International Property Measurement Standards: Retail Buildings

International Property Measurement Standards Coalition
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Welcome to IPMS: Retail Buildings

On behalf of the IPMS Coalition we present IPMS: Retail Buildings. The Coalition comprises organisations from all over the world, who have come together to create one shared international standard for property measurement. We have recognised that there has been a lack of consistent measurement standards within many markets. Our profession and consumers deserve better.

IPMS: Retail Buildings follows feedback from previous building classes consultations and discussions with many stakeholders over inconsistencies in retail measurement within and across markets. It is a continuation of the work already carried out in relation to measurement of office, residential and industrial buildings and part of a programme of work that includes preparing IPMS standards for other building classes and for mixed use.

The Coalition accepts that standard setting is a never-ending process of continuous improvement and will be listening closely to the market to make future developments to the standard as and when needed.

As a Coalition we are also continuing 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 document, the Coalition wishes to acknowledge the work on the floorplans by Professor Marc Grief of Mainz University of Applied Sciences and Tom Pugh of Malcolm Hollis.

For further information on IPMS please visit www.ipmsc.org.

Lisa Prats, Trustee for BOMA International, Chair of the Board of Trustees IPMS Coalition
Kenneth M Creighton, Trustee for RICS, Vice Chairman of the Board of Trustees IPMS Coalition
Maurice Barbieri, Trustee for FIG, Secretary General of the Board of Trustees IPMS Coalition
Introduction to IPMS Coalition

The International Property Measurement Standards Coalition (IPMSC) was formed on 30 May 2013 after meeting at the World Bank in Washington DC. The Coalition, comprising (at the date of publication) the 89 organisations listed below, 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.

This document for the measurement of Retail Buildings is the fourth building class document prepared by the Coalition’s Standards Setting Committee (SSC). 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 (ASSOIM-MOBILIARE)
- 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
- 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 (FMI)
- FM Institute Czech
- International Real Estate Federation (FIABCI)
- International Federation of Surveyors (FIG)
- Ghana Institution of Surveyors (GhIS)
- Society of Property Researchers, Germany (GIF)
- GRESB
- HypZert
- International Association of Assessing Officers (IAAO)
- International Consortium of Real Estate Associations (ICREA)
- Institute of Estate Agents Singapore (IEAS)
- 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 (KPO)
- 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)
Research by the SSC has found that measurement practices vary substantially across local and global retail markets. 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: Retail Buildings will not only provide clarity for those purchasing or leasing retail property, but also enable comparison of differing measurement standards by interfacing to IPMS.

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).

The SSC has spent considerable time researching established standards to ensure that existing intelligence has not been wasted. The SSC did not identify any existing retail 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.

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.

The SSC considered it unrealistic to create a single standard that would immediately apply to all classes of Buildings because each has distinctive characteristics that require individual analysis. However, the principles, methodology and measurement practices developed for IPMS will be similar for all Buildings. IPMS needs to be consistent as another class of Building, mixed use, incorporates several Building classes.

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 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. Our research found there was a need to measure the external area of a Building and Component Areas, 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 Building. IPMS 2 – Retail was developed to measure the internal area of a Building and Component Areas and will assist the Property Industry in making efficient use of space and benchmarking data. It was also important to measure areas in exclusive occupation for transactions and other purposes. The SSC identified three different measurement bases, IPMS 3A – Retail, IPMS 3B – Retail and IPMS 3C – Retail, that were required to meet global market needs. Some markets require only one of these measurement bases, but others may use two or three for different purposes.
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 Retail Buildings are:

**Chairman:** Kent Gibson BOMA Fellow (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)
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)
Nicholas Stolatis CPM, RPA, LEED AP (USA)
Peter L. Stevenson BOMA, RICS (USA)
Prof. Dario Trabucco PhD (Italy)
Prof. Dipl. Ing. Marc Grief, Architect AKH (Germany)
Prof. Dr. -Ing. Regina Zeitner CC PMRE (Germany)
Tom Pugh FRICS (UK)
Wolfgang Glunz (Germany)
Definitions

Amenity Area
An area included in the Building being measured, used and shared by some or all of the occupiers or their visitors for supplementary purposes, for example food courts, child-minding facilities and prayer rooms.

