 217		14.01.1		te	It is not obvious that the ecological footprint of on line booking is better than paper registration. In any case it has an ecological footprint	Delete the sentence "it creates virtually no ecological footprintmodification »	Agree to delete sentence.
CA 218		15		ge	The indicator included in the Safety theme is limited and further research should be conducted to identify additional Safety indicators, such as indicators pertaining to the use of sensors to ensure safety of citizens.	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators.	Noted.
BR 219		15 Safety (15.01)	Page 34		Municipalities that sometimes do not even have basic sanitation networks (flushing open sewers), investing in video monitoring (pursuing only the empty political status of Intelligent City), even when the rates of congestion or violence in public roads (respectively) are minimal or even non- existent. That is, inefficient public spending, under Smart City pretexts.	Add a Note: "The density of surveillance cameras in city's area should be interpreted together with other safety and security indicators, so it can respond if more surveillance cameras are effectively bringing benefits for security or not. This indicator must be interpreted very carefully because it can easily be used inappropriately for political reasons using the common sense that more surveillance brings more safety and security automatically, which is not true."	Agree. Will add to data interpretation.
BR 220		15 Safety (15.01)	Page 34	ge		Consider adding to the text: "The digital surveillance camera systems must be careful about how the data/images generated	This note is already included and clearly stated.

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						are used, taking all the Privacy and Security measures needed to ensure that this information will only be used to the benefit and safety of the citizens and that they will never be inappropriately exposed.	
US/ 221 ANSI		15.01		te	I would recommend using the phrase "surveillance systems" rather than just referring to "cameras."		Disagree. This indicator has been written to refer to the area covered by cameras rather than a system.
DE 222		15.01		te	How can the area covered be defined precisely.	Pretest after re-definition	Disagree. Refers to city's land area (city administrative boundary)
CA 223		15.01		te	Measuring the area covered by cameras (i.e. the spatial area covered by their field of view?) requires additional guidance. It also be useful additional data to request number of cameras as supplementary information.	Provide additional guidance on measurement of area coverage.	Noted. Add note on measurement of area coverage. This is determined by the technical specifications of the systems in use.
GB 224		15.01.1 General		te	The draft uses the term "deterrent against crime and mischief". This term implies that mischief is non-crime and it's acceptable to deter actions that aren't crimes. I propose the term is replaced with "deterrent against crime".	Replace "deterrent against crime and mischief" with "deterrent against crime".	Partially agree. Note, in French there are different connotations, crime and mischief are different. This is an issue of translation. Change to deterrent against crime and other offences as per agreement during WG2 meeting in Moscow.
CA 225		16		Ge/te	Indicators 16.1 and 16.5 seem to be measuring similar quantities.	The differences between these two indicators should be made clearer	Disagree. They are measuring different things.
BR 226		16 Solid Waste (16.03)	Page 36	te	If the energy measure is relevant for generation or replacement of electricity is more appropriate to express it already in watts, so it is aligned and comparable with the		Noted. As per previous comment, will ensure units are aligned with gigajoules. This indicator is already expressed in

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					Energy section indicators and avoids the necessity of converting units for equivalence.		gigajoules.
CA 227		16.01		Ge/te	This is a very confusing indicator especially with the interchangeable use/bracketing of the terms centres and containers	Clarify and simplify indicator or consider for deletion	Disagree. Canada now understands.
CA 228		16.01		Ge/te	This is a model of waste management that it common in Europe but less so in other parts of the world. This should be noted.	The fact that is a model of waste management that may not be used substantively in all locations should be noted.	Disagree. This is an optional indicator.
FR 229		16.02		te	In fact, what is the most important and smart for the city is "metering" of the weight of the waste at each place rather than the transfer on line to a control center. I would suggest to enlarge the indicator to "metering" and ask for a specification in case of telemetering	indicator (title and definition)	Agree. Metering is the first step, weight is important for the cost of collection and can optimize collection. This can impact waste management. <b>Percentage of the city</b> <b>population that</b> has a door-to- door garbage collection with individual monitoring of household waste quantities Further define monitoring as weigh and volume etc. Add note on telemetering.
CA 230		16.02		Ge/te	Is there anywhere where individual household's waste is equipped/monitored with telemetering? If this is not grounded in reality it should be deleted.	Suggest removing indicator.	Disagree. See above.

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DE 231		16.03		te	No data available for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. Waste-to-energy is a "smart" and efficient waste management option that reduces the volume of solid waste in landfills and offsets the need for the extraction of fossil energy carriers.
CA 232		16.03.2		te	The reference to the measurement of energy (GJ) is confusing. The indicator is measuring % of waste used to generate energy – this would be measured with both the numerator and denominator expressed in tonnes and then the final value as a percentage.	Remove reference to measuring energy and clarify the use of tonnes for the numerator and denominator.	Noted. Will align all measurement units
FR 233		16.05.1		te	The link with ISO 37101 needs to be established The indicator reflects "Community infrastructures" and "Economy and sustainable production and consumption" It concerns "Responsible resource use" and "Preservation and improvement of environment" purposes	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects "Community infrastructures" and "Economy and sustainable production and consumption" issues as defined in ISO 37101. It can allow an evaluation of the contribution to the "Responsible resource use" and "Preservation and improvement of environment" purposes of the city as defined in ISO 37101	Agree.
FR 234		16.06		Ed/te	We are considering WEEE in this indicator. To be clear and "electrical" in the title	Modify as such: "city's electrical and electronic waste"	Agree. Waste electrical and electronic equipment as defined by European Commission.
DE 235		16.06		ed	Is meant only officially collected electronic waste or the whole electronic waste, that is generated by the city's inhabitants per year?	Re-definition	Noted. This is based on what's collected.

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CA 236		16.06.2		te	Discarded electrical equipment is likely to have a mix of true electronics-related waste and other waste materials (e.g. plastic casings). It should be clarified exactly how this mixture of waste types is considered under this indicator.	Clarification should be included.	Noted. This is already included.
** 237		16.06.2	4	Ed	'Source: International Solid Waste Association'	Please provide full reference details.	Agree
BR 238		17 Sport and Culture	Page 39	ge		(NEW INDICATOR) 17.5 Percentage of events using technology for organization and security (games, championships, exhibitions, festivals, concerts, etc): The percentage of cultural events using technology for organization and security (exhibitions, festivals, concerts, etc) shall be calculated as the total number of cultural events that uses technology for organization and security issues (numerator) divided by the city's total number of cultural events (denominator) (ISO 37120 indicator 5.3). The result shall then be multiplied by 100 and expressed a percentage. Auditable data should be sourced through local/ city relevant departments, ministries, or research/survey companies. A high percentage of cultural events using technology for organization and security active indicates that the city's concerned about improving cultural experience, safety and quality of life of the population.	Disagree. Not clear what is an event using technology. This was discussed before and there were methodological concerns regarding measurement.
US/ 239 ANSI		17.01		te	How does this metric support a "sustainable community?"		Disagree. Culture is an important part of building a sustainable community.
DE 240		17.01		te	Only a small part of the data required are availa- ble for local authorities. The given data sources risk to be very insecure and could not guarantee comparability	Indicator should be given up.	Disagree. This is starting to be tracked by cultural and tourism departments and with open data this will become more available.
CA 241		17.01		Ge/te	The rationale "The digitization of access to cultural institutions helps to increase the availability of cultural resources to a broader audience." Is definitely true, however on line booking of tickets is fairly trivial measure that doesn't align with the core	Identify more appropriate indicator or delete indicator.	Agree to keep this indicator as this is an initial attempt to bring smart technology to cultural facilities.

