Consultation Document
International Property Measurement Standards:
All Building Asset Classes

International Property Measurement Standards Coalition
Welcome to IPMS: All Building Asset Classes

On behalf of the IPMS Coalition we present the IPMS consultation draft. The Coalition comprises organisations from around the world who have come together to create one shared international standard for property measurement. There has been a lack of consistent measurement standards within many markets: our profession and consumers deserve better.

This document follows feedback from previous consultations and discussions with many stakeholders over inconsistencies about measurement of office, industrial, residential and retail property within and across markets.

As a Coalition we have continued the important work of implementation through engaging with governments, occupiers, owners and other important stakeholders. You can view the list of well over 200 companies and governments that have committed to using IPMS at www.ipmsc.org

In preparing this consultation document, the Coalition wishes to acknowledge the work on the diagrams by Tom Pugh of Hollis.

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Introduction

The International Property Measurement Standards Coalition (IPMSC) was formed on 30 May 2013 after meeting at the World Bank in Washington DC. The Coalition, now comprising 89 organisations, aims to bring about the harmonisation of national property measurement standards through the creation and adoption of agreed international standards for the measurement of Buildings.

IPMSC appointed a Standards Setting Committee (SSC) which consulted widely to understand the measurement conventions used in different international markets against the background of the impact on consumers of non-transparent and varying local market practices. The SSC also spent considerable time researching established standards to ensure that existing intelligence was not wasted. The SSC has produced measurement standards for office, residential, industrial and retail property. This document brings those individual standards together into one harmonised standard applicable to all classes of Buildings including those in mixed use and specialist buildings whether held for investment, private occupation or public use.

The SSC did not identify any existing measurement standard that was suitable for adoption internationally. IPMS is not a hybrid of those standards but does introduce some concepts that may be new to some markets. These concepts have been further refined for the purpose of IPMS.

In order to resolve confusion with terms that have established definitions the SSC avoided using existing Floor Area descriptions such as Gross External Area (GEA), Gross Internal Area (GIA), Gross Lettable Area (GLA), Net Internal Area (NIA), Net Leasable Area (NLA) and Net Lettable Area (NLA). These terms are commonly, but inconsistently, used in markets across the world.

The SSC research found measurement practices vary substantially across local and global markets. There was a need to measure the external area of a Building for planning purposes or for the summary costing of development proposals. The SSC decided to refer to this as IPMS 1 and apply it to all classes of Buildings. Component Areas within IPMS 1 will assist the Property Industry in making efficient use of space and benchmarking data. IPMS 2 was developed to measure the internal area of all or part of a Building.

It was also important to measure areas in exclusive occupation for transactions and other purposes. The SSC identified two different measurement bases, IPMS 3A and IPMS 3B, that were required to meet global market needs. The SSC also identified two further different measurement bases, IPMS 4A and IPMS 4B, that were required by facility managers and corporate occupiers to define the area of part of a Building. For the measurement variants of both IPMS 3 and IPMS 4 some markets require only one of these measurement bases, but others may use both for different purposes.

The SSC has focused only on issues directly related to Building measurements and calculated areas within a Building. It is acknowledged that globally there are different Floor Area measurements adopted in construction, transactions and valuation. IPMS will not only provide clarity for those developing, purchasing or leasing property, but also enable comparison of differing measurement standards using IPMS as an interface.

IPMS, as an international property measurement standard, has been created through a transparent, detailed and inclusive standard setting process by the SSC. It supports associated financial reporting and valuation standards such as the International Financial Reporting Standards (IFRS) and, in the USA, the Uniform Standards of Professional Appraisal Practice (USPAP). The International Valuation Standards Council (IVSC) supports IPMS, which should be read in conjunction with International Valuation Standards (IVS).

IPMS is a high level and overarching standard. Markets that do not have an existing established measurement standard are encouraged to adopt IPMS. The SSC expects IPMS to work initially in parallel with local standards and for a dual reporting basis and interface to be adopted where appropriate. In time the SSC expects IPMS to become the primary basis of measurement across all markets.

Standard setting is a never-ending process of continuous improvement and the SSC will be listening closely to property markets to make future improvements to IPMS as and when needed.
Glossary of Terms

This glossary defines terms used in the International Property Measurement Standards and is only applicable to these Standards.

Balustrade
A protective barrier such as a Wall, parapet, railings, or other construction feature that enables Floor Area with one or more open sides to be used safely.

Boundary
A physical or non-physical line denoting the perimeter of an area to be measured.

Building
A construction providing shelter from the environment for occupants or contents, partially or totally enclosed by a roof, designed to stand in one place and comprising all levels within the construction.

Clear Height
The height within a level of a Building or part of a Building measured from the floor surface to the lowest point of the structural element above, ignoring the existence of any brackets, struts or fixtures and fittings. Refer to Diagram 27

Column
A Building member may also be known as a Pillar, generally cylindrical or rectangular in shape, whose primary purpose is to provide structural support and having a maximum ratio of 4:1 comparing the longest and shortest horizontal dimensions.

Component
One of the main elements into which the Floor Area of a Building can be allocated.

Component Area
The Floor Area attributed to one of the Components.

Covered Area
The extent of the area of a Building covered by one or more roofs and the perimeter of which is sometimes referred to as the drip line, being the outermost permanent structural extension, exclusive of ornamental overhangs.

Demising Wall
A Wall, other than an External Wall, between adjoining occupiers’ space or an occupier’s space and Standard Facilities.

External Floor Area
An external horizontal structure at any floor level of a Building with a Balustrade to the open sides and including in this definition generally accessible balconies, colonnades (with balustrade), rooftop terraces, external galleries and loggias but excluding structures such as patios and Level 0 terraces when not integral to the structural construction of the Building.

External Wall
The enclosing element of a Building, excluding appendages and ornamental features, that separates the interior area from the exterior.

Finished Surface
The Wall surface directly above the horizontal wall-floor junction, ignoring any part-height walls, fittings, skirting boards, cable-trunking, pipework and heating or cooling units.

Floor Area
The area of a normally horizontal, permanent, load-bearing structure, inclusive of areas occupied by Walls, Columns, stairs, staircase openings, lift shafts and other vertical penetrations, for all or part of each level of a Building.
Internal Dominant Face (IDF)
The inside surface area comprising more than 50 per cent of the lowest 2.75 metres measured vertically from the structural floor surface, or to the ceiling if lower, for each Wall Section. If such does not occur or, if the IDF is not vertical, the Finished Surface is deemed to be the IDF.

