



IMPS Consultation on Office Buildings – Exposure Draft

General Comments

On behalf of CLGE it is our pleasure to comment the Exposure Draft of the International Property Measurement Standards (IPMS) for Offices. We answer the questions with the attached form. However, some fundamental remarks, comments and explanations are added in the sections called “General Comments” and “CLGE Position Paper”. Hence, our answer is composed of following documents:

- General comments (the current section);
- The CLGE position paper (with a summary);
- The IPMS Consultation Form.

CLGE is strongly committed to the successful implementation of IMPS. This is the reason why we ask the Standard Setting Committee as well as the Coalition to consider our remarks very thoroughly and seriously.

The CLGE Executive Board as well as the ad hoc specialists’ working group of CLGE are convinced that the remarks we are formulating here are of utmost importance. If we want to obtain the required result, i.e. an IPMS, fit for purpose they must be taken into account.

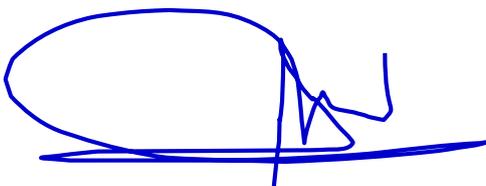
In order to get a practicable standard, we also insist on the need of a repository of guidelines, which have to be coordinated all over the world.

The use of this repository should be mandatory for all those coalition partners who want to introduce new definitions within their guidelines for the use of IPMS by their constituency. The coalition has to make sure that:

- There are no conflicting definitions in different guidelines (e.g. the distinction above and below ground, once it has been set by one (group of) partner(s) of the coalition, cannot be introduced by another partner in another way). Extensive coordination has to be provided, if need be harmonised by the Standard Setting Committee.
- Regional guidelines should be coordinated with and applied by all the partners involved, including worldwide actors.

CLGE is available for further discussion of these topics, as well as the CLGE position paper and the attached IPMS Consultation form.

Yours Sincerely,



Jean-Yves Pirlot  
CLGE President



IMPS Consultation on Office Buildings – Exposure Draft

CLGE Position Paper

The key comments in the text below are shown in large bold type.

## Title and Scope

Although the document presented is entitled “*International Property Measurement Standards: Offices*” it is clear from the context of the document that it does not deal, and is not intended to deal, with “Property” as defined in **1.1 Definitions** – “Property: Any real estate asset in the built environment”, but instead it is intended to deal very specifically with “Building: An independent structure forming part of a property”. This is very clear from the absence of any reference to the measurement of external surface car parking, access roads, external landscaping or site extent.

**It would be more correct to entitle the document *International Property Measurement Standards: Office Buildings*.**

It is not clear why the standard is being confined solely to office buildings as the definitions and procedures being set out in the standard are equally applicable to a range of other buildings and there seems no reason why their application should be confined only to office buildings.

**In this case, the document could simply be entitled:  
*International Property Measurement Standards for Buildings*.**

## Aims

**Aims of the Standards** states that “the aim of IPMS is to meet the requirements of Users of the Property for consistency in measurement”. The sentence following this indicates that it is the “stated area of floor space in identical buildings” which requires standardisation and consistency. In the main body of the Exposure Document, the areas which are to be defined and whose measurement is to be standardised is set out. It is clear that this measurement is intended to apply only to horizontal surfaces and that volumes are not to be taken into consideration.

**To achieve a clearer and more correct definition, the aims should read – “The aim of *IPMS: Buildings* is to meet the requirements of users for consistency in the measurement of specified components of buildings in two dimensional horizontal space”**



The standard should apply in two areas:

1. **What is to be measured?** – defining the boundaries or limits of areas of a building to which area values should apply and applying standard nomenclature to these defined areas.
2. **How is it to be measured?** – defining the precision and methodology to be used in carrying out the measurement.

### What is to be measured

In the Exposure Document there are a number of distinct entities defined to which measurement should apply:

1. The area within the external face of the building, described in the Exposure Document as IPMS1, in the euREAL document as SEM and more generally as the Gross External Area.
2. The area within the inner face of the external structural components and the permanent weatherproofing components of a building, described in the Exposure Document as IPMS2, in the euREAL document as SIM and more generally as the Gross Internal Area.
3. The areas of various internal building components allowing for a more analytical and focussed understanding of usability of areas within a building.