Ancillary Area
An area in exclusive use in the same Building, which is separate from the main area being measured and is being used for supplementary purposes.

Balcony
See External Floor Area.

Balustrade
A protective barrier formed by a solid Wall, railing or other feature.

Building
An independent attached or detached Structure, which may include a Covered Area in whole or in part, forming all or part of a Property.

Catwalk
An internal or external walkway above the surrounding area that provides higher level access.

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

Coalition
The Trustees of IPMS, comprising not-for-profit organisations each with a public interest mandate.

Column
See Pillar.

Common Facilities
Those parts of a Building that would, in multiple occupation, provide shared facilities that typically do not change over time and may include, for example, circulation areas, stairs, escalators, lifts/elevators and motor rooms, toilets, cleaners’ cupboards, plant rooms, fire refuge areas, maintenance rooms and unallocated parking spaces.

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

Component Area
The total Floor Area attributed to one of the Components.
Covered Area
The extent of the area of a Building covered by one or more roof(s) and the perimeter of which is sometimes referred to as the drip line, being the outermost permanent structural extension, exclusive of ornamental overhangs.

External Floor Area
An external platform at an upper floor level with a Balustrade to the open side projecting from or recessed from an External Wall and including generally accessible rooftop terraces, balconies, external galleries and loggia.

External Wall
The enclosing element of a Building, including windows and Walls, that separates the exterior area from the interior area.

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

Floor Area
The area of a normally horizontal, permanent, load-bearing structure for each level of a Building.

IDF (Internal Dominant Face) 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 Pillars.

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

Internal Height
The height within a Building or section of a Building measured from the floor to the lowest point of a ceiling or suspended ceiling, ignoring the existence of any brackets, struts or fixtures and fittings.

Internal Wall
A full-height Wall, whether or not structural, that separates one interior area from another.

IPMS
International Property Measurement Standards.

IPMSC
The International Property Measurement Standards Coalition.

IPMS 1
The total of the areas of each floor level of a Building measured to the outer perimeter of External Walls or other external construction features, Sheltered Areas and External Floor Areas.

IPMS 2
The total of the areas of each floor level of a Building measured to the Internal Dominant Face (IDF) of all External Walls and External Floor Areas on each level.
**IPMS 3**

The **Floor Area** available on an exclusive basis to an occupier.

**Loading Bay**

Area(s) designed for vehicles next to or adjacent to a **Loading Dock**.

**Loading Dock**

Elevated platform(s) at an opening of a **Building** designed for receiving or dispatching goods or equipment.

**Mall Line**

See **Shop Line (Presumed Boundary)**.

**Mezzanine**

An intermediate or partial floor, other than a **Catwalk**, that is usually fully or partially open on one or more sides.

**Patio**

A paved or floored terrace, adjacent to a **Building**, which may or may not be covered by an independent framework.

**Pillar**

An upright slender building element, whose primary purpose is to provide structural support.

**Property**

Any real estate asset in the built environment.

**Property Industry**

Comprises **Users**, **Service Providers** and **Third Parties**.

**Retail Building**

A **Building** predominately used for retail purposes, whether or not part of the **Building** is used for other purposes.

**Room**

A separately defined, usually enclosed, floor area subdividing a **Space** normally bounded by **Walls** or other dividing features.

**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 but excluding insignificant areas under the eaves.

**Shop Line (Presumed Boundary)**

The notional line established as the maximum potential extent of the retail area in exclusive use. This may be the actual shop front or, in shopping centres for example, may be known as the **Mall Line**.
Space
Any area forming a part of a Building other than a Room.

Space Measurement Professional
A Service Provider qualified by experience or training to measure Buildings in accordance with IPMS.

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

Standard Facilities
See Common Facilities.

Structure
A construction that provides shelter or serves an ancillary function, but is not necessarily fully enclosed.

Temporary Structure
A physical element within a Building installed on an interim or permanent 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
An owner-occupier, developer, investor, purchaser, vendor, landlord or tenant.

Valuer
A Service Provider with an appropriate professional qualification in valuation or appraisal.