Internal Height
The height within a Building or part of a Building measured from the floor to the lowest point of a ceiling, suspended ceiling or similar defining feature. Refer to Diagram 28

Internal Wall
A full-height Wall within a Building that separates one interior area from another.

IPMS
International Property Measurement Standards.

IPMSC
The International Property Measurement Standards Coalition.

IPMS 1
Floor Area measured to the external extent of the External Walls and to any External Floor Areas, Sheltered Areas and Notional Boundaries. Refer to Diagram 29 and Diagram 30

IPMS 2
Floor Area measured to the internal extent of the IDF and any Notional Boundaries and External Floor Areas. Refer to Diagram 31 and Diagram 32

IPMS 3A
The Floor Area available on an exclusive basis to an occupier measured externally and including any External Floor Areas, Sheltered Areas and Secondary Areas. Refer to Diagram 33 and Diagram 35

IPMS 3B
The Floor Area available on an exclusive basis to an occupier measured internally to the IDF and any Demising Walls and Notional Boundaries. Refer to Diagram 34 and Diagram 36

IPMS 4A
The selected Floor Area in a Building measured to Finished Surfaces and any Notional Boundaries including all Floor Area occupied by Walls and Columns. Refer to Diagram 37

IPMS 4B
The selected Floor Area in a Building measured to Finished Surfaces and any Notional Boundaries excluding (subtracting) all Floor Area occupied by Walls and Columns. Refer to Diagram 38

Limited Use Areas
Areas in Buildings that are incapable of legal or effective occupation due to local or national legislation or practical circumstances.

Mezzanine
An intermediate or partial floor that is usually fully or partially open on one or more sides.

Notional Boundary
A non-physical line, that forms part or all of a Boundary.

Pillar
See Column.

Property
Any real estate asset in the built environment.

Property Industry
Users, Service Providers and Third Parties.

Glossary of Terms
Secondary Area
A demised area forming part of the Building that supports the primary use of any exclusive use area.

Service Provider
Any entity providing real estate related services to a User or Third Party including, but not limited to, valuers, surveyors, facility managers, property managers, asset managers, agents and brokers, space measurement professionals, cost consultants, interior designers and architects.

Sheltered Area
Any part of the Covered Area that is not fully enclosed where the permanent structural extension above provides effective shelter.

Standards Setting Committee (SSC)
The committee appointed by the IPMSC to develop global standards for the measurement of Buildings.

Standard Facilities
Shared areas in a Building that typically do not change over time, such as circulation areas, stairs, escalators, lifts/elevators and their motor rooms, toilets, cleaners’ cupboards, plant rooms, fire refuge areas and maintenance rooms.

Temporary Structure
A physical element within or attached to a Building installed on an interim basis, the removal of which would not damage the physical integrity of the Building.

Third Party
Any entity other than a User or Service Provider with an interest in property measurement including, but not limited to, governments, banks, other property financing bodies, data analysts and researchers.

User
Any entity other than a Service Provider or Third Party with an interest in property measurement including, but not limited to owner-occupiers, developers, investors, purchasers, vendors, landlords and tenants.

Wall
A normally vertical element, whether or not load-bearing, that separates one area from another.

Wall Section
The lateral extent of each section of an External Wall or other external construction feature where the inside finished surface area of each part of a window, Wall or other external construction feature varies from the inside surface area of the adjoining window, Wall or external construction feature, ignoring the existence of any Columns.
Part A: Aim and Scope of the Standards
Part A: Aim and Scope of the Standards

A.1 Aim of Standards

The aim of IPMS is to provide transparency in the measurement of Buildings. IPMS support the requirements of Service Providers, Third Parties and Users of Property for consistency in measurement reporting. Until now the stated area of floor space in identical Buildings has varied considerably between countries, and sometimes within the same country, owing to differing measurement conventions.

A.2 Use of the Standards

IPMS define what is to be measured in a Building and the measurement parameters, but they do not dictate how measurements are to be obtained.

IPMS can be used for any purpose agreed between Users, Service Providers and Third Parties including asset management, benchmarking, construction, facility management, marketing, property financing, research, transactions and valuations.

IPMS provide a common language that can interface with pre-existing local measurement standards.

A.3 Accuracy

Service Providers must adopt appropriate measuring and computing processes so as to satisfy the requirements of Users. These requirements can range from a broad approximation for some purposes to a precise calculation for contractual or other reasons.

A.4 Floor Level Designation

IPMS adopt Level 0 as the primary ground level. Upper and lower levels are referred to sequentially as the number of levels above or below Level 0. For example, Levels 1, 2 or 3, etc. are above Level 0 and Levels -1, -2 or -3, etc. are below Level 0.
Part B: Principles of Measurement
Part B: Principles of Measurement

B.1 General Principles of Measurement and Calculation

IPMS adopt the following fundamental measurement and calculation principles:

1. Items must be capable of being measured.
2. Measurements must be objectively verifiable.
3. All measurements with the exception of height are to be taken horizontally.
4. All measurements and calculations must be clearly documented and the following stated:
   - the IPMS standard used, for example, IPMS 1, IPMS 2, IPMS 3A, IPMS 3B, IPMS 4A or IPMS 4B;
   - the method of measurement and the tools used;
   - the unit of measurement;
   - the date of the measurement; and
   - whether the measurement has been verified on site.
5. Buildings or selected areas are to be measured individually and reported on a level by level basis as existing or as proposed at the time of measurement.

IPMS are a factual measurement and must not include understated or inflated Floor Areas. When faced with situations not explicitly addressed by IPMS, the principles are to be extrapolated using a logical and consistent approach, based on these fundamental principles and supported by an explanation.

B.2 Measurement Practice

General

Areas for IPMS are to be taken from drawings or by directly taking measurements on site.

The SSC recommends that all IPMS measurement is supported by computer-generated drawings, if available but, where other drawings are used as a basis for measurement annotated dimensions on drawings should be used in preference to a reliance on scaling alone.

Unit of Measurement

Measurements and calculations should be in the unit of measurement commonly adopted in the relevant country.

Users and Third Parties may require measurements to be converted between imperial and metric, in which case the conversion factor must be stated.