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					rationale.		
FR 242		17.01.1		te	The link with ISO 37101 needs to be improved	In NOTE 2: Add "Culture and community identity" Issue	Agree.
					It reflects "Culture and community identity" as it facilitated the access to culture and education		
US/ 243 ANSI		17.02		te	How does this metric support a "sustainable community?"		Disagree. Culture is important for a sustainable community.
DE 244		17.02	17.2	te	city's cultural records are mainly not digitalized by themselves (they are not owner)	Consider to remove this indicator	Disagree. Definition is clear, this is city managed.
FR 245		17.02.1		Te/ed	The link with ISO 37101 needs to be revised It has no link with "well-being" and "Social cohesion". On the other hand, it has a link with "resilience" as it is a mean to keep the cultural heritage than can be useful when hazard occurs. The issue is "Culture and community identity"	Delete in NOTE 2: "Well-being" and "social cohesion" purposes Add in NOTE 2: "Resilience" purpose Add "identity" to the issue about culture and community	Agree.
US/ 246 ANSI		17.03		te	How does this metric support a "sustainable community?"		Disagree. Culture is an important part of sustainable community.

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
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BR 247		18 Telecommunic ation (18.01)	Page 42	ge		Consider including back an indicator like "Percentage of the city population with home access to computers or other electronic devices with internet access" or simply "Percentage of the city population with permanent(24/7) access to computers or other electronic devices with internet access".	Disagree. We have the number of internet connections in ISO 37120. And we cannot calculate the number of computers we have in their homes.
US/ 248 ANSI		18.01		te	The term "sufficient" is too vague and can be task dependent.		Disagree. Sufficient is well defined. Further input for next amendment is welcomed.
DE 249		18.01		te	No data available for local authorities. Indicator is currently only obtained via micro-census, mean- ing that data is only available for larger cities that are not part of an administrative district and for administrative districts. In addition these are es- timates.	The use of this indicator should be given up be- cause of methodological reasons.	Disagree. This data can be obtained from internet providers and statistical agencies such as Eurostat.
FR 250		18.01.1		ed	An "s" is missing in "community infrastructures"	Add "s"	Agree.
FR 251		18.02.1		ed	An "s" is missing in "community infrastructures"	Add "s"	Agree.
FR 252		18.03		Те	Please consider the revision as proposed of this indicator.	18.3 Percentage of city area covered by municipally provided internet connectivity 18.3.1 General	Partially agree. It's important to keep the internet connectivity of transit routes as a separate indicator but have edited this indicator as suggested by France. Edited as per WG2 meeting in Moscow.
						Those implementing this International Standard should report on this indicator in accordance with the following	

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1 MB = Member body / NC = National Committee (enter the ISO 3166 two-letter country code, e.g. CN for China; comments from the ISO/CS editing unit are identified by \*\*)

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						requirements. NOTE 1 A public internet connection allows people to connect to the internet that may not have mobile data plans or regular internet access - enabling them to take advantage of the enormous economic and social benefits the Internet can offer. In addition, publicly accessible internet including access in <u>public transport routes</u> can help enable municipalities to passively track users for future planning purposes and deliver <u>new services to users</u> . NOTE 2 This indicator reflects the "community infrastructure" issues as defined in ISO 37101. It can allow an evaluation of the contribution to ""social cohesion and "attractiveness" purposes of the city as defined in ISO 37101.	
						<b>18.3.2 Indicator requirements</b> The percentage of city area covered by municipally provided internet connectivity <u>including public transport routes</u> shall be calculated as the total land area of the city serviced with internet connectivity in	

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						square kilometers (numerator)divided by the city's total land area in square kilometers (denominator). The total shall then be multiplied by 100 and expressed as the percentage of city area covered by municipally provided internet connectivity. Municipally provided internet connectivity shall refer to internet connectivity services provided by the city or third party providers under license by the city to the public and shall be accessible by anyone within city limits regardless of if they are a resident or visitor of the city. Publicly available places for internet connectivity shall be defined by location, not by routers. For example, if multiple routers exist within a park, the park would be considered as only one place.	
						<b>18.3.3 Data sources</b> Data on the city area covered by municipally provided internet connectivity should be sourced from departments or ministries responsible for a city's information technology and managing publicly accessible internet figures, or can	

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NO	number	Subciause	Figure/Table	comment			Secretariat
						be estimated utilizing GIS tools.	
FR 253		18.03.1		ed	An "s" is missing in "community infrastructures"	Add "s	Agree.
FR 254		18.03.2		te	The service delivered by the municipality can be either free or with payments	Please add a note that the service can be free and with payments	Agree. Edited as per WG2 meeting in Moscow.
CA 255		18.04		te	While this is conceptually an interesting idea – is there anywhere in the world that has such stations? Are they used and actually useful?	delete – this indicator is outdated.	Agree to delete as per WG2 meeting in Moscow.
FR 256		18.04.1		te	The link with ISO 37101 needs to be revised The indicator does not reflect "living together"	Delete in NOTE 2: "well-being" "resilience" and "social cohesion" purposes Add in NOTE 2: "Attractiveness" purpose	Indicator deleted as per WG2 meeting in Moscow.
					It has no link with "well-being" and "Social cohesion" and resilience. On the other hand, it has a link with "attractiveness" as for tourists resorts it is often used to facilitate tourist life and therefore attract them.	Delete "living together" issue	
DE 257		19		ge	Number of indicators in this section is rather high. A link tot the indicators in the other standards should be established and help to reorganise this section. In the following, several possible changes are proposed.		Noted
JP 258		19		te	Create more city indicators on transportation to make the document more practically useful.	Create a city indicator below: 19. 11 (New) Ratio of motor- to engine-driven	Agree to include but will need to fully draft with the

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			by smooth driving that can be achieved by no mission acceleration. 19.11.2Indicator requirements The number of motor- to engine-driven buses shall be counted in a city and the ratio of motor- to engine-driven buses in number shall be calculated. The result shall be expressed as a ratio. 19.11.3Data sources	considerations commented below as per the WG2 meeting in Moscow. This proposal is referring to percentage of motor driven buses to engine driven buses in order to better understand a city's fleet. Countries that are not using diesel, using motor there is no emissions needed and it's much safer for passengers. Percentage of the city's bus fleet that is motor driven (to be further developed) Motor – battery driven includes fuel cell Excludes biogas Engine – combustion including diesel Need to include note on life cycle. Data interpretation note: Motor driven engines in a city's bus fleet can help to improve air quality of a city for citizens and can help to improve safety of passengers and a more comfortable and smooth ride. Can increase rider usage in public transit systems.