Veranda
An open or partly enclosed area on the outside of a Building normally at ground level (level 0) and covered by a roof that is an integral part of the Building.

Wall
A vertical element whose primary purpose is to fully or partially enclose or subdivide a Space or Room.
Part 1 Aim and Scope of the Standards

1.1 Aim of the standards

The aim of IPMS is to provide transparency in the measurement of Buildings. IPMS supports 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.

The measurements can be used for asset management, benchmarking, construction, facility management, marketing, property financing, research, transaction, valuation and other purposes.

1.2 Use of the standards

IPMS defines what is to be measured in a Building and the measurement parameters. IPMS does not dictate how measurements are to be obtained.

The appropriate IPMS building class (such as office, residential, industrial, retail) to be used should be chosen according to the current or proposed designed function of the Building or part of a Building being measured.

IPMS can be used for any purpose agreed between Users, Service Providers and Third Parties.

IPMS provides a common language that can interface with existing local measurement standards.

1.3 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.

1.4 Floor level designation

The SSC found there to be no market consistency in the reference to a particular level.

For all property classes IPMS has adopted 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 2 Principles of Measurement

2.1 General principles of measurement and calculation

IPMS is a factual measurement and must not include understated or inflated Floor Area(s). The SSC has adopted the following fundamental principles of measurement and calculation, which apply to all Buildings:

1. The item must be capable of being measured.
2. The measurement must be objectively verifiable.
3. All measurements with the exception of height are to be taken horizontally.
4. The measurements and calculations must be clearly documented and the following stated:
   • the IPMS standard used, for example, IPMS 1, IPMS 2 – Retail, IPMS 3A – Retail, IPMS 3B – Retail or IPMS 3C – Retail
   • the method of measurement and the tools used (see Section 2.2)
   • the unit of measurement
   • the date of the measurement and
   • whether the measurement is verified on site.
5. Buildings are to be measured individually and reported on a floor-by-floor basis as existing or proposed at the time of measurement.
6. The principles of IPMS should be extrapolated using a common-sense approach.

2.2 Best measurement practice

2.2.1 General

The SSC recommends that all IPMS measurements are 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.

The Service Provider must report how the Floor Area has been established, for example by computer-generated drawings, other drawings or by laser or tape measurement.

2.2.2 Unit of measurement

Measurements and calculations should be in the unit 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.

2.2.3 Measurement reporting

Any Component Area under IPMS 1 or IPMS 2 reported to a User or Third Party should, where practical and appropriate, be cross-referenced to an appropriately coloured drawing and Component Area spreadsheet.
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.

2.3 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. Such areas and their limitations are to be identified, measured and stated separately within IPMS reported areas. If areas are subject to a restriction, this should be stated in the reporting document and in any Component Area spreadsheet.

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.

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 IDF and measurements taken to the wall-floor junction.

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 in some instances the restricted height may be due to construction features. Where this is the restricted height adopted, this 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.

2.4 Adjustment between IPMS and other standards

Where dual reporting is adopted, reconciliation between IPMS and the standard referred to must be appropriately explained. The SSC recommends that Coalition members provide interface guidance in their local implementation procedures for their respective membership.
Part 3 IPMS Standards

The IPMS standards (and their principal uses) are:

- IPMS 1 (External).
- IPMS 2 – Retail (Internal).
- IPMS 3A – Retail (Occupier).
- IPMS 3B – Retail (Occupier).
- IPMS 3C – Retail (Occupier).

3.1 IPMS 1

3.1.1 Use

IPMS 1 is used for measuring the area of a Building including External Walls.

The primary intent of IPMS 1 is for use for planning purposes or the summary costing of development proposals.

IPMS 1 is a whole Building measurement.

3.1.2 Definition

IPMS 1: The total of the areas of each floor level of a Building measured to the outer perimeter of External Walls or other external construction features, Sheltered Areas and External Floor Areas.

The definition for IPMS 1 is the same for all classes of Building.

Measurement practice:

Areas for IPMS 1 are to be taken from drawings or on site.

If required, IPMS 1 can be reported on a Component-by-Component basis for each floor of the Building. The aggregate of the Component Areas must equal IPMS 1.