Measurement Reporting for Proposed Developments

When reporting measurements and Floor Areas for proposed developments, Service Providers must take special care to ensure that measurements are cross-referenced as accurately as is reasonably possible to plans at the date of reporting.
Allocation of Areas

Floor Areas measured in accordance with IPMS1 or IPMS2 may be required by a User to be allocated according to different characteristics or purposes.

Floor Area allocations are to be taken to the centreline of shared internal Walls or to agreed Notional Boundaries. In either case the sum of the allocated areas and any unallocated areas must total the applicable IPMS 1 or IPMS 2 area.

B.3 Limited Use Areas

Service Providers need to be aware that in certain markets there may be areas in Buildings that are incapable of legal or effective occupation due to local or national legislation or practical circumstances. Such areas and their limitations may be identified and, if so, must be measured and stated separately within IPMS reported areas. If areas are subject to a restriction, this should be stated in the reporting document.

Users and Third Parties need to be aware that the inclusion of measured areas in IPMS does not necessarily mean that the areas are available for legal occupation or use.

The reason why a particular area is regarded as a Limited Use Area must be stated, together with any authoritative reference. The following examples are not exhaustive:

Example 1 – Area difference from Internal Dominant Face

There may be a need to show the difference, if any, in Floor Area between measurements taken to the Internal Dominant Face and measurement taken to the Finished Surface.

Example 2 – Areas with height restriction

In various markets, areas defined as having limited or restricted height are identified separately. This height can vary between jurisdictions and should be stated.

Example 3 – Areas with limited natural light

In some jurisdictions, areas with limited natural light in a Building are required to be identified separately.

Example 4 – Above and below ground

A Building may include floors below ground level. For measuring purposes, this may be important in determining the conditions under which the premises may be used in compliance with local or national legislation, rules on fitness for habitation, or taxation.
B.4 Reconciliation between IPMS and other Standards

Where dual reporting is adopted, reconciliation between IPMS and the standard referred to must be appropriately referenced. The SSC recommends that Coalition members provide interface guidance in their local implementation procedures for their respective memberships.

If applicable, for the purposes of conversion between IPMS and another measurement standard, any difference between the perimeter boundary of the non-IPMS standard and IPMS should be identified, measured and stated separately, whether positive or negative.

Where Limited Use Areas are used to distinguish between IPMS and other standards, that intention and reference to the other standard should be clearly stated.
Part C: IPMS Standards
Part C: IPMS Standards

IPMS comprise six standards suitable for different measurement requirements in various jurisdictions. An overview of these are:

- **IPMS 1** (External Measurement) is the **Floor Area** for all or part of a **Building** measured to its external boundary. Refer to Diagram 29 and Diagram 30.

- **IPMS 2** (Internal Measurement) is the **Floor Area** for all or part of a **Building** measured to its internal boundary. Refer to Diagram 31 and Diagram 32.

- **IPMS 3A** (Exclusive Occupation External Measurement) is the **Floor Area** available on an exclusive basis to an occupier measured to the external boundary of the **Building**. Refer to Diagram 33 and Diagram 35.

- **IPMS 3B** (Exclusive Occupation Internal Measurement) is the **Floor Area** available on an exclusive basis to an occupier and where appropriate, measured to the internal boundary of the **Building**. Refer to Diagram 34 and Diagram 36.

- **IPMS 4A** is a selected measured **Floor Area** which includes internal **Walls** and **Columns**. Refer to Diagram 37.

- **IPMS 4B** is a selected measured **Floor Area** which excludes internal **Walls** and **Columns**. Refer to Diagram 38.
Part D: IPMS for Buildings
Part D: IPMS for Buildings

D.1 IPMS 1

D.1.1 IPMS 1 - Overview

IPMS 1 (External Measurement) is the Floor Area for all or part of a Building measured to its external boundary.

D.1.2 IPMS 1 - Scope

Typical uses of IPMS 1 are listed alphabetically below:

- Benchmarking
- Development
- Insurance
- Planning
- Summary Costings
- Transactions

D.1.3 IPMS 1 - Definition

Floor Area measured to the external extent of the External Walls and to any External Floor Areas, Sheltered Areas and Notional Boundaries.

D.1.4 IPMS 1 - Measurement Practice

Stage 1: Determine the IPMS 1 Boundary

The boundary of IPMS 1 for each level is determined by the following hierarchy:

1. Notional Boundary

   Identify any Notional Boundaries that differ from the maximum physical extent of External Floor Areas, Sheltered Areas or External Walls; then (Red dotted line shows the extent of a possible Notional Boundary)

2. External Floor Area

   Identify External Floor Areas which are measured to the outside edge of the floor construction, and then up to the maximum physical extent of the External Walls; then
3. Sheltered Area

Identify any Sheltered Areas and establish a boundary line along the edge of the permanent structural extensions directly above; and then (Red dotted line shows the extent of the Sheltered Area).

4. External Wall

Identify the remaining boundary line along the maximum physical extent of the External Wall.

Stage 2: Other Considerations

Measurements are taken to the centreline of shared External Walls between adjoining Buildings.

The areas occupied by Walls and Columns within the boundary are not deducted.

Where the wall thickness of any External Wall is unknown an estimate should be made and stated.

Void areas such as covered air and stair openings and atria within a Building are excluded but the Floor Area at the lowest level of air and stair openings and atria is included.

Measurement of the upper levels of a void and Mezzanines is to the outside edge of the floor construction.

Access openings, such as roller shutters and folding doors, in an External Wall are ignored when establishing the external boundary line.

External stairs that lead to upper levels are included, except open framework fire escapes which are excluded.

Structures beyond the Covered Area do not form part of the Building. If measured they must be stated as separate Buildings.

Stage 3: Measure and Calculate the Areas included in IPMS 1

Once the IPMS 1 boundary for each level of the Building has been determined, the boundary lines should be measured and the area within the boundary calculated on a level by level basis and or apportioned into different sections of the area being measured. The resulting calculations determine the IPMS 1 for each level or section and these are added together to calculate IPMS 1 for the Building. Any reporting of IPMS 1 must be clear as to whether it is for the entire Building or only for one or more levels of the Building.
Stage 4: Areas included in IPMS 1 but reported separately

The following areas are included in IPMS 1 but, for completeness and clarity, must be itemised individually on a level by level basis:

- Any area between a Notional Boundary and the external perimeter of External Walls;
- Sheltered Areas;
- External Floor Areas;
- Enclosed walkways or passages connecting separate Buildings;
- Enclosed roof-top plant such as mechanical, electrical and lift rooms;
- External stairs that lead to upper levels, excluding open framework fire escapes, which are excluded;
- Limited Use Areas not otherwise identified above.
D.2    IPMS 2

D.2.1    IPMS 2 - Overview

IPMS 2 (Internal Measurement) is the Floor Area for all or part of a Building measured to its internal boundary.