**A fourth level has been defined as IPMS3, identifying ownership or occupation areas within a building. This is merely a specific application or combination of areas already defined in 1-3 above. It is superfluous and should be deleted.**

In defining the 3 sets of components outlined above there is inconsistency in the Exposure Draft.

### Defining the External Face of a Building

In defining IPMS1/SEM/External Gross Area, *Diagram 1 IPMS1 – Upper floor level*, shows projecting structural columns which have been excluded from the colour coding for no apparent reason. Buildings vary greatly in their horizontal external profile and unless specific guidance is given in the Standard it will be impossible to define the extent of this area. Should structural projections be included or excluded? What criteria should apply? At what level on the building face should the measurement be taken? Internally, a level immediately above skirting level has been defined; should this level be projected horizontally to the outer face to define the location of the measurement for IPMS1?

**The location and the definition of the external building face, where IPMS1 is to be measured, must be more clearly and more fully defined.**



## Dominant Face

A similar issue occurs with regard to the measurement of IPMS2. The concept of Dominant Face introduce anomalies which render the standard less than useful as a basis of comparison between buildings.

Let us examine a number of situations:

A building contains an internal space which is square and measures 10m by 10m on plan to the inner face of an external masonry wall. The glazed inner faces of the external wall is 0.5m closer to the exterior than the inner face of the masonry wall. We will now examine 3 different possibilities in relation to this space.

1. In this example the inner surface of the external masonry wall is the Dominant Face. The glazed area reaches to the floor surface allowing the floor to project outwards into the window space. The total length of the masonry wall at floor level is very slightly over 5m. The total length of the glazed surface at floor level is very slightly under 5m. Using the concept of Dominant Face the floor area of this space is  $10\text{m} \times 10\text{m} = 100\text{m}^2$ .
2. In the second case the glazed surface is the Dominant Face. The glazed area still reaches to the floor surface allowing the floor to project outwards into the window space. The total length of the masonry wall at floor level is very slightly less than 5m and the masonry very slightly more than 5m. Here when using the concept of Dominant Face the floor area of the space is  $10\text{m} \times 10.5\text{m} = 105\text{m}^2$ .

In both these cases the actual usable floor area, i.e. the floor area that is a fully continuous surface that can be accessed, and on which workspace items such as chairs, desks etc. can be placed and on which people can stand is  $102.5\text{m}^2$ .

3. The third example is where the glazed surface is also the Dominant Face. The glazing is 9m wide, stretching almost the full width of the workspace area but it does not reach to the floor. Below this window, whose cill level is 1m above floor level, there is masonry walling whose inner face is flush with the full height masonry walling at both sides. In this case the concept of Dominant Face give a floor area of  $104.5\text{m}^2$  where the actual usable floor space is  $100\text{m}^2$ .

Dominant Face give an under value of 2.5% in the case of example 1, an over value of 2.5% in the case of example 2 and an over value of 4.5% in the case of example 3.

**Because of the existence of these anomalies, it is recommended that the concept of dominant face be abandoned and measurements be taken of actual floor area as measured immediately above skirting**



**board level to the inner face of the permanent external structural and weatherproofing envelope of a building.**

## **Work Areas**

IPMS makes no differentiation between floor areas which are fully usable, i.e. floor areas which can accommodate standing humans and which have sufficient ceiling height to comply with health and safety legislation in the jurisdictions in which they are located. Furthermore, there are minimum floor areas and room dimensions defined in most jurisdictions, below which it would be illegal to use the area as habitable work space. Normally the area must be at least capable of accommodating a minimum standard workstation for at least one person. Again IPMS makes no differentiation. Thirdly there are areas which, because of issues such as lack of ventilation, daylight, dampness or contamination, are deemed unfit for human occupation. All of these space should not be classified and treated in the same way as legally occupiable areas. If the purpose of the standard is to allow comparison between floor areas internationally, then the areas must be broadly comparable. To treat a 1m square boxroom as comparable to 1m square of floor space in an open plan office is ingenuous and misleading. Equally, to treat a floor area whose ceiling height is 1.5m as being equivalent to an area whose ceiling height is 2.1m makes a nonsense of the standard.