If there are no available plans for a basement, the area must include an estimation of the External Wall thickness.

In respect of Sheltered Areas, IPMS 1 is to be measured to the Covered Area. In respect of roller shutters and other openings the principal external perimeter line of the Building across such openings should be followed to measure IPMS 1.

External Floor Areas and internal permanent Mezzanines are to be measured to the outside edge of the Balustrade but never to exceed the outside edge of the floor construction.
Inclusions:

IPMS 1 includes all areas and Walls, Pillars and enclosed walkways or passages between separate Buildings, available for direct or indirect use. Enclosed void areas such as atria are only included at their lowest floor level.

Measurements included but to be stated separately:

External Floor Areas, Sheltered Areas, Verandas and Mezzanines are included but the measurement of each must be stated separately.

Measurements excluded but to be stated separately if measured:

Measurement for IPMS 1 does not include:

- **Temporary Structures**
- open light wells or the upper level voids of an atrium
- open external stairways that are not an integral part of the Building, for example, an open framework fire escape
- any Structure beyond the Covered Area.

### 3.1.3 Summary

<table>
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<th>Included</th>
<th>Included but stated separately</th>
<th>Excluded but stated separately if measured</th>
</tr>
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<tbody>
<tr>
<td><strong>Walls, Pillars.</strong></td>
<td>The areas between the Shop Line (Presumed Boundary) and outer face of the External Wall.</td>
<td>Any other Temporary Structures or ground level areas beyond the Covered Area.</td>
</tr>
<tr>
<td>Covered void areas such as atria are only measured and included at their lowest level.</td>
<td><strong>Sheltered Areas</strong> measured to the outer perimeter of the Covered Area.</td>
<td>Any other Structures or ground level areas beyond the Covered Area.</td>
</tr>
<tr>
<td>External Floor Areas and internal permanent Mezzanines measured to the outer face of the Balustrade but never to exceed the outside edge of the floor construction.</td>
<td>Enclosed walkways or passages connecting separate Buildings.</td>
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Part 1  
Aim and Scope of the Standards

Part 2  
Principles of Measurement

Part 3  
IPMS Standards

Part 4  
Technical

IPMS: Retail Buildings
Diagram 1 shows by red lines the extent of IPMS 1 measurements.

Diagram 1: IPMS 1 – Retail (units cross section)
Diagram 2 shows the extent of IPMS 1 – Retail at level 0, when the development of four retail units is treated as a Building.
Diagram 3 shows the extent of IPMS 1 – Retail at Mezzanine level, when the development of four retail units is treated as a Building.
Diagram 4 shows the retail mall level 0 as a Building.
Diagram 5 shows the retail mall level 1 as a Building.
Diagram 6 shows a retail freestanding Building.

Diagram 6: IPMS 1 – Retail (freestanding Building)
Diagram 7 shows a retail strip centre treated as a Building.
3.2 IPMS 2 – Retail

3.2.1 Use

IPMS 2 – Retail is a whole Building measurement that is used for measuring the interior boundary area of a Building. The primary intended use is for providing data on the use of space and for benchmarking.

IPMS 2 – Retail enables Users, Third Parties and Service Providers to make direct floor space comparisons between data derived from different market practices.

3.2.2 Definition

IPMS 2 – Retail: The total of the areas of each floor level of a Building measured to the IDF of all External Walls and External Floor Area on each level.

Measurement practice:

All areas in a Retail Building, including for example storage, are to be measured in accordance with IPMS 2 – Retail. External Floor Areas and Mezzanines are to be measured to the inner face of the Balustrade, but not beyond the outside edge of the floor construction. If required IPMS 2 – Retail may be reported on a Component-by-Component basis for each floor of a Building.

Inclusions:

IPMS 2 – Retail includes all internal areas, including Internal Walls and Pillars. Enclosed void areas such as atria are only included at their lowest floor level.

Measurements included but to be stated separately:

External Floor Areas, internal Loading Bays, Mezzanines and enclosed walkways or passages between separate Buildings, available for direct or indirect use, are included but the measurement of each must be stated separately.