D.2.2    IPMS 2 - Scope

Typical uses of IPMS 2 are listed alphabetically below:

- Benchmarking
- Development
- Facility Management
- Insurance
- Planning
- Summary Costing

Floor Area measured to the internal extent of the IDF and any Notional Boundaries and External Floor Areas.

D.2.3    IPMS 2 Definition

Floor Area measured to the internal extent of the IDF and any Notional Boundaries and External Floor Areas.

D.2.4    IPMS 2 - Measurement Practice

Stage 1: Determine the IPMS 2 Boundary

The boundary of IPMS 2 for each level is determined by the following hierarchy:

1. Notional Boundary

Identify any Notional Boundaries that differ from the Internal Dominant Face; then (Red dotted line shows the extent of a possible Notional Boundary)

![Diagram 5]

2. External Floor Area

Identify any External Floor Areas and establish boundary lines along the innermost line at the top of the Balustrade, but not beyond the outside edge of the floor construction and up to the IPMS 1 External Wall boundary; and then

![Diagram 6]
3. **Internal Dominant Face (IDF)**

Identify the IDF line of all External Walls. Refer to Diagram 26

**Stage 2: Other Considerations**

Measurements are taken to the IDF of shared External Walls between adjoining Buildings. The areas occupied by Walls and Columns within the boundary are not deducted.

Void areas such as covered air and stair openings and atria within a Building are excluded but the Floor Area at the lowest level of air and stair openings and atria is included.

Measurement of Mezzanines and upper floor levels where there is a void is to the IDF or to the innermost line of the top of the Balustrade, whichever is applicable, but not beyond the outside edge of the floor construction. The wall thickness between the External Floor Area and the IDF is excluded from IPMS 2.

*Diagram 7*

Sheltered Areas are excluded from IPMS 2 but may be measured and stated separately.

Areas that are not within the structural construction of a Building such as patios and other external facilities are excluded from IPMS 2. If measured they must be stated separately.

**Stage 3: Measure and Calculate the Areas included in IPMS 2**

Once the IPMS 2 boundary for each level of the Building has been determined, the boundary lines should be measured and the Floor Area within the boundary calculated on a level by level basis and / or apportioned into different sections of the area being measured. The area of any atrium void above the lowest level is deducted at each level. The resulting calculations determine the IPMS 2 for each level or section and these are added together to calculate the IPMS 2 for the Building. Any reporting of IPMS 2 must be clear as to whether it is for the entire Building or only for one or more levels of the Building.

**Stage 4: Areas included in IPMS 2 but reported separately**

The following areas are included in IPMS 2, but for completeness and clarity must be itemised individually on a level by level basis:

- Any area between a Notional Boundary and the Internal Dominant Face
- External Floor Areas
- Mezzanines
- Enclosed walkways or passages connecting separate Buildings;
- Enclosed roof-top plant rooms such as mechanical, electrical and lift rooms;
- Limited Use Areas not otherwise identified above.
Part E: IPMS for Exclusive Use Areas
Part E: IPMS for Exclusive Use Areas

E.3 IPMS 3

E.3.1 IPMS 3 - Overview

IPMS 3A (Exclusive Occupation External Measurement) and IPMS 3B (Exclusive Occupation Internal Measurement) are used for measuring the occupation of Floor Areas in exclusive use.

Property markets may require both IPMS 3A and IPMS 3B for different asset classes or different purposes. Measurement references must state whether the measurement is IPMS 3A or IPMS 3B and not simply IPMS 3.

Each exclusive occupancy area in a multi-occupied Building must be measured separately and level by level. If consistent, the total area of relevant exclusive occupancy areas may be reported as an aggregate of IPMS 3A or IPMS 3B for the Building.

IPMS 3A and IPMS 3B are not directly related to IPMS 1, IPMS 2, IPMS 4A or IPMS 4B.

E.3.2 IPMS 3 - Scope

Typical uses of IPMS 3A and IPMS 3B are listed alphabetically below:

- Benchmarking
- Cost allocation
- Insurance
- Transactions
E.3A  IPMS 3A (Exclusive Occupation External Measurement)

E.3A.1.  IPMS 3A – Definition

The Floor Area available on an exclusive basis to an occupier measured externally and including any External Floor Areas, Sheltered Areas and Secondary Areas.

E.3A.2  IPMS 3A - Measurement Practice

Stage 1: Determine the IPMS 3A Boundary

The boundary of IPMS 3A for each level is determined by the following hierarchy:

1.    Notional Boundary

   Identify any Notional Boundaries that differ from the maximum physical extent of External Floor Areas, Sheltered Areas, External Walls or Demising Walls; then (Red dotted line shows the extent of a possible Notional Boundary)

2.    External Floor Area

   Identify External Floor Areas which are measured to the outermost lines at the top of the Balustrade, but not beyond the outside edge of the floor construction; then

3.    Sheltered Area

   Identify any Sheltered Areas and establish a boundary line along the edge of the permanent structural extensions directly above; then (Red dotted line shows the extent of the Sheltered Area)

4.    External Wall

   Identify the remaining boundary line along the maximum physical extent of the External Wall.

Diagram 8

Diagram 9

Diagram 10
5. Demising Wall

Identify the boundary line along the centreline of any Demising Walls between occupants or adjoining Buildings; then identify the boundary line along the Finished Surface of other Demising Walls, for example between the occupier’s area and Standard Facilities; then

![Diagram 11]

6. Secondary Areas

Consistent with the above Identify the boundary lines of any Secondary Areas, such as seating or storage areas for the primary area not directly connected to the primary area.

Stage 2: Other Considerations

Tenant-related non-permanent changes are disregarded.

The areas occupied by Walls and Columns within the boundary are not deducted.

Where the wall thickness of any External Wall is unknown an estimate should be made and stated.