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
							With regards to sustainability, we need to know where the energy is coming from. Sources of energy should be taken into account. To be taken into consideration with other indicators that reflect energy use mix.
JP 259		19		te	Create more city indicators on transportation to make the document more practically useful.	Create a city indicator below: 19. 12 (New) Number of recharging places or instruments in a target area 19.12.1 General Those implementing this International Standard should report on this indicator in accordance with the following requirements. This indicator show show much a city contributes to a good environment for citizens and safety for passengers, especially mobility-impaired people, by introducing motor-driven buses. 19.12.2Indicator requirements The number of recharging places or instruments in a target area shall be counted. The result shall be expressed as a number. 19.12.3Data sources Data on the number of recharging places or instruments in a target area should be sourced from relevant city departments and transportation organizations, especially bus companies.	Partially agree. See comment above for indicator on electric charging station. Comment # DE082 above.
JP 260		19		te	Create more city indicators on transportation to make the document more practically useful.	Create a city indicator below: 19. 13 (New) Passengers' number taking a motor- driven bus	Disagree. To be considered for next amendment. To encourage the usage of

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						<ul> <li>19.13.1 General</li> <li>Those implementing this International Standard should report on this indicator in accordance with the following requirements. This indicator shows how much a city contributes to the environment and offer easy rides to citizens and visitors, especially mobility-impaired people.</li> <li>19.13.2Indicator requirements</li> <li>The number of passengers taking a motor-driven bus in a city shall be counted. The result shall be expressed as a number.</li> <li>19.13.3Data sources</li> <li>Data on the number of passengers taking a motor-driven bus in a city should be sourced from relevant city departments and transportation organizations, especially bus companies.</li> </ul>	motor driven buses.
DE 261		19 (TRANSPOR TATION)		ge	No indicator related to the access to clean transportation	Consider adding of an indicator e.g. "Number of public parking spaces dedicated to alternative fuel infrastructures (electricity, gas, hydrogen etc)" to the transport section	Noted. Regarding parking space proposal: if you dedicate more parking spaces for alternative fuel vehicles, which tend to be more expensive, this would be excluding others. 19.3 is considered to be a clean transportation indicator. Please provide full proposal for next amendment.
BR 262		19 Transportation (19.06)	Page 48	ge		Clarify how to proceed If the coverage is overlapped by different modes of transport (buses and public bike sharing, p. ex.): should it be added twice times (only in the nominator or in the denominator also?)?	Further clarification is provided as per comment FR280. This is a percentage and therefore coverage is considered in both numerator and denominator.
BR		19 Transportation	Page 51	ge	This indicator calls for another ISO Standard for cities' and communities' interactive maps and systems. How they can be		Noted. This is not within the scope of WG2 at this time.

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263		(19.10)			developed properly for the well-being of citizens? Note 1 pinches this subject, but an entire Standard can be developed.		
CA 264		19.01		te	It is not clear whether this just covers the public message signage systems or also includes commuters using their own systems GPS/Google maps/Waze. Also "the number of street and thoroughfare kilometres within the city covered by real-time online traffic alerts and information" may be difficult to concretely define in practice (particularly depending on the point of clarification above).	Clarify the coverage of the indicator and the measurement methodology	Noted. This is already clear as this indicator is measuring the kilometres of streets being covered.
FR		19.01.1		Te/ed	The link with ISO 37101 needs to be revised	Delete in NOTE 2: "social cohesion" purpose	Agree.
265					The indicator reflects also "Mobility" issue	Add in NOTE 2: "Well-being" and	
						"Preservation and improvement of	
					It has no link with "Social cohesion" purpose.	environment" purposes	
					On the other hand, it has an indirect link with		
					"Preservation and improvement of	Add "Mobility" issue	
					environment" and "Well-being" purposes as		
					these means contributes to decrease traffic	Add "s" in "Community infrastructures"	
					jams frequency and improve traffic.		
					An "s" in missing in "Community		
					infrastructures"		
DE		19.02		te	No data available for local authorities. The given	The use of this indicator should be given up be-	Noted. This data can be
266					data sources risk to be very insecure and could not guarantee comparability. Indicator is currently only obtained via micro-census, meaning that data is only available for larger cities that are not part of an administrative district and for adminis- trative districts. In addition these are estimates.	cause of methodological reasons.	available from car sharing companies.
CA 267		19.02		te	There is an increasing body of evidence that ride sharing may be cannibalising ridership from public transit. This should be explicitly acknowledged in	Add additional notes on potential adverse impacts on public transit.	Agree. Add note to data interpretation.

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					the explanatory notes.		
FR		19.02.1		Те	The link with ISO 37101 needs to be revised	Add in NOTE 2: "Mobility" and "Living	Agree.
268					The indicator reflects "Mobility" and "Living	together, interdependence and mutuality"	5
					together, interdependence and mutuality"	issues and delete "Community	
					issue.	infrastructures"	
					It does not reflect "Community		
					infrastructures" issue as sharing economy is		
					not based always on community		
					infrastructures		
CA 269		19.02.2		ge	Given the tensions between municipal authorities and share transportation providers in many jurisdictions it may be difficult for cities to access the required data.	Possibly add note.	Agree. Add note for data source.
FR		19.03.1		te	It is the vehicle that is low emission not the	Delete the 2 last sentences " regarding the	Agree to delete last two
270					energy produced by the country. The	term as clean"	sentences.
					indicator is impossible to calculate if it refers		Add note referring to local air
					to energy production of the country.	Add a note referring to local air quality standards	Add note referring to local air quality standards including PM2.5 from ISO 37120.
					Refer to local legislation of air quality		
CA 271		19.03.1		te	Introducing the qualification: "Regarding the term "low-emission" the need to consider the energy source needs to be highlighted. e.g. electricity provided by coal powered plants should not be considered as clean" is highly problematic. It will require a detailed assessment of the electrical generation on the grid, which also changes with time of day, season etc.	Remove the sentence: "Regarding the term "low- emission" the need to consider the energy source needs to be highlighted. e.g. electricity provided by coal powered plants should not be considered as clean".	Agree.
					The main benefit for cities of low emission vehicles is the reduced tail pipe emissions of the car		