Measurements excluded but to be stated separately if measured:

Areas outside the External Wall such as Sheltered Areas and external Loading Bays do not have to be measured, but if they are measured these areas should be stated individually and separately. Sheltered Areas are to be measured to the Finished Surface of any Walls and otherwise to the outer perimeter of the Covered Area.
3.2.3 Summary

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<th>Excluded but stated separately if measured</th>
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</thead>
<tbody>
<tr>
<td>• Areas within the IDF includes internal Walls and Pillars.</td>
<td>• Internal Loading Bays.</td>
<td>• Areas outside the External Wall other than areas that are defined as being within the Shop Line (Presumed Boundary).</td>
</tr>
<tr>
<td>• Areas such as atria or similar are only measured and included at their lowest level.</td>
<td>• Internal Mezzanines.</td>
<td>• Sheltered Areas.</td>
</tr>
<tr>
<td></td>
<td>• Enclosed passageways between separate Buildings.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• External Floor Area(s) measured to the inner face of the Balustrade but never to exceed the outside edge of the floor construction.</td>
<td></td>
</tr>
</tbody>
</table>

Diagram 8 shows by red lines the extent of IPMS 2 – Retail measurements.

Diagram 8: IPMS 2 – Retail (unit cross section)
Diagram 9 shows the extent of IPMS 2 – Retail at level 0, when the development of four retail units is treated as a Building.
Diagram 10 shows the extent of IPMS 2 – Retail at Mezzanine level, when the development of four retail units is treated as a Building.

Diagram 10: IPMS 2 – Retail (units at Mezzanine level)
Diagram 11 shows the retail mall level 0 as a **Building**.
Diagram 12 shows the retail mall level 1 as a Building.
Diagram 13 shows a retail freestanding building treated as a Building.
Diagram 14 shows a retail strip centre treated as a Building.
3.3 IPMS 3 – Retail

3.3.1 Use

IPMS 3A – Retail, IPMS 3B – Retail and IPMS 3C – Retail are used for measuring the occupation of Floor Area(s) in exclusive use. They are not directly related to IPMS 1 or IPMS 2 – Retail.

The SSC has researched international property markets and identified different measurement bases that need to be accommodated for transaction or cost allocation purposes. Some markets require only one of these measurement bases for transactional purposes, that being the primary intended use for IPMS 3. Other markets may use IPMS 3A – Retail, IPMS 3B – Retail or IPMS 3C – Retail depending on the purpose.

Service Providers must not simply state that a measurement is in accordance with IPMS 3 – Retail. The reference must state whether the measurement is IPMS 3A – Retail, IPMS 3B – Retail or IPMS 3C – Retail.

Each retail unit in a multi-occupied Building must be measured separately but, if consistent, the total area of all relevant units may be reported as an aggregate of IPMS 3A – Retail, IPMS 3B – Retail or IPMS 3C – Retail.

3.3.2 IPMS 3A – Retail definition

IPMS 3A – Retail: The area in exclusive occupation, including the Floor Area occupied by External Walls, Internal Walls and Pillars, including any External Floor Area(s), Sheltered Area(s) and Ancillary Area(s).

Measurement practice:

The area of exclusive occupancy is measured adopting the following hierarchy to:

- the centre-line of shared Walls between occupants and/or
- the Shop Line (Presumed Boundary) and/or
- the outside face of the External Walls and otherwise
- to the Finished Surface.

A Shop Line (Presumed Boundary) may not exist everywhere and relates to the legally accessible part of the shop or retail unit, not to its enclosure. Where there is no Shop Line (Presumed Boundary), measurements are to be taken to the physical shop front.

The Floor Area occupied by stairs is only to be included at the lower level. For clarification, the principle detailed in Item 5 in Section 2.1 is to be applied: ‘Buildings are to be measured individually and reported on a floor-by-floor basis as existing or proposed at the time of measurement’. Hence, when measuring floor by floor there are only two levels to be considered for each stair: the lower level and the upper level of the stair.
The stair is measured on the lower level but not the upper level. Any landings, unless they are used to provide separate access to other Rooms, are deemed to be part of the stairs.

A vertical penetration whose floor opening and surrounding Walls, if any, is less than 0.1m² (1 ft²) is not separately identified and is included in the Floor Area measurement of IPMS 3A – Retail.