**It is recommended that the standard recognise two different definitions in classifying Workspace floor area and floor area for other building components which must be accessed by building users in the normal course of their work activities, i.e. Hygiene Areas and Circulation Areas:**

- 1. Full Use Workspace: floor areas where there is a minimum height, as defined within the jurisdiction in which the building is located, as acceptable for human occupation, and where other legal requirements for human occupation are complied with. An indicative height of 2.1m is suggested.**
- 2. Limited Use Workspace: Floor areas which are usable for purposes ancillary to the main work function of the building but which fall below the standard required for human occupation and use. An indicative height of 1.5m is suggested.**



## Building Components

The components, as outlined in the exposure document contain anomalies and inconsistencies which detract from the standardisation of measurement which is the stated aim of this document. The following are suggested as a more consistent and defined set of components:

1. **External Structure and Weatherproof Envelope:** Together, these two components provide the basis for defining IPMS1 and IPMS2

IPMS1 – the outer face of these components;

IPMS2 – the inner face of these components.

The interior of the building can be logically divided into the following components:

- i. **Internal Structure:** the components of a building which support the building and prevent it from collapsing and whose removal would compromise all or part of the structural stability of the building, and which do not form part of the external Envelope of the building.
- ii. **Full Use Workspace:** As defined in the previous section.
- iii. **Limited Use Workspace:** As defined in the previous section.
- iv. **Circulation Areas:** This comprises floor space whose primary function is to allow the users of the building to move around the building and access all workspaces and other components requiring access – hallways, foyers, corridors, passageways, stairs, steps, ramps, lifts.

It should be noted that circulation areas may be partitioned, as in traditional cellular office buildings, or unpartitioned, as in open-plan office buildings. In IPMS no allowance is made for necessary circulation space in open plan offices, instead the required circulation area is treated as workspace. This is wrong and misleading.

**The standard must make allowance for unpartitioned circulation areas, where they serve the same functions as partitioned circulation areas.**

**The standard must also make allowance for common circulation space which provide access to workspace in different ownership or occupancy.**



- v. **Permanent Technical Service Areas:** As defined in the Exposure Draft.
- vi. **Permanent Hygiene Areas:** As defined in the Exposure Draft.

**It should be noted, that areas such as changing rooms, cleaners' closets without plumbed fixtures, can change their function without the need for constructional alterations to the space. It is debatable whether these should be defined as Permanent Hygiene Areas.**

- vii. **Vertical Penetrations:** As defined in the Exposure Draft.
- viii. **Amenities:** This is an anomalous classification. Day-care rooms, fitness areas, prayers rooms etc. can, with equal facility, be used as workspace, at the preference of the user. As distinct from permanent technical service or hygiene areas, or indeed circulation areas, there is nothing distinctive in their construction, fixtures or operation which renders them suitable only for the defined functions. The opposite can also be the case; floor area that is defined as workspace can, with equal facility, be designated as a prayer room or a day care room without any essential constructional change. Unless a particular legal requirement is in place, such as a restrictive covenant or rental agreement clause, which requires that the space may only be used for the designated functions, this classification becomes redundant.

If a cafeteria contains a permanent kitchen/cooking/food preparation area, separate from a seating or eating area, this area could be classified as a Permanent Hygiene Area.

**Amenity areas are not necessarily permanent or specific to their function in terms of services or fittings. They can be work areas simply designated for a different work function. IPMS should revisit the criteria upon which Amenity Areas are designated to resolve this ambiguity.**

- ix. **Permanent Partitions:** Permanent partitions are partitions which cannot be removed for any of the following reasons:
  - a. The partition may act as a functional separator between two functions which are incompatible, for instance, between a workspace and a hygiene area.



- b. The partition may act as a separator between two separate legal ownerships or users. Although the function on either side of the partition may be the same e.g. workspace, because the occupiers are separate legal entities the partition is required to be permanent.
- c. The removal of the partition may be prevented for legal reasons by restrictive covenants, lease conditions or rental agreements.