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					thereby contributing to improved local air quality.		
KR2 272		19.04		te	KR MB proposes to add a bicycle-related indicator which corresponds to 19.4 "Number of bicycles available through municipally provided bicycle sharing services per 100 000 population". The indicator of 19.4 can drive municipalities to deploy bicycle sharing services and dispatch more bicycles, which will be affected by use rate of citizens, i.e. no use no more deployment and dispatch. The use of bicycle sharing services will depend on conditions, routes and distances of bikeways. Among these impact factors, at least the bikeway distance in comparison with the total road distance can be an initial indicator to promote bicycle sharing services.	Add the following additional indicator in conjunction with 19.4: "19.x Percentage of bike path 19.x.1 General Those implementing this document should report on this indicator in accordance with the following requirements. NOTE 1 – A bike path is a bikeway separated from motorized traffic and dedicated to cycling or shared with pedestrians or other non-motorized users. NOTE 2 – The more bikeways are constructed and provided, the more citizens can use their bicycles or bicycle sharing services by getting easily to their destinations. This can contribute to decreasing use of automobiles and the city sustainability. 19.x.2 Indicator requirements The percentage of bike path shall be calculated as the total bike path distance in the city (numerator) divided by the city's total road distance (denominator). The result shall be expressed as the percentage of bike path to the total road distance. 19.x.3 Data sources Data on the bike path distance and the total road distance of the city should be sourced from relevant city departments that oversee and/or collect data on bicycle pathways and roads."	Disagree. Already included in ISO 37120.
CA 273		19.04		te	Some city bike share schemes are operated under a licence or contract agreement with the municipality. It should be made clear that these schemes are included in the definition of the indicator.	Update indicator definition	Agree. Will clarify in definition.
FR 274		19.04.1		Te/ed	The link with ISO 37101 needs to be improved	Add in NOTE 2: "Mobility" issue Add "s" in "Community infrastructures"	Agree.

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					Bicycle sharing reflects also "Mobility"		
					An "s" is missing "Community infrastructures"		
FR 275		19.04.2		te	Why should we consider only bicycles sharing operated by city? In France such services are PPP's	Delete "operated"	Will keep operated but add other agreements including PPPs to clarify as per CA273. See above.
US/ 276 ANSI		19.05		te	We think the indicator needs to detail the purpose of the "real-time" system		This is already explained in note 1.
CA 277		19.05		te	The 'real time system' included in the title could refer to a number of things. The indicator title should be made more specific.	Revise indicator title so it clearly reflects the measured quantity.	Agree. Add publicly accessible real time system to the title and the rest of the indicator.
FR 278		19.05.1		Te/ed	The link with ISO 37101 needs to be improved Transport lines equipment reflects also "Mobility"	Add in NOTE 2: "Mobility" issue Add "s" in "Community infrastructures"	Agree.
					An "s" is missing "Community infrastructures"		
FR 279		19.05.2	2nd alinea 4th line	te	Cable car and waterway transport are also public transport means that should be mentioned in the list and considered in the	Modify the sentence " shall include both rail-based and road -based public transport, cable car and waterway transport	Agree.

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					computation		
FR 280		19.06		te	Why do we use "integrate" or "unified" in the text? Is there a difference? If yes explain. Do we count the percentage of services or the percentage of networks? How do we can count the number of kilometers for shared bicycles? Cars and bicycles cannot be included in the indicator as no calculation is possible whereas unified payment can concern them We should count the number of services/or network not the number of kilometers	Revise the indicator Explain the difference between unifies and integrate or align terminology Revise 19.6.2 as proposed below: The percentage of the city public transport network covered by a unified payment system shall be calculated as the number of different « network » of the city public transport network covered by a unified payment system (numerator) divided by the total number of a city's public transport network (denominator). The result shall then be multiplied by 100 and expressed as the percentage of the city public transport network covered by a unified payment system. A city's public transport network shall cover the transportation infrastructure within the public right-of-way, including the public realm that provide public transportation services. Public transport refers to travel services provided locally by the city that allow a	Agree to change the language to unify. Agree to change requirements to number of transport services as per French proposal with some slight edits.

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						number of people to travel together along set routes, the most common public transport vehicles that form a public transport network can include transportation services provided and/or managed by the city, such as buses, boats, subways, trains, shared bicycles, shared vehicles, etc. Consider 2 different networks when there are two differents operators.	
CA 281		19.06		te	This is an important area but the basis of measurement (i.e kilometres of network) seems a strange choice particularly as it is the node of entry (i.e. stations, tram stops). A practical alternative could be the number of public transit trips that were taken by commuters using a unified system	Improve basis of measurement for this indicator – suggests	Noted. See above. Usage doesn't reflect coverage.
FR 282		19.06.1		Te/ed	The link with ISO 37101 needs to be improved Transport network reflects also "Mobility" An "s" is missing "Community infrastructures"	Add in NOTE 2: "Mobility" issue Add "s" in "Community infrastructures"	Agree.
DE 283		19.06/19.7	19.6/19.7	te	Too many indicator in transport: Percentage of the city public transport network covered by a unified payment system and then e payment system	Suggestion: keep 19.7 and delete 19.6 How to consolidate this chapter should be discussed in the next meeting.	These are two different indicators. Both are important.
FR 284		19.07.1		Te/ed	The link with ISO 37101 needs to be revised The indicator reflects also "Mobility" issue.	Add in NOTE 2: "Mobility" issue Delete "Social cohesion" purpose	Agree.

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					It has no link with "Social cohesion" An "s" is missing "Community infrastructures"	Add "s" in "Community infrastructures"	
FR 285		19.08.1		Te/ed	The link with ISO 37101 needs to be revised The indicator reflects also "Mobility" issue. It has no link with "Social cohesion" but it has a link with "Preservation and improvement of environment" as people can find easier a parking place. They are, therefore, using their car less in the city. In Paris it was demonstrated that it had a direct effect of carbon balance of the city. An "s" is missing "Community infrastructures"	environment" purpose Add "s" in "Community infrastructures"	Agree.
FR 286		19.09.1		Te/ed	The link with ISO 37101 needs to be revised The indicator reflects also "Mobility" issue. It has no link with "Social cohesion" and "attractiveness" but it has a link with "Preservation and improvement of environment" as traffic jams are less frequent. In Paris it was demonstrated that it had a direct effect of carbon balance of the city. An "s" is missing "Community	Add in NOTE 2: "Mobility" issue Delete "Social cohesion" and "attractiveness" purpose Add "Preservation and improvement of environment" purpose Add "s" in "Community infrastructures"	Agree.