**Measurements included but stated separately:**

Ancillary Area(s), External Floor Area(s) and permanent Mezzanines are included in IPMS 3A – Retail and are to be measured to the outer face of the Balustrade but never to exceed the outside edge of the floor.

**Measurements excluded but stated separately if measured:**

Measurement for IPMS 3A – Retail does not include the following areas, which are to be measured consistently with the IPMS 3A – Retail measurement hierarchy:

- Temporary Structures.

### 3.3.3 IPMS 3A – Retail summary

<table>
<thead>
<tr>
<th>Included</th>
<th>Included but stated separately</th>
<th>Excluded but stated separately if measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Exclusive occupancy of retail area – measured to External Wall(s) consistent with IPMS 1.</td>
<td>• External Floor Area(s).</td>
<td>• Temporary Structures.</td>
</tr>
<tr>
<td>• Mezzanines (excluding Temporary Structures).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Ancillary Area(s).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Diagram 15 shows four units at level 0 measured individually.
Diagram 16 shows the extent of IPMS 3A – Retail at Mezzanine level, when the development of four units in one Building measured individually.
Diagram 17 shows the retail mall level 0 divided into exclusive use.
Diagram 18 shows the retail mall level 1 divided into exclusive use.

Diagram 18: IPMS 3A – Retail (mall at level 1)
Diagram 19 shows a retail freestanding Building in exclusive use.
Diagram 20 shows a retail strip centre divided into exclusive use.
3.3.4 IPMS 3B – Retail definition

IPMS 3B – Retail: The area in exclusive occupation, including the Floor Area occupied by Internal Walls and Pillars (and may include External Floor Area(s) and Ancillary Area(s)).

Measurement practice:

The area of exclusive occupancy is measured adopting the following hierarchy to:

- the centre-line of shared Walls between occupants and/or
- the Shop Line (Presumed Boundary) and/or
- the Internal Dominant Face for all External Walls and otherwise
- to the Finished Surface.

A Shop Line (Presumed Boundary) may not exist everywhere and relates to the legally accessible part of the shop or retail unit, not to its enclosure. Where there is no Shop Line (Presumed Boundary), measurements are to be taken to the internal face of the shop front.

The Floor Area occupied by stairs is only to be included at the lower level. For clarification, the principle detailed in Item 5 in Section 2.1 is to be applied: ‘Buildings are to be measured individually and reported on a floor-by-floor basis as existing or proposed at the time of measurement’. Hence, when measuring floor by floor there are only two levels to be considered for each stair: the lower level and the upper level of the stair. The stair is measured on the lower level but not the upper level. Any landings, unless they are used to provide separate access to other Rooms, are deemed to be part of the stairs.

A vertical penetration whose floor opening and surrounding Walls, if any, is less than 0.1m² (1 ft²) is not separately identified and is included in the Floor Area measurement of IPMS 3B – Retail.

Measurements included but stated separately:

Ancillary Area(s), External Floor Area(s) and permanent Mezzanines are included in IPMS 3B – Retail and are to be measured to the inner face of the Balustrade, but never to exceed the outside edge of the floor.

Measurements excluded but stated separately if measured:

Measurement for IPMS 3B – Retail does not include the following areas, which are to be measured consistently with the IPMS 3B – Retail measurement hierarchy:

- Temporary Mezzanines.
- Sheltered Areas.
### 3.3.5 IPMS 3B – Retail summary

<table>
<thead>
<tr>
<th>Included</th>
<th>Included but stated separately</th>
<th>Excluded but stated separately if measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Exclusive occupancy of retail area – measured to the IDF of External Wall(s) consistent with IPMS 2.</td>
<td>• External Floor Area(s).</td>
<td>• Temporary Structures.</td>
</tr>
<tr>
<td></td>
<td>• Mezzanines (excluding Temporary Structures).</td>
<td>• Sheltered Areas.</td>
</tr>
<tr>
<td></td>
<td>• Ancillary Area(s).</td>
<td></td>
</tr>
</tbody>
</table>
Diagram 21 shows four units at level 0 in one Building measured individually.