Void areas such as covered air and stair openings and atria within a Building are excluded but the Floor Area at the lowest level of air and stair openings and atria is included.

Measurement of the upper levels of a void and Mezzanines is to the outermost lines at the top of the Balustrade, but not beyond the outside edge of the floor construction.

![Diagram 12]
Access openings, such as roller shutters and folding doors, in an **External Wall** are ignored when establishing the external boundary line.

External stairs that lead to upper levels are included, except open framework fire escapes which are excluded.

The **Floor Area** occupied by **Standard Facilities** is excluded.

Structures beyond the **Covered Area** that do not form part of the **Building** being measured are excluded, if measured they must be stated separately and individually.

**Stage 3: Measure and Calculate the Areas included in IPMS 3A**

Once the **IPMS 3A** boundary for each level of the **Building** has been determined the boundary lines should be measured and the **Floor Area** within the boundary calculated on a level by level basis. The resulting calculations determine the **IPMS 3A** for each level and these are added together to calculate **IPMS 3A** for the occupier’s exclusive area.

**IPMS 3A** for a multi-occupied **Building** is the aggregate of each occupier’s exclusive use area.

**Stage 4: Areas included in IPMS 3A but reported separately**

The following areas, if in exclusive occupation, are included in **IPMS 3A** but, for completeness and clarity, must be itemised individually on a level by level basis:

- Any area between a **Notional Boundary** and the external perimeter of the **External Walls**;
- **Sheltered Areas**;
- **External Floor Areas**;
- Enclosed walkways or passages connecting separate **Buildings**, which form part of occupier’s area;
- **Mezzanines**;
- Openings for stairs and lifts;
- Vertical technical penetrations with openings greater than 0.1m² (1ft²) and their surrounding walls;
- **Limited Use Areas** not otherwise identified above.
**E.3B IPMS 3B (Exclusive Occupation Internal Measurement)**

**E.3B.1. IPMS 3B - Definition**

The **Floor Area** available on an exclusive basis to an occupier measured internally to the **IDF** and any **Demising Walls** and **Notional Boundaries**.

**E.3B.2 IPMS 3B - Measurement Practice**

*Stage 1: Determine the IPMS 3B Boundary*

The boundary of **IPMS 3B** for each level is determined by the following hierarchy:

1. **Notional Boundary**
   
   Identify any **Notional Boundaries** that differ from an **Internal Dominant Face** or the extent of any **External Floor Areas** or **Sheltered Areas**; then *(Red dotted line shows the extent of a possible Notional Boundary)*

2. **External Floor Area**
   
   Identify any **External Floor Areas** and establish boundary lines along the innermost line at the top of the **Balustrade**, but not beyond the outside edge of the floor construction and up to the **IPMS 1 External Wall** boundary; then

3. **Sheltered Area**
   
   Identify any **Sheltered Areas** and establish boundary lines along the edge of the permanent structural extensions above; then *(Red dotted line shows the extent of the Sheltered Area)*
4. **Internal Dominant Face (IDF)**
Identify the boundary lines along the IDF (refer to **Diagram 26**) of all **External Walls**; then

5. **Demising Wall**
Identify the boundary along the centreline of **Demising Walls** between occupants; then
Identify boundary lines along the **Finished Surface** of other **Demising Walls**, for example between the occupier’s areas and **Standard Facilities**; and then

6. **Secondary Areas**
Consistent with the above Identify the boundary lines of **Secondary Areas**, such as seating or storage areas for the primary area not directly connected to the main occupied area.

**Stage 2: Other Considerations**

Tenant-related non-permanent changes within a **Building** are disregarded.

Measurements are taken to the IDF of shared **External Walls** between adjoining **Buildings**.

The areas of **Walls** and **Columns** within the boundary are not deducted,

Void areas such as covered air and stair openings and atria within a **Building** are excluded but the **Floor Area** at the lowest level of air and stair openings and atria is included.
Measurement of Mezzanines and upper floor levels where there is a void is to the IDF or to the innermost line of the top of the Balustrade, whichever is applicable, but not beyond the outside edge of the floor construction.

Diagram 17

The Floor Area occupied by Standard Facilities is excluded.

External Floor Areas are measured to the innermost line at the top of the Balustrade, but not beyond the outside edge of the floor construction, then up to the IPMS 1 boundary of the External Walls.

The wall thickness between any External Floor Areas and the IDF is excluded from IPMS 3B.

Sheltered Areas are measured up to the IPMS 1 boundary of External Walls.

Structures beyond the Covered Area that do not form part of the Building being measured are excluded. If measured they must be stated separately and individually.

Stage 3: Measure and Calculate the Areas included in IPMS 3B

Once the IPMS 3B boundary for each level of the Building has been determined the boundary lines should be measured and the Floor Area within the boundary calculated on a level by level basis. The resulting calculations determine the IPMS 3B for each level and these are added together to calculate IPMS 3B for the occupier’s exclusive area.

IPMS 3B for a multi-occupied Building is the aggregate of each occupier’s exclusive use area.

Stage 4: Areas included in IPMS 3B but reported separately

The following areas, if in exclusive occupation, are included in IPMS 3B but, for completeness and clarity, must be itemised individually on a level by level basis:

- Any area between a Notional Boundary and the Internal Dominant Face;
- Sheltered Areas;
- External Floor Areas;
- Enclosed walkways or passages connecting separate Buildings, which form part of occupier’s area;
- Mezzanines;
- Openings for stairs and lifts;
- Vertical technical penetrations with openings greater than 0.1m² (1ft²) and their surrounding walls;
- Limited Use Areas not otherwise identified above.
Part F: IPMS for Selected Floor Areas
Part F: IPMS for Selected Floor Areas

F.4 IPMS 4

F.4.1 IPMS 4 - Overview

IPMS 4A and IPMS 4B are used for measuring Floor Areas of selected parts within a Building. Such measurements are directly linked to specific requirements. It may include all or some of the selected parts of the Building. IPMS 4A and IPMS 4B are measured to the Finished Surface.