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					infrastructures"		
DE 287		19.10		te	As far, as recent systems obtain their date from logged in mobile phones, this number differs by chance, daytime and usage of those networks. Hence, th ese data are not reliable and/or compa- rable.	The use of this indicator should be given up be- cause of methodological reasons.	This indicator is referring to the areas mapped.
CA 288		19.10		ge	The justification for this indicator is unclear – the vast majority of cities globally are now covered by these types of systems	Delete indicator.	Disagree to delete indicator.
FR 289		19.10.01		Te/ed	had a direct effect of carbon balance of the city.	Add in NOTE 2: "Mobility" issue Delete "Social cohesion" and "attractiveness" purpose Add "Preservation and improvement of environment" purpose Add "s" in "Community infrastructures"	Agree.
DE 290		19.11	19.11	te	An "s" is missing "Community infrastructures" Percentage of vehicles registered in the city that are autonomous vehicles => for many cities this information will not be available. Since the number of autonomous vehicles is rather small still it might be pushed to an update in order to reduce the number of indicators.	Remove it and keep it for the next update (some other indicator will disappeared when systems are everywhere)	Noted. This is an increasing trend and it is important to think about the future therefore we should keep this indicator to encourage cities to think about this issue.

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FR 291		19.11.01		Te	The link with ISO 37101 needs to be established The indicator reflects "Mobility" It concerns "Preservation and improvement of environment" purposes". In fact, Autonomous vehicles are easier to share and it reduces indirectly the traffic. The speed of vehicles is more regular and the eco-driving is better managed.	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects "Mobility" issue as defined in ISO 37101. It can allow an evaluation of the contribution to the "Preservation and improvement of environment" purposes of the city as defined in ISO 37101	Agree.
FR 292		19.12		Те	This indicator is already mainly covered by 18.3 and 19.5. We are counting the number of lines that have an internet connection (ie wifi) (already covered by 18.3). The number of lines that give an information on real time to the commuters thank to internet/IT means are already covered by 19.5. Connection to internet not necessarily free. Is should be mentioned	Please delete this indicator.	Disagree. This indicator is different from 18.3 and 9.5 and it is important indicator for cities.
CA 293		19.12		ge	This indicator is not clear and would be difficult to measure.	Suggest to further develop indicator or remove.	Disagree. Already discussed.
FR 294		19.12.01		Те	The link with ISO 37101 needs to be established	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects	Agree.

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					The indicator reflects "Mobility" and "Community infrastructures" It concerns "Attractiveness" and "well-being"	"Mobility" and "Community infrastructures" issues as defined in ISO 37101. It can allow an evaluation of the contribution to the "Attractiveness" and "Well-being" purposes of the city as defined in ISO 37101	
CA 295		19.13		ge	The use of Autonomous Vehicles (AV) is still experimental and it may be difficult for municipalities to measure road compliance with autonomous driving systems. That said, procedures and planning principles pertaining to autonomous driving systems are most likely still under development.	Suggest to remove indicator.	Disagree. This is important for cities to consider.
DE 296		19.13	19.13	te	See 19.11 Percentage of roads compliant with autonomous driving systems See above	Remove it and keep it for the next update	Disagree. This is an important trend for cities.
FR 297		19.13.01		Те	The link with ISO 37101 needs to be established The indicator reflects "Mobility" and "Community infrastructures" It concerns "Attractiveness"	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects "Mobility" and "Community infrastructures" issues as defined in ISO 37101. It can allow an evaluation of the contribution to the "Attractiveness" purposes of the city as defined in ISO 37101	Agree.
FR 298		19.14		te	This indicator considers a too specific issue in term of on-line payment. It could be merged with 10.4	Merge with 10.3 by asking in 10.3 to specify the percentage linked to the city service for traffic violation	Agree to delete indicator and merge with 10.3 as per agreement in WG2 meetings in Moscow.
FR 299		19.14		te	Only violations under the responsibility of	Limit the indicator to violations under the	Noted. Agree to delete indicator.

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					the local police should be considered	responsibility of the local police	
US/ 300 ANSI		19.14		te	We do not see the relevance of this indicator from a "sustainable community" perspective.		Agree to delete indicator.
DE 301		19.14	19.14	te	Not sure about the usefulness of this indicator. Distinction between roads (federal, city etc.) could be necessary etc. Percentage of vehicles fined for traffic violations making a payment through an online e-fine system	Remove it or put it in the governance part	Agree to delete indicator.
FR 302		19.14.01		Те	The link with ISO 37101 needs to be established The indicator reflects "Governance empowerment and engagement" issue It concerns "Attractiveness" and "social cohesion" purposes	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects Governance empowerment and engagement" issues as defined in ISO 37101. It can allow an evaluation of the contribution to the "Attractiveness" and "Social cohesion" purposes of the city as defined in ISO 37101	Indicator now deleted.
CA 303		20		ge	The current set of indicators may not be a sufficient set of indicators to support cities to consider how the changing technologies affect the monitoring of urban agriculture and food security.	Consider adding no more than 2-3 new indicators as per city consultation outcomes to be presented in Moscow meeting, and consider deleting existing indicators and/or adjusting the current set of indicators. Also, further research should be conducted on urban agriculture/food security related to smart cities.	Noted.
DE 304		20	20	te	Consider to put an additional indicator e.g. Number of app on food exchange, local agriculture cover the city.	Consider to provide additional indicator to this section.	Canada and Sweden also supports adding an indicator on technology. Agree to add Canada proposal on Percentage of

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							the city's land area covered by an online food suppliers- mapping system. As per WG2 meeting in Moscow.
							Important to understand food availability. This is also an indicator for food security.
							Include as edits made as per WG2 meeting in Moscow. This indicator will be a start and understood to be further refined in the next revision.
CA 305		20.01		Ge/te	The rational for the inclusion of this indicator in the Smart City Standard is very unclear – local/urban agriculture is already adequately covered in ISO 37120	Delete indicator	Disagree. If a city is developing a strategy, you will see this reflected in the budget. See if UA is a good solution. The City can track and analyse.
							UA is not so relevant in Germany, urban gardening is more and more relevant.
FR 306		20.01.1		te	The link with ISO 37101 needs to be revised The indicator reflects "Economy and sustainable production and consumption" issue and not "health and care in the	Add in NOTE 2: "Economy and sustainable production and consumption" issue Delete "Well-being" purpose and	Agree.
					community" It concerns "Preservation and improvement of environment" purpose and not "well- being"	Add "Preservation and improvement of environment" purpose	
DE		20.02		te	The data in need is only partly available on local levels. Hence, these data are not reliable and/or 66 two-letter country code, e.g. CN for China: comments fro	The use of this indicator should be given up be-	Noted. This data can be available from solid waste