Diagram 21: IPMS 3B – Retail (four units at level 0)
Diagram 22 shows four units at Mezzanine level in one Building measured individually.
Diagram 23: IPMS 3B – Retail (mall level 0)

Diagram 23 shows the retail mall level 0 divided into exclusive use.
Diagram 24 shows the retail mall level 1 divided into exclusive use.
Diagram 25 shows a retail freestanding Building divided into exclusive use.
Diagram 26 shows a retail strip centre divided into exclusive use.
3.3.6 IPMS 3C – Retail definition

IPMS 3C – Retail: The area in exclusive occupation excluding the Floor Area occupied by External Walls, Internal Walls and Pillars.

Measurement practice:

The area of exclusive occupancy pursuant to IPMS 3C – Retail is measured adopting the following hierarchy to:

- the Finished Surface of shared Walls between occupants and/or
- the Shop Line (Presumed Boundary) and/or
- the Internal Dominant Face for all External Walls and External Floor Areas and otherwise
- to the Finished Surface.

A Shop Line (Presumed Boundary) may not exist everywhere and relates to the legally accessible part of the shop or retail unit, not to its enclosure. Where there is no Shop Line (Presumed Boundary), measurements are to be taken to the physical shop front.

The Floor Area occupied by stairs is only to be included at the lower level. For clarification, the principle detailed in Item 5 in Section 2.1 is to be applied: ‘Buildings are to be measured individually and reported on a floor-by-floor basis as existing or proposed at the time of measurement’. Hence, when measuring floor by floor there are only two levels to be considered for each stair: the lower level and the upper level of the stair. The stair is measured on the lower level but not the upper level. Any landings, unless they are used to provide separate access to other Rooms, are deemed to be part of the stairs.

A vertical penetration whose floor opening and surrounding Walls, if any, is less than 0.1m² (1 ft²) is not separately identified and is included in the Floor Area measurement of IPMS 3C – Retail.

Measurements included but stated separately:

Ancillary Area(s), External Floors Area(s) and permanent Mezzanines are included in IPMS 3C – Retail and are to be measured to the inner face of the Balustrade, but never to exceed the outside edge of the floor and shall be stated separately.

Measurements excluded but stated separately if measured:

Measurement for IPMS 3C – Retail does not include the following areas, which are to be measured consistently with the IPMS 3C – Retail measurement hierarchy:

- Temporary Mezzanines.
3.3.7 IPMS 3C – Retail summary

<table>
<thead>
<tr>
<th>Included</th>
<th>Included but stated separately</th>
<th>Excluded but stated separately if measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Exclusive occupancy of retail area – measured according to the hierarchy.</td>
<td>• External Floor Area(s).</td>
<td>• Temporary Structures.</td>
</tr>
<tr>
<td>• Mezzanines (excluding Temporary Structures).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Ancillary Area(s).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Diagram 27 shows four units in one **Building** at level 0 measured individually.
Diagram 28 shows four units in one Building at Mezzanine level measured individually.
Diagram 29 shows the retail mall level 0 divided into exclusive use.
Diagram 30 shows the retail mall level 1 divided into exclusive use.
Diagram 31 shows a retail freestanding **Building** divided into exclusive use.
Diagram 32 shows a retail strip centre divided into exclusive use.
4.1 IPMS Retail Component Areas

If a particular portion of space may be assigned to more than one Component Area, it is to be assigned to the Component Area that best reflects its primary design within the larger space.

Component Areas, as a whole or in part, may be classified as private (being reserved exclusively for one occupier) or shared (being available for the use of several occupiers).

Areas within Component Area H not available for direct retail related use may be described as ancillary. They are to be measured but may also be stated in an alternative way. For example, car parking may also be reported by the number of spaces.

Below are suggested Component Areas that may be used when areas need to be separately allocated for cost or other purposes under IPMS 1 and IPMS 2 – Retail. These may be further subdivided if required.

| Component Area A1 | Vertical circulation penetrations  
Examples of vertical circulation penetrations include staircase openings, stairs and lift/elevator shafts. |
|------------------|----------------------------------------------------------------------------------|
| Component Area A2 | Vertical technical penetrations  
Examples of vertical technical penetrations include pipes, ducts and shafts whose