**A new component – Permanent Partitions - should be introduced to cater for the floor area occupied by such partitions, as their function precludes them from being removed and absorbed into usable Workspace.**

- x. **Other Internal Areas:** As defined in the Exposure Draft
- xi. **External Building Areas:** These areas include balconies, galleries, terraces, patios, roof terraces and other similar constructions which are open to air or semi-enclosed, which are an integral part of the building, i.e. constructed as part of the structure of the building, accessible directly from the interior of the building and not free-standing or built on their own separate foundations external to the building.

**Consideration should be given to creating a new component – External Building Areas to cover these structures**

## Measurement Methodology

The precision of measurement is critical if the stated area values are to be meaningful. Precision has cost implications in that increased precision inevitably means increased costs, so it is important to match the degree of precision being achieved by the measurement methodology to the actual requirements of the measurement. Usually, more expensive property values require greater precision because relatively small variations of area can result in substantial cost differences due to the high cost of floor area. The purpose for which a survey is being carried out can also affect the degree of precision required. A measurement needed for general planning purposes does not require the same precision as one being carried out for built-in furniture or fittings installation. In all cases, what is important is that the degree of precision is fully documented so the person, who later uses the measurement values, can be aware of exactly what level of precision has been achieved. The documentation should include:

- i. A description of the equipment and methodology used for carrying out the measurement
- ii. An indication, by the person carrying out the survey, of the degree of precision achieved, i.e. a measurement value +/- a tolerance.



- iii. The standard on which the measurement is based.
- iv. The unit of measurement used.
- v. The signature of the person carrying out the measurement and the date of the measurement.

**The guiding principle is that the measurement should be suitable for purpose and that the method by which the measurements were taken, and the date on which they were taken, should be clearly defined.**

**References to “adopting pre-agreed areas” in clause 2.3 of the exposure draft should be deleted. If data exists which allows the provenance and precision of areas to be quoted then that should be cited and the area values presented on that basis. If no such data exists then the areas do not meet any standard and there is no basis on which their precision or accuracy can be assessed.**

In clause 2.4 the suggestion that the service provider should “seek the highest degree of accuracy possible” is meaningless. Increases in accuracy are always achievable by improvements in equipment and methodology but at a cost. The highest degree of accuracy possible is therefore an indeterminate value. All that is required is that the service provider defines and documents the methodology he has used and provides a statement of precision based on this methodology. This is sufficient to allow any user to assess the appropriateness of the area value to the purpose for which the subsequent user intends.

**Reference to “seeking the highest degree of accuracy possible” should be deleted.**



## Summary

CLGE recommends the following amendments and additions to the IPMS – Office standards document:

1. The title should be –  
*International Property Measurement Standards: Office Buildings.*  
or  
*International Property Measurement Standards for Buildings.*
2. The aim of the standards should be amended as follows:  
“The aim of *IPMS: Buildings* is to meet the requirements of users for consistency in the measurement of specified components of buildings in two dimensional horizontal space”
3. The outer face of the External Structure/Weatherproof Envelope should be more fully defined to allow an accurate and consistent measurement for IPMS1
4. The inner face of the External Structure/Weatherproof Envelope should be more fully defined to allow an accurate and consistent measurement for IPMS2
5. The definition and measurement of the internal building components, as listed, should be designated as IPMS3
6. IPMS3 as currently defined – the separation between ownerships and users within a building should be deleted as it is merely an example which can be derived from the other three standards.
7. The building component list should be amended as follows to provide a more logical, more intelligible and more measurable group of components:
  - i. External Structure and Weatherproof envelope
  - ii. Internal Structure
  - iii. Full Use Workspace
  - iv. Limited Use Workspace
  - v. Circulation Areas
  - vi. Permanent Technical Service Areas
  - vii. Permanent Hygiene Areas
  - viii. Vertical Penetrations
  - ix. Amenities – (to be reconsidered)
  - x. Permanent Partitions
  - xi. Other Internal Areas
  - xii. External Building Areas



8. Workspace should be separately designated as Full Use Workspace and Limited Use Workspace. Areas should only be designated as **Full Use Workspace** if it is legal, in the particular jurisdiction where the office building is located, to use such space as habitable, working, office workspace.
9. The concept of **Limited Use Workspace** should be introduced for office workspace, which because of height, daylight, floor area, shape, ventilation or other similar restriction, does not meet the requirements for **Full Use Workspace**, but is nonetheless usable for office related work functions.
10. The concept of **Dominant Face** should be abandoned, because of the anomalies and inconsistencies it introduces to area values.
11. Internal partitions should be classified as a separate component, if their function renders them permanent.
12. Provision should be made for the designation of **Circulation Areas** in the context of open-plan offices.
13. Survey methods should be carefully documented and the degree of precision indicated. This documentation and the floor areas derived from it should be certified and dated by the person carrying out the survey.
14. The component **Amenity Space** should be redefined. It is unnecessary, unless it contains fittings of fixtures which preclude its use as **Workspace**, or it is legally precluded from being used as **Workspace**.
15. Balconies, galleries, terraces, etc. which are an integral part of the building should form an **External Building Areas** component and should be included as part of the standard.

## IPMS for Offices Exposure Draft Response Form

Comments on this Exposure Draft are invited before Monday 15 September 2014.

Responses may be placed on public record, unless confidentiality is requested.

Please submit as an email attachment to: [response@ipmsc.org](mailto:response@ipmsc.org)

**Full Name:**

**Organisation: CLGE – Comité Liaison des Geometres Européens – Council of European Geodetic Surveyors.**

**Date: 14 September 2014**

### Q1. Is IPMS: Offices fit for purpose?

No. There are numerous anomalies and inconsistencies, which we have outlined in the position paper of CLGE, to which this form is attached.

**Please state whether or not you**

#### (a) have any fundamental concerns, or,

Yes. Our concerns involve, particularly, the concept of Dominant Face, which could lead to serious inconsistencies in the values derived for the floor areas of different buildings. These inconsistencies are fully explained in the above-mentioned position paper.

Secondly, the designation as valid workspace, of Work Areas, Circulation Areas and Hygiene Areas, where ceiling height and other parameters do not meet the minimum legal requirement, in the jurisdiction in which the building is located, for human habitation and working conditions, is unacceptable. This would again lead to serious inconsistencies in comparing buildings and would negate the whole purpose of the standard.

#### (b) consider there are matters that need clarification, or

The definition of the location on the external face of buildings, to which IPMS1 is to be measured is unclear. There are inconsistencies between the text and the diagrams.

Similarly, the definition of the internal face of the External Structure and Weatherproofing Envelope, to which IPMS2 should be measured, is also inadequately defined.

#### (c) require more detail?

Amenity Areas and Hygiene Areas are inadequately specified. Many areas which IPMS defines as amenity would be equally usable as workspace, i.e. there is no qualitative reason why daycare rooms, fitness areas and prayer rooms may not be used as workspace. Equally, there is no qualitative reason why the dining part of a cafeteria could not be used as Workspace and the kitchen part designated as Hygiene Area. Amenity is simply a specialist workspace and it is questionable whether it needs to be designated as a separate component.

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### Q2. Are there any further concepts that you would like introduced into IPMS: Offices?

Yes. As already outlined above, the concept of Full Use Workspace and Limited Use Workspace as set out in Q1(a) above. This separation should also apply to Circulation Areas and Hygiene Areas where similar legal restrictions on use might also apply.

The concept of Permanent Partitions should be introduced as a component. What constitutes a Permanent Partition has been defined in position paper. This component is required as the floor area occupied by such partitions cannot be cleared and incorporated into Workspace or any other usable space and so should not be measured as part of these other components.

External and semi-external parts of a building, such as balconies, galleries, roof terraces, etc. should be included as a new component.

Circulation Space consists not alone of partitioned corridors but also exists within open-plan office layouts. Allowance should be made for Circulation Space within open-plan layouts. This issue has not been addressed at all in IPMS.

### Q3. Are there any parts of IPMS: Offices that would be better left out?

Yes. IPMS3, as presently constituted should be omitted. It is merely an application or an example of a particular measurement under the standard and is superfluous. Instead, the subdivision of internal building space (currently part of IPMS2) into separate components should be designated as IPMS3.

### Q4. Do you feel there is sufficient information within IPMS: Offices to allow you to interlink with existing standards? If not, please state what, if any, supplementary guidance would assist your organisation or membership in adopting IPMS: Offices?

There are serious conceptual differences between IPMS and euREAL which would prevent euREAL from operating as a detailed European variant or flavour of the IPMS world standard. These have already been alluded to (undifferentiated workspace, the anomalies of Dominant Face).