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307					comparable.	cause of methodological reasons.	management facilities.
FR 308		20.02.1		ed	Issue is "Economy and sustainable production and consumption"	Add "Economy and" in issue of NOTE 2	Agree.
FR 309		20.02.2		te	In the 3rd § there is a mistake. We should talk about "food loss" and not "food waste" in the first sentence. It is not clear if not	Replace "food waste refers to discarding" by "food loss refers to discarding"	Disagree. This is a translation issue. Definition is according to FAO. France to be careful when translating. Food waste is broader than consumed food that is wasted as discussed during WG2 meeting in Moscow.
DE 310		21	21	Ge	Indicator about urban planning are rather general not specific to smart city	Consider e.g.: Annual number of citizens engaged in the planning process via online participation.	This will be included in the new indicator proposed by BR. As discussed in comment #BR155.
RU 311		21 Urban Planning		ge	It is proposed to supplement clause 21 with three new indicators linking ISO 37122, ISO 37120 and ISO 37101	The new indicator 2.5. The percentage of covering the city with legitimate digital planning documentation and regulations sufficient for electronic obtaining of a building permit. General. This indicator characterizes the level of "digitalization" of urban development planning and the degree to which the city covers detailed development plans. At the same time, all the legitimate requirements for building and land use the development of construction documentation	Disagree. Online building permits is already cover Indicator 21.3 Disagree with adding indicator 2.6 as mixed functional areas are difficult to define. As discussed with comments and indicator 12.1. Disagree with 2.7. We

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						and its state expertise (if necessary) for obtaining a building permit. Indicator requirements	already measure the change in native species in ISO 37120.
						It is defined as the ratio of the area of the city covered by legitimate detailed urban planning documentation (ha) to the entire territory of the city (ha) X 100.	
						The new indicator 2.6. Percentage of mixed functional areas with high and medium density of jobs located in the periphery of the city.	
						General.	
						The indicator assesses the degree of polycentricity of the city structure and ensures the optimization of infrastructure development, increase the diversity and comfort of the urban environment of the peripheral areas of the city.	
						The indicator also details and supplements clauses 12.1 and 21.4 of ISO 37122.	
						Indicator requirements	
						The indicator is determined by dividing the area of mixed zones with a high density of workplaces located in the periphery of the city by the area of all mixed zones of the city	
						The new indicator 2.7. The degree of balance of diversity in the urban environment.	
						General	
						Smart city of sustainable development should maintain a balance of heterogeneity in the structure of the population, economy, city space. The principle of diversity and balance should be included as structuring in ISO 37101 and ISO 37120.	
						Indicator requirements	
						The degree of diversity and structural heterogeneity of the urban environment can be measured by the ratio of urban density indicators: the ratio of zones of high population density (buildings) to zones of	

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						low population density (buildings); ratio of indicators of high-density areas of the street network to zones with low density (the ratio of the center and the periphery). At the same time, it is essential to establish the shares of a high-density, medium-dense, low- density urban environment, where a predominant share of the medium-dense urban environment is important for sustainable development. Also important is the indicator of the balance between the density of population (buildings) and the density of streets (public transport network).	
BR 312		21 Urban Planning (21.01.2)	Page 55	ge		Consider adding to the text: "This indicator may be disassembled in others, by project or by poll (annual number of citizens engaged in the transportation/ energy/ sanitation/ etc. planning process per 100 000 population)."	Disagree. This is very difficult to capture already and to break it down by project will be too difficult.
BR 313		21 Urban Planning (21.01.3)	Page 55	ge		Consider adding to the text: "The indicator's description can briefly outline the engagement processes that are being used and considered for the indicator's calculation, for purposes of sharing best practices (indicating <u>HOW to engage people</u> )."	Disagree. This will be difficult because the citizen engagement methodology depends on the specific projects and/or departments. Each is very unique.
DE 314		21.01			What about people engaged in social-media- campaigns or free-of-entry workshops? The number of people engaged is actually not count- ed, therefore only estimated data are available for local authorities. The given data sources risk to be very insecure and could not guarantee compa- rability.	Pretest after re-definition	Disagree. There's an indicator on online engagement and social media is often counted.
FR 315		21.01.1		te	The link with ISO 37101 needs to be revised The indicator has no link with "resilience", "responsible resource use" and attractiveness" It concerns "social cohesion"	Delete in NOTE 2: "Resilience", "Responsible resource use" and "Attractiveness" purpose and Add "Social cohesion" purpose	Agree.

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CA 316		21.03		te	Submission of building permits electronically seems to be a secondary quantity – surely the speed of processing of permits is a more important measure (as measured by Indicator 21.2).	Consider deleting this indicator.	Disagree to delete but move before average time for permits. 21.3 become 21.2 and 21.2 become 21.3. This is a way for cities to consider online systems.
FR 317		21.03.1		te	The link with ISO 37101 needs to be established The indicator reflects "Governance, empowerment and engagement" It concerns "Attractiveness"	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects ""Governance, empowerment and engagement" issue as defined in ISO 37101. It can allow an evaluation of the contribution to the "Attractiveness" purposes of the city as defined in ISO 37101	Agree.
FR 318		21.04.1		te	The link with ISO 37101 needs to be revised The indicator does not reflect "Biodiversity and ecosystem services" and "Community infrastructures" issues. It reflects living conditions And thus "living and working environment"	Delete in NOTE 2 "Biodiversity and ecosystem services" and "Community infrastructures" issues Replace by "Living and working environment" issue	Agree.
FR 319		21.04.2		te	The reference for medium to high density is questionable. I would mean that Amsterdam or Dublin have not medium to high population density.	Explain and/or revise the values	Noted. Delete the medium to high density reference and include a general reference for cities to note the reported range for medium and high density. This is to be defined by each cities.

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RU 320		21.04.2		te	Indicator 21.4 assumes that zones of a city with a high and medium population density are preferable for the formation of "mixed zones" and active development of public passenger transport. This indicator is meaningfully connected with the indicators "12 Housing" and "19 Transportation» in ISO 37120 and ISO 37122. For these purposes zoning of population density is more convenient for the built-up parts of the city, and consequently the density indicators should be higher.	It is advisable to clarify the proposed indicator in a zone of a city with a high population density. If the density of the population is estimated for the built-up parts of the city as the density of development in ISO 37120, paragraph 21.5.3. (do not take into account the large open green spaces), then the density should be at least 75-100 people / ha, so that the network of public passenger transport works effectively and pedestrian communications develop. The proposed indicator of 48 people / hectare (12,500 people per square mile) does not fully meet such requirements	Noted. The reference is now deleted. Cities will include the reported ranges.
GB 321		21.04.2 Indicator requirements		te	The draft contains the text "shall be defined as a population density that is more than 12,500 persons per square mile, or approximately 12,500 persons per 2.6 square kilometres". This definition is precise in square miles but only approximate in square kilometres. The consequences are: 1. Anyone seeking precision must use square miles. 2. Anyone prepared to use the approximate part of the definition in square kilometres is faced with a more complex calculation (i.e. division by 2.6 square kilometres) which doesn't match normal data sources. ISO directives part 2 section 9 requires the use of metric units. I propose the definition is revised to: a) state an exact value in square kilometres b) state the value per single square kilometre e.g. "x persons per square kilometre"	Replace "12,500 persons per square mile, or approximately 12,500 persons per 2.6 square kilometres" with "x persons per square kilometre" where x is an integer. Eliminate conversion to or from non-metric units throughout the draft	Noted. This will no longer be an issue as the reference will be deleted. Will ask cities to report the range in metrics.