IPMS 4A and IPMS 4B may be used by Service Providers and Users where there is a need to know measurements within a selected area, which may be the whole Building. Examples of the types of uses to which IPMS 4A and IPMS 4B may be put for the selected parts of a Building are shown below:

- the extent of air-conditioned against non-air-conditioned space;
- how much space has a security restriction;
- the size of a hotel suite;
- the ratio between the front of house and back of house in a hotel;
- the ratio of different uses within a Building;
- defining and verifying a client space requirement;
- the area of departments within an organisation’s space;
- the area required given a desired density of occupancy;
- the size of a maternity wing in a hospital;
- the horizontal and vertical circulation areas within a building;
- room areas within a residence.

When using IPMS 4A and IPMS 4B the selected Floor Areas within the Building that are being measured and the purpose to which the use of this application is to be put must be stated.

Whilst IPMS 4A and IPMS 4B are measured to the Finished Surface, the principles of measurement are the same as for other IPMS measurements.
F.4A  IPMS 4A

F.4A.1  IPMS 4A - Definition

The selected Floor Area in a Building measured to Finished Surfaces and any Notional Boundaries including all Floor Area occupied by Walls and Columns.

F.4A.2  IPMS 4A - Measurement Practice

The Boundary selected for an IPMS 4A measurement must be clearly stated or identified on a plan and the purpose to which the measurement is to be used clearly explained.

Stage 1: Determine the IPMS 4A - selected boundary

The selected boundary of IPMS 4A for each level is determined by the following hierarchy:

1.  Notional Boundary

Identify any Notional Boundaries that differ from a Finished Surface or the extent of any External Floor Areas or Sheltered Areas; then (Red dotted line shows the extent of a possible Notional Boundary)

2.  Finished Surface

Identify the boundary line along the Finished Surface of the internal perimeter Walls and External Walls; then

3.  External Floor Area

Identify any External Floor Areas which are measured to the innermost line at the top of the Balustrade, but not beyond the outside edge of the floor construction, and then up to the boundary of the External Wall; then
4. Sheltered Area

Identify any Sheltered Areas and establish a boundary line along the edge of the permanent structural extensions directly above. *(Red dotted line shows the extent of the Sheltered Area)*

![Diagram 20]

Stage 2: Other considerations

If a Notional Boundary rather than a Finished Surface is adopted, for example in allocating space in an open-plan area, then it has to be clearly identified in any report.

IPMS 4A measurements ignore recessed door openings in the boundary lines and use the Finished Surface line of the wall.

Measurement of External Floor Areas is to the inside line at the top of the Balustrade but not beyond the outside edge of the floor construction.

Measurement of Mezzanines and upper floor levels where there is a void is to the outside line of the floor construction.

![Diagram 21]

Stage 3: Measure and Calculate the Areas included in IPMS 4A

Once the boundary lines have been determined, they should be measured and the area of IPMS 4A calculated.

Stage 4: Areas included in IPMS 4A but must be reported separately

The following areas may be included in IPMS 4A, and, for purposes of completeness and clarity, must be itemised individually:

- External Floor Areas
- Sheltered Areas
- Secondary Areas
- Limited Use Areas
Stage 5: Areas in IPMS 4A that may be reported separately

The following Floor Areas may be reported separately, if required:

- Stairs
- Staircase openings
- Lift shafts
- Other vertical penetrations
**F.4B IPMS 4B**

**F.4B.1 IPMS 4B - Definition**

The selected **Floor Area** in a **Building** measured to **Finished Surfaces** and any **Notional Boundaries** excluding (subtracting) all **Floor Area** occupied by **Walls** and **Columns**.

**F.4B.2 IPMS 4B - Measurement Practice**

The **Boundary** selected for an **IPMS 4B** measurement must be clearly stated or identified on a plan and the purpose to which the measurement is to be used clearly explained.

**Stage 1: Determine the IPMS 4B selected boundary**

The selected boundary of **IPMS 4B** for each level is determined by the following hierarchy:

1. **Notional Boundary**
   
   Identify any **Notional Boundaries** that differ from a **Finished Surface** or the extent of any **External Floor Areas** or **Sheltered Areas**; then *(Red dotted line shows the extent of a possible **Notional Boundary]*)

   ![Diagram 22](image)

2. **Finished Surface**
   
   Identify the boundary line along the **Finished Surface** of the internal perimeter **Walls** and **External Walls**; then

3. **External Floor Area**
   
   Identify any **External Floor Areas** establishing boundary lines along the innermost line at the top of the **Balustrade**, but not beyond the outside edge of the floor construction; then

   ![Diagram 23](image)
4. **Sheltered Area**

Identify any Sheltered Areas and establish boundary lines along the edge of the permanent structural extensions directly above. *(Red dotted line shows the extent of the Sheltered Area)*

![Diagram 24]

**Stage 2: Other considerations**

If a Notional Boundary rather than a Finished Surface is adopted, for example in allocating space in an open-plan area, then it has to be clearly identified in any report.

IPMS 4B measurements ignore recessed door openings in the boundary lines and use the Finished Surface line of the wall.

Measurement of External Floor Areas, Mezzanines and upper floor levels where there is a void, is to the inside line at the top of the Balustrade but not beyond the outside edge of the floor construction.

![Diagram 25]

**Stage 3: Measure and Calculate the Areas included in IPMS 4B**

Once the boundary lines have been determined they should be measured, and the area of IPMS 4B calculated.

**Stage 4: Areas included in IPMS 4B but must be reported separately**

The following areas may be included in IPMS 4B and, if so, for purposes of completeness and clarity, must be itemised individually:

- External Floor Areas
- Sheltered Areas
- Secondary Areas
- Limited Use Areas

**Stage 5: Areas in IPMS 4B that should be reported separately**

The following Floor Areas, if included in the selected area, should be reported separately:

- Stairs
- Staircase openings
- Lift shafts
- Other vertical penetrations
Part G: IPMS Technical
Part G: IPMS Technical

G.1.1 Overview - Component Areas

The use of Component Areas is determined by User requirements. They may be applied when IPMS areas need to be separately allocated for purposes such as benchmarking, comparison and analysis and conversion between different standards.

Any Component Areas reported to a User or Third Party should, where practical and appropriate, be cross-referenced to an appropriately coloured drawing and Component Area spreadsheet.

G.1.2 Scope

Typical uses of Component Areas are listed alphabetically below:

- Benchmarking
- Building Design
- Facility Management
- Planning

G.1.3 Use of the Component Areas

The sum of all the Component Areas will equal IPMS 1 for the relevant Building or level of a Building being measured.