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### Q5. Any other comments.

A full comment on IPMS is provide in the CLGE position paper.

### Please add further comments to the appropriate section below

#### Page 4. IPMS Standards Setting Committee

No comments

#### Page 5. 1.1 Definitions

The limitation of the standard to office buildings is unnecessary. The standard is of a nature that can apply to a much wider range of buildings. It is recommended that the title be altered to meet this possibility - *International Property Measurement Standards: Buildings*

#### Page 6. 1.2 Aim of the Standards

The standard applies to horizontal floor space (plan area) and not to volumes. The aim of the Standard should be rephrased as:

The aim of *IPMS: Buildings* is to meet the requirements of users for consistency in the measurement of specified components of buildings in two dimensional horizontal space

#### Page 6. 1.3 Use of the Standards

No comment

#### Page 7. 2.1 General Principles of Measurement and Calculation

Measurement should be fit for purpose. It is clear that the purpose of a survey may vary considerably from situation to situation. It is therefore important to state the purpose for which the measurement was carried out, the methodology used, and indication of the precision achieved, the date for which the survey is valid and the name of the service provider carrying out the measurement.

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### Page 7. 2.2 Best Measurement Practice

Reference is made to a requirement to “seek the highest degree of accuracy possible”. The phase should be deleted. Accuracy, or more correctly precision, is a continuum. Greater degrees of precision can always be achieved by greater expenditure on methods and technology. All that is required is that the measurement is fit for purpose and that that purpose is clearly stated and that the methodology and equipment used to carry out the measurement is clearly specified. This allows a subsequent user decide whether the values given meet his particular requirement or not.

### Page 7. 2.3 Alternative Measurement Practice

This is a difficult area. The use of CAD plans make the calculation of components and areas easier and more accurate. The difficulty, however, is whether available CAD drawings or paper drawings are correct with regards to the “as built” construction. How can their accuracy and precision be determined and validated? The use of the phrase “pre-agreed” areas, negates the whole purpose of a standard. A standard must have universal validity and measurement based on the standard must be acceptable to multiple users. Pre-agreed areas may be acceptable to two negotiators at a particular point in time but may not be acceptable to subsequent parties who were not privy to the agreement.

### Page 7. 2.4 Accuracy and Tolerance

Accuracy is a measure of how close a measurement or a series of measurements approximate to the true physical reality. It is a theoretical concept and is rarely if ever fully achievable. Precision is a measure of the fineness, resolution and repeatability of the measurement system and subsequent plotting of the measurements, normally indicated in terms of plus or minus a tolerance value, i.e. what probability there is that certain percentages of the measurements will fall within given tolerances. Values should be quoted in the form VALUE +/- TOLERANCE and the nature of the tolerance specified i.e. as Root Mean Square Error (RMSE) or 3 standard deviations above and below the mean, or a probability that 99.73% of measured values will lie within the tolerance. etc.

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### Page 8. 2.6 Unit of Measurement

In a European context the metre should be the standard unit of measurement.

### Page 8. 2.7 Restrictions

It has already been stated that comparing like with like is critical in the context of the standard and that comparing floor area which is both physically usable in the fullest sense, and also legally usable, with floor area which is not, makes no sense. As already recommended, this should be changed to allow at least two levels of usability. Including area with restricted usability in IPMS1 is, of course acceptable in defined circumstances. It is equally acceptable to include it within IPMS2, in the sense of Gross Internal Area, also in defined circumstances. It is not acceptable to include it within the Workspace Component where the internal areas have been broken down by component.

### Page 9. 3.1.1 Use

OK

### Page 9. 3.1.2 Definition

In the last paragraph, which states what IPMS1 is not to include, the phrase “but may state separately” should be altered to “but should state separately”

It should also be made explicit that the “other areas that are not fully enclosed, such as terraces, patios and decks” refers to terraces, patios and decks which are structurally disconnected from the building, i.e. not roof terraces or patios and decks which are support by the building and are an itegral part of its construction.

### Page 10. Diagram 1 - IPMS 1: upper floor level

There are anomalies in this diagram regarding what constitutes the external face of a building. For instance, column projections are excluded (left uncoloured). In other forms of building construction these omission could constitute a considerable area. There needs to be far greater clarity in definition and drawing of what constitutes the external face of a building to which the measurement of IPMS1 should apply.

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### Page 11. Diagram 2 - IPMS 1: plan and section

We have recommended that a separate component be created for External Building Areas, to include balconies, galleries, roof terraces, etc. We would see a roof terrace as no different from a balcony in term of construction or use and therefore see no reason why it should be excluded from IPMS1. It should be indicated by the coloured tint on the section.

### Page 12. IPMS 2 – Office: 3.2.1 Use

We recommend that the breakdown of internal areas be removed from IPMS2 and made into a new separate standard.

### Page 12. IPMS 2 – Office: 3.2.2 Definition

It is suggested that IPMS2 should include the sum of the floor areas at each level, **accurately measured**. The concept of Dominant Face introduces serious anomalies and serious inconsistencies, depending on building design and construction method, that would render the standard useless as a comparison tool (see the CLGE position for a full elucidation).

We would recommend that the sub-division of the building areas into components should be made the subject of a separate IPMS and should not be included as part of IPMS2.

We would also recommend that the external building areas such as, balconies, galleries, terraces, patios and decks, which are an integral part of the building, should be included as a component in the new standard (IPMS3), though not reported as part of IPMS2. These integral external building areas should be differentiated from external car parking areas, equipment yards and trash storage areas, which are separate from the building and located directly on the ground surface.

### Page 13. Diagram 3 - IPMS 2 - Office: upper floor level

The anomalies cause by the use of the Dominant Face concept are clearly visible in this diagram. Dominant Face should be abandoned and accurate actual floor measurement substituted.

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### Page 14. Diagram 4 – Dominant Face

The concept of Dominant Face produces inconsistent area values. These inconsistencies will vary depending on the particular construction on any given building and the interpretation by the surveyor. The extent of these inconsistencies render the purpose of the standard null and void. The concept of Dominant Face should be set aside and a more consistent form of floor area definition and measurement substituted. See the CLGE position paper for a fuller analysis of this issue.

### Page 15. Diagram 5 - IPMS 2 - Office: Component Areas

The addition of two new components – permanent partitions and external building areas, has been recommended. The re-evaluation of the definitions of Amenity Areas and Hygiene Areas has also been recommended to remove the anomaly of space being potentially usable as Workspace, Hygiene Area or Amenity area without physical alteration of the space. See attached document for a full description of this issue.

### Page 16. IPMS 2 - Office: Component Areas

The internal projections of the external structure and weatherproofing envelope are an integral part of that component and should be delineated as such.

Component (A) Vertical Penetrations is OK as shown.

The internal structure (B) is OK as shown.

We recommend the creation of a new component – Permanent partition. The partitions between Technical Service Area (C) and Hygiene Area (D) cannot be removed as the two areas are incompatible. Similarly, the partitions between areas (C) and (D) and the Circulation Area (E) may not be removed (toilets cannot be left open to a corridor). The same applies to partitions between a Circulation Area (corridor) in common use, i.e. providing access to Workspace owned or rented by different legal entities. These permanent, non-removable partitions should constitute a new Component.

## IPMS for Offices Exposure Draft Response Form

Comments on this Exposure Draft are invited before Monday 15 September 2014.

Responses may be placed on public record, unless confidentiality is requested.

Please submit as an email attachment to: [response@ipmsc.org](mailto:response@ipmsc.org)

### Page 17. Sample spreadsheet for IPMS 2 - Office

The spreadsheet needs to be extensively amended to take cognizance of the changes required to the building components.

### Page 18. IPMS 3 – Office: 3.3.1 Use

IPMS3, as currently set out, is merely an application or example of the standard definitions and delineations set out in IPMS1, IPMS2, and the component definition, which we recommend should constitute a new standard. We recommend that IPMS3, as currently defined, should be deleted altogether, and the definition of the separate building components be designated as IPMS3 instead. The inclusion of the new component – Permanent Partitions, would facilitate the delineation and accurate measurement of floor area held by each separate occupier.

### Page 18. IPMS 3 – Office: 3.3.2 Definition

We recommend the deletion of the current IPMS3

### Page 19. Diagram 6 - IPMS 3 - Office: upper floor, multiple occupancy

We recommend the deletion of the current IPMS3