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					c) eliminate conversion to or from non-metric units throughout the draft		
DE 322		22		te	Basically, these indicators are not very useful for water supply and waste water disposal. They suggest that the mere use of data processing and measurement technology is already "smart". This even contradicts the definition of "Smart Community Infrastructure" in SC1 of the same TC, where smart is generally associated with "enhanced technological performance", i.e. innovative construction technology can also be quite smart. Accordingly, the ultimate goal should be to achieve sustainability goals and not just the purposeless use of digitalization tools. These indicators should at best only be given as examples, indicating that there are also other diverse technical performance dimensions during the lifecycle of a network (construction, operation, rehabilitation).	Introduce chapter 22 by: "The following indicators are only given as examples. Although these relate to tools for digitisation, the use of other indicators to describe technological progress in areas such as network planning, construction and renovation is also in line with the definition of a Smart Community Infrastructure (cf. ISO 37151)."	Noted. Many of the indicators in this section not only refers to digitalization but also innovative techniques. The definition of smart city that is included in this standard is based on the TMB definition which is broader than the SC1 definition of smart community infrastructure. All indicators within this standard are examples, we do not claim to be exhaustive. We do not have this introduction in any of the themes. Operation maintenance and construction of the sewers, there's a lot of innovation within this area which are also very smart and efficient. Not only relating to sensors. It's not only about digitization but it's important to

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							emphasize technological enhancement.
BR 323		22 Wastewater (22.03)	Page 59	te	If the energy measure is relevant for generation or replacement of electricity is more appropriate to express it already in watts, so it is aligned and comparable with the Energy section indicators and avoids the necessity of converting units for equivalence.		Agree to review and ensure consistency for all units.
DE 324		22.01		te	Economic and ecological advantages of water reuse are not given in all circumstances. Use of indicator depends strongly on context (water scarcity). In Germany and other regions with sufficient rainwater it is not relevant. Having a sufficient water supply it is a lot more efficient to increase the use of rainwater and reuse of water in idustrial processes than to reuse treated wastewater. Note 1: It is not clear, why the reuse of treated wastewater does prevent the discharge of untreated wastewater in the environment?	To measure the "smartness" these aspects should be included.	Noted. This indicator is just one example, there are many other techniques. See DE 322 comments. Add note on data interpretation: In cities where water scarcity is not a pressing challenge, other techniques may be more useful as other issues may be more prevalent. For example, the use of rainwater.
DE 325		22.02			Sludge from "water supply treatment plants" is often not used for reuse. In addition: The parameter includes only some aspects of smart and sustainable use of sludge. In Germany almost every city will reach a percentage of 100 % according to the definition. It might be helpful to differentiate between the different types of ressources beeing contained in the sludge, e.g. energy, phosphor. The definition is inconsistent: whereas sand and solid waste after screening is excluded, sludge obtained from urban wastewater collectig systems, usually containing a high amount of sand is included.	Exclude "sludge from Water supply treatment plants"	Disagree. France: Important to include sludge from water supply treatment plants as it is not included in another indicator. It's important to include this in the calculation.

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CA 326		22.02		te	The term sludge is outdated and out of use in many areas	Consider changing to more current term (e.g. biosolids).	Agree. Change to biosolids as per TC275, biosolids is after treatment.
							Must double check.
GB 327		22.02.2 Indicator requirements		te	The draft is inconsistent in use of units. It sometimes uses unambiguous term "tonnes" and sometimes uses the ambiguous term "tons". I propose each instance of "tons" is replaced with "tonnes". The calculation is actually neutral in terms of units. I propose each instance of "dry matter tons" and "dry matter tonnes" is replaced with "dry matter mass".	Replace each instance of "ton" with "tonne". Replace each instance of "tons" with "tonnes". Replace each instance of "dry matter tons" and "dry matter tonnes" with "dry matter mass".	Agree.
US/ 328 ANSI		22.03		te	How is this different from 7.2?		In the energy section, it's energy driven. In section 22, we are addressing the wastewater reuse to address energy consumption issues. These are innovative methods to produce energy. In section 7, we are addressing energy.
DE 329		22.03		te	The amount of energy drived from wastewater compared to the total energy consumption of the city (traffic, industry) will not be significant. Furthermore the total energy consumption might be hard to measure. Thus the significance of this indicator is highly questionable.	Remove these indicators or keep them here and remove them from energy chapter	Noted. This comment has now been clarified as per edits made in WG2 meeting in Moscow.
FR 330		22.03.1		te	The link with ISO 37101 needs to be revised	Delete in NOTE 2 "Biodiversity and ecosystem	Agree.

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					The indicator does not reflect "Biodiversity and ecosystem services" issue.	services" issue	
DE 331		22.03/22.4	22.3/22.4	Ge	Energy derived from wastewater as a percentage of total energy consumption of the city => double with energy part	Remove these indicators or keep them here and remove them from energy chapter	Noted. Already discussed, see comment DE 329.
DE 332		22.04		te	We do not understand this indicator. It is nowhere used in the water sector to our knowledge: This indicator can be 100%, if energy is generated in a wastewater treatment plant – no matter how much and how efficiently energy is generated. By the way, there seems to be a CPM-Mistake ("Copy, Paste and Modify"): Why does "Energy generated from the wastewater network or treatment plant shall be expressed in gigajoules (GJ) per year", when the unit of this indicator is "percentage"?	Delete indicator	Disagree. This has now been explained and used in the water sector and in other countries, as per WG2 meeting in Moscow. With this indicator, the goal of the wastewater is to produce energy, this is not the only use of wastewater and may not be the best use. Cities sometimes do not understand or consider wastewater as a way to produce energy. Wastewater is more than sludge, soiled water and rainwater is also wastewater. Surface flooding is a big issue and is not mentioned here. With regards to Smartness, what is more relevant is the impact on rainwater and surface water flooding.

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							There are other indicators on wastewater in ISO 37120.
							Agree with changing to percentage in the units.
CA 333		22.04.2		te	The quantities in the numerator and denominator are not aligned. The numerator is currently energy generated while the denominator is (presumably) the volume of wastewater.	The numerator and denominator should be aligned – presumably both as volume measurements.	Disagree.
DE 334		22.05		te	The complexity of monitoring a wastewater pipeline network cannot be described by a single indicator. And, just measuring does not say anything about influencing and regulating. Often a lot of data is collected but not really used. What kind of systems regulate the data?	Discuss the objective and terminology of this indicator and adapt	Noted. We cannot cover the whole complexity of the section. These indicators just make the city think about network monitoring.
					Additionally, the questions will arise, what is measured? Loads or volume? What kind of loads? How do you define supervised length? Measurement is always on a certain spot? Should it rather be number of sensors/length of network?		Goal is to make the city consider pipeline monitoring, if this is an issue for the city, they can refer to further water monitoring standards.
					What is the difference between "real-time data tracking sensor system" (22.5), "real-time water quality monitoring station"(23.1), "ICT based environmental water quality monitoring stations" (23.2) and "smart water systems" (23.3)?		This is just an example to make cities think about this issue.
FR		22.05.1		te	The link with ISO 37101 needs to be	Rename NOTE as NOTE 1	Agree.
335					established	Add a NOTE 2: This indicator reflects	
					The indicator reflects "Community	"Community infrastructures" and "Economy	
					infrastructures" and "Economy and	and sustainable production and	
					sustainable production and consumption"	consumption"	