In a mixed-use Building there may need to be separate lists of Component Areas for each use.

Component Areas A, B and G may be further allocated as Sub-Component Areas A1, A2, A3, A4; B1, B2; or G1, G2 as shown on Table 1.

If required, Sub-Component Areas can also be further allocated. For example, Sub-Component Area A4 could be allocated into Walls and Columns.

Component Areas could also be allocated according to private or public use or allocated between enclosed space and External Floor Areas. Any such allocations must be clearly reported.

The Component Areas may be stated as a total or further allocated according to use. Eg lift motor room, air conditioning plant rooms.
G.1.4 Measurement Practice

Component Areas are measured in the sequence in the table below and measured to:

- the maximum physical extent of the External Wall;
- the Internal Dominant Face of External Walls to identify the area occupied by the External Wall; Refer to Diagram 26
- the Finished Surface of all internal Walls;
- outermost line at the top of the Balustrade, but not beyond the outside edge of the floor construction;
- the boundary line along the edge of the permanent structural extensions directly above.

A portion of a Floor Area that can be allocated to more than one Component Area should be allocated to the Component Area that best reflects the dominant purpose.

It may be necessary to divide Demising Walls in half when making allocations, for example, in Component Areas A3 and F.

Non-enclosed floor openings such as piping, conduits or vents of less than 0.1 sq m (1 sq ft) are disregarded and the area is included in the surrounding Component Area.

The following table shows the Component Areas:
<table>
<thead>
<tr>
<th>Component Area A</th>
<th>Sub-Component Area A1</th>
<th>External Enclosing Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Areas</td>
<td></td>
<td>External Walls (measured to the IDF) and Balustrades, which can be further divided into structural and non-structural parts, if required.</td>
</tr>
<tr>
<td></td>
<td>Sub-Component Area A2</td>
<td>Intersurface Adjustment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Wall area between IDF and Finished Surface</td>
</tr>
<tr>
<td></td>
<td>Sub-Component Area A3</td>
<td>Internal Structural Elements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internal Walls and internal Columns.</td>
</tr>
<tr>
<td></td>
<td>Sub-Component Area A4</td>
<td>Internal Non-Structural Elements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Balustrades, if located within the measured floor area, Internal full-height Walls and similar non-structural elements other than those included in Component Area A1, A2 and A3.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component Area B</th>
<th>Sub-Component Area B1</th>
<th>Vertical Circulation Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Penetration Areas</td>
<td></td>
<td>Staircase openings, stairs, lift / elevator shafts and escalators.</td>
</tr>
<tr>
<td></td>
<td>Sub-Component Area B2</td>
<td>Vertical Technical Areas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Service shafts and ducts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component Area C</th>
<th>Component Area C</th>
<th>Technical Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Areas</td>
<td></td>
<td>Mechanical and electrical plant rooms, lift / elevator motor rooms and maintenance rooms.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component Area D</th>
<th>Component Area D</th>
<th>Sanitary Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitary Areas</td>
<td></td>
<td>Toilet facilities, cleaners’/janitors’ cupboards, bath/shower rooms and changing rooms.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component Area E</th>
<th>Component Area E</th>
<th>Horizontal Circulation Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circulation Areas</td>
<td></td>
<td>Circulation areas whether or not enclosed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component Area F</th>
<th>Component Area F</th>
<th>Primary Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Areas</td>
<td></td>
<td>Areas used for primary purposes such as industrial, office, residential or retail.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component Area G</th>
<th>Sub-Component Area G1</th>
<th>Amenity Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Areas</td>
<td></td>
<td>Areas for the benefit of the primary purpose such as landlord-provided food court seating areas, exercise or child-minding facilities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component Area G</th>
<th>Sub-Component Area G2</th>
<th>Ancillary Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Areas</td>
<td></td>
<td>Areas such as delivery areas, refuge areas and internal car parking.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component Area H</th>
<th>Component Area H</th>
<th>Other Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Areas</td>
<td></td>
<td>All other areas included in IPMS 1 but not otherwise included in Component Areas A-G.</td>
</tr>
</tbody>
</table>
G.2 Internal Dominant Face

The **Internal Dominant Face (IDF)** is the inside surface area comprising more than 50 per cent of the lowest 2.75 metres measured vertically from the structural floor surface, or to the ceiling if lower, for each **Wall Section**. If such does not occur or if the IDF is not vertical, the **Finished Surface** is deemed to be the **IDF**.

A **Wall Section** is the lateral extent of each section of an **External Wall** or other external construction feature, where the inside finished surface area of each part of a window, **Wall** or other external construction feature varies from the inside surface area of the adjoining window, **Wall** or external construction feature, ignoring the existence of any **Columns**.

Refer to **Diagram 26** on following page
Diagram 26: Internal Dominant Face (IDF)
G.3 Internal Height & Clear Height

**Clear Height**
The height within a level of a Building or part of a Building measured from the floor surface to the lowest point of the structural element above, ignoring the existence of any brackets, struts or fixtures and fittings. *(red dotted line shows Clear Height)*

![Diagram 27](image)

**Internal Height**
The height within a Building or part of a Building measured from the floor to the lowest point of a ceiling, suspended ceiling or similar defining feature.

![Diagram 28](image)
Part H: Technical IPMS Diagrams
Technical diagrams do not reflect a particular asset class.

The sole purpose of each technical diagram is to depict the principles of the IPMS concept.
Technical diagrams do not reflect a particular asset class.

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Diagram 33: IPMS 3A Level1 Single Occupancy

Technical diagrams do not reflect a particular asset class.

The sole purpose of each technical diagram is to depict the principles of the IPMS concept.
Diagram 34: IPMS 3B Level 1 Single Occupancy

Technical diagrams do not reflect a particular asset class.
The sole purpose of each technical diagram is to depict the principles of the IPMS concept.
Technical diagrams do not reflect a particular asset class.
The sole purpose of each technical diagram is to depict the principles of the IPMS concept.

Diagram 35: IPMS 3A Level 1 Multi Occupancy
Technical diagrams do not reflect a particular asset class.

The sole purpose of each technical diagram is to depict the principles of the IPMS concept.
Technical diagrams do not reflect a particular asset class.

The sole purpose of each technical diagram is to depict the principles of the IPMS concept.
The area of stairs, staircase openings, lift shafts and other vertical penetrations, if included in the selected area, should be stated separately.

Diagram 38: IPMS 4B

Technical diagrams do not reflect a particular asset class.

The sole purpose of each technical diagram is to depict the principles of the IPMS concept.
Part I: APPENDICES
Part I: Appendices - IPMS Coalition

The Coalition members at the date of publication include:

- Asociación de Consultoras Inmobiliarias (ACI)
- La Asociacion Espanola de Analisis de Valor (AEV)
- Appraisal Institute (AI)
- Asian Association for Investors in Non-listed Real Estate Vehicles (ANREV)
- Asociación de Promotores Constructores de España (APCE)
- Asociación Española de Geómetras Expertos (AEGEX)
- Australian Property Institute (API)
- Asia Pacific Real Estate Association (APREA)
- Asociacion Professional de Sociedades de Valoracion (ATASA)
- The American Society of Farm Managers and Rural Appraisers (ASFMRA)
- Italian Real Estate Industry Association (ASSOIMMOBILIARE)
- American Society for Testing and Materials (ASTM)
- Federation of real estate investment Expert (Bundesverband der Immobilien-Investment-Expert (BiIS)
- British Property Federation (BPF)
- Building Owners & Managers Association Canada (BOMA Canada)
- Building Owners & Managers Association China (BOMA China)
- Building Owners & Managers Association Indonesia (BOMA Indonesia)
- Building Owners & Managers Association International (BOMA International)
- Building Owners & Managers Association Japan (BOMA Japan)
- China Institute of Real Estate Appraisers and Agents (CIREA)
- Chongqing Real Estate Association
- Competence Centre Process Management Real Estate (CC PMRE)
- Commonwealth Association of Surveying and Land Economy (CASLE)
- Consiglio Nazionale Geometri e Geometri Laureati (CNGeGL)
- European Association of Real Estate Professions (CEPI-CEI)
- CoreNet Global
- Council of European Geodetic Surveyors (CLGE)
- Council on Tall Buildings and Urban Habitat (CTBUH)
- Counselors of Real Estate (CRE)
- Cyprus Association of Civil Engineers (CYACE)
- Cypriots Architects Association (CAA)
- Czech Banking Association (CBA)
- Emirates Green Building Council (EmiratesGBC)
- European Mortgage Federation (EMF)
- Technical Chamber of Cyprus (ETEK)
- Facility Management Institute Slovakia (FMiS)
- FM Institute Czech
- International Real Estate Federation (FIABCI)
- International Federation of Surveyors (FIG)
- Ghana Institution of Surveyors (GhIS)
- Society of Property Researchers, Germany (GfS)
- GRESB
- HypZert
- International Association of Assessing Officers (IAAO)
- International Consortium of Real Estate Associations (ICREA)
- Institute of Estate Agents (IEA)
- Hungarian Real Estate Developers Association (IFK)
- International Facility Management Association (IFMA)
- International Facility Management Association – Poland (IFMA)
- European Association for Investors in Non-Listed Real Estate Vehicles (INREV)
- International Monetary Fund (IMF)
- Institute of Philippines Real Estate Appraisers (IPREA)
- Institute of Real Estate Management (IREM)
- International Right of Way Association (IRWA)
- Institution of Surveyors Kenya – ISK
- International Union of Tenants (IUT)
- Iuav University of Architecture
Japanese Association of Real Estate Appraisers (JAREA)
Japan Association of Real Estate Counselors (JAREC)
Bulgarian Chamber of Professional Valuers (KPD)
The Middle East Council of Shopping Centres (MECSC)
Nigerian Institution of Estate Surveyors and Valuers (NIESV)
National Society of Professional Surveyors (NSPS)
Ordre des géomètres experts français (OGE)
Cyprus Federation of Building Contractors Associations (OSEOK)
Open Standards Consortium for Real Estate (OSCRE)
Polish Green Building Council (PGBC)
Property Institute New Zealand (PINZ)
Property Council of Australia (PCA)
Property Council New Zealand (PCNZ)
ProProgressio
Queensland Spatial & Surveying Association (QSSA)
The Real Estate Institute of Botswana (REIB)
Real Estate Syndicate of Lebanon (REAL)
Real Property Association of Canada (REALpac)
Real Estate Investments Zimbabwe (REIZ)
Royal Institute of British Architects (RIBA)
Royal Institution of Chartered Surveyors (RICS)
Royal Society of Ulster Architects (RSUA)
Russian Cadastral Engineers
South African Property Owners Association (SAPOA)
Society of Chartered Surveyors Ireland (SCSI)
SECOVI – SP (SECOVI)
Cyprus Association of Quantity Surveyors and Construction Economists (SEEOKK)
Society of Office and Industrial Realtors (SIOR)
Swiss Surveyors Association (IGS)
Appraisal Foundation (TAF)
International Union of Property Owners (UIPI)
The National Union of Economists of the Construction (UNTEC)
Germany Property Federation (ZIA)
Part I: Appendices - IPMS Standards Setting Committee

In July 2013 the IPMSC selected real estate experts from around the world to form its Standards Setting Committee (SSC) and develop global standards for property measurement.

The SSC brings together experts including academics, real estate fund and asset managers, valuers, and specialists in development and construction. The SSC acts independently from the Coalition and its respective members.

At the time of publication, the SSC members and co-authors of this standard for IPMS are:

- **Chairman:** Peter L. Stevenson MBOMA, MRICS (USA)
- **Vice Chairman:** Frederic Mortier MSc (Belgium)
- **Executive Secretary to the Committee:** Alexander Aronsohn FRICS (UK)

Alex Leung MHKIS, MRICS. MCIREA (China)
Allen Crawford FRICS, FAPI (Australia)
André Lukashev MRICS, CCIM, SIOR (Russia)
Anthony Gebhardt MRICS, RQS (South Africa)
Prof. Dario Trabucco PhD (Italy)
Howard Morley ANZIV, SNZPI, FREINZ, AAMINZ (New Zealand)
Koji Tanaka FRICS, ACIarb, RIBA, JIA (Japan)
Luke Mackintosh MRICS, AAPI, F Fin (Australia)
Max Crofts FRICS (UK)
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Randal Froebelius (Canada)
Prof. Dr. Ing. Regina Zeitner (Germany)
Tom Pugh FRICS (UK)
Dipl. Ing. Wolfgang Glunz REV (Germany)