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issues as defined in ISO 37101. It can allow an

evaluation of the contribution to the

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It concerns "Responsible resource use",

"Preservation and improvement of

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					environment" and "resilience"	"Responsible resource use", "Preservation and improvement of environment" and "Resilience"" purposes of the city as defined in ISO 37101	
DE 336		23		Ge/ed	Basically, these indicators are not very useful for water supply and waste water disposal. They suggest that the mere use of data processing and measurement technology is already "smart". This even contradicts the definition of "Smart Community Infrastructure" in SC1 of the same TC, where smart is generally associated with "enhanced technological performance", i.e. innovative construction technology can also be quite smart. Accordingly, the ultimate goal should be to achieve sustainability goals and not just the purposeless use of digitalization tools. These indicators should at best only be given as examples, indicating that there are also other diverse technical performance dimensions during the lifecycle of a network (construction, operation, rehabilitation).	Introduce chapter 23 by: "The following indicators are only given as examples. Although these relate to tools for digitisation, the use of other indicators to describe technological progress in areas such as network planning, construction and renovation is also in line with the definition of a Smart Community Infrastructure (cf. ISO 37151)."	Same note to be added as per section 22.
DE 337		23.01		te	According to the definition one monitoring station at the network entry point (which is in the case of Germany always given) is sufficient for a value of 100%. For terminology see comment to 22.5	Discuss the objective and terminology of this indicator and adapt.	Noted. Add note it cannot be based on only one point in the network. Isabelle to provide note.
DE 338		23.02		te	The indicator is focused on "water resource management". The definition for "Environmental water" ("any water in a river or wetland that benefits the environment") seems to be vague. Values of indicator are depending strongly on number of water bodies, volume of water,	Discuss the objective and terminology of this indicator and adapt.	Noted. Refers to more than water resource. It's up to the city to further go in depth.

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					Is this indicator somewhere used? Do experience exist?		
CA 339		23.02		ed	Consider removing ICT-based from the indicator title, since real-time should be sufficient as done in Indicator 23.1.	Remove ICT-based from the indicator title.	Agree.
FR 340		23.02.1		Те	The link with ISO 37101 needs to be improved. The indicator reflects also "Health and care in the community" as it has a link with the quality of bathing waters	Add in NOTE 2: ""Health and care in the community" issue	Agree.
DE 341		23.03			See comments to 22.5	see 22.5	Noted. Already explained and clarified as per WG2 meeting in Moscow.
CA 342		23.03		te	Is length of system covered by the smart monitoring the best measure? Given limited resources, it is more important to monitor the main elements of the system – so it could alternatively measure by flow volume monitored against total flow volume.	Consider revised basis of measurement.	Disagree. The issue is the length because you want to track across the network and to track at different points. If we measure volume we would miss the cost issue for the cities.
FR 343		23.03.1			The link with ISO 37101 needs to be established The indicator reflects "Community infrastructures" and "Economy and sustainable production and consumption" and Health and care in the community" issues It concerns "Responsible resource use",	Rename NOTE as NOTE 1 Add a NOTE 2: This indicator reflects Community infrastructures" and "Economy and sustainable production and consumption" and Health and care in the community" issues as defined in ISO 37101. It can allow an evaluation of the contribution to the "Responsible resource use",	Agree.

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					"Attractiveness" and "resilience"	"Attractiveness" and "Resilience"" purposes of the city as defined in ISO 37101	
FR 344		23.04		te	There is in §12.3 an indicator that concerns also water for households. It should be mentioned in a NOTE that this indicator exists so that people could refer to it if interested. Add a sentence just after the title	Before 23.4.1, add a NOTE: Considering the smart water ma nagement at household scale refer to §12.3	Agree to add note.
FR 345		23.04		Te	The definition of public buildings is not consistent with the definition of public buildings given in §7.8 Definition of public buildings should consistent with the one used in §7.5 ISO	Align definition of public buildings between 7.8 and 7.9 Align definition of public buildings with ISO 37120	Agree. Definition added to definition section.
DE 346		23.04		te	37120 In Germany water meters often do not depend on number of buildings, but e.g. clients, apartments, In 12.3 a different approach (per household) is presented. A link to this chapter would be helpful.	Exchange denominator: Total number of water meters used for measuring consumption of clients. Mention alternative indicator in chapter 12.3.	Noted and disagree to changing denominator. It is not universally measurable by clients individually in buildings. This is considered in 12.3. This indicator is simply for buildings. We can consider this for the
FR 347		23.04.1		Те	The link with ISO 37101 needs to be revised The indicator reflects also "Economy and	Delete in NOTE 2 "Well-being" purpose Add "Economy and sustainable production	Agree.

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MB/ NC <sup>1</sup>	Line number	Clause/ Subclause	Paragraph/ Figure/Table	Type of comment <sup>2</sup>	Comments	Proposed change	Observations of the secretariat
					sustainable production and consumption" issue The link with 'Wellk-being" is not obvious	and consumption" issue	
** 348		A B		Ed	ISO/IEC Directives, Part 2, 2018, 20.5 'Each annex shall be explicitly referred to within the text.'	Please provide a reference to Annexes A and B in the main text.	Agree and noted.
** 349		A		Ed	Suggest removing (ISO 37101) from each entry in column 2, instead mentioning it in the column header.		Noted. This was not completed. Will revise.
FR 350		Annex A		te	All indicators have to be added in the second column of the table/ In order to prevent some misunderstanding of the reader we should at least have mention that it will be added later	Add in the title of the second column: ISO 37120 purpose (to be added once finalized) And Add the indicator for the FDIS version	Agree. This is not completed yet.
CA 351		Annex B		ge	A draft of Annex B should be provided in advance of the next ISO Meeting in Russia.	Annex B draft to be developed.	Noted. Will be added.

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<sup>1</sup> MB = Member body / NC = National Committee (enter the ISO 3166 two-letter country code, e.g. CN for China; comments from the ISO/CS editing unit are identified by \*\*)

MB/	Line	Clause/	Paragraph/	Type of	Comments	Proposed change	Observations of the	
NC <sup>1</sup>	number	Subclause	Figure/Table	comment <sup>2</sup>			secretariat	

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- Collation of files was successful. Number of collated files: 10
- SELECTED (number of files): 10
- PASSED TEST (number of files conformed to CCT table model): 10
- FAILED TEST (number of files conformed to CCT table model): 0
- CCT Version 2018.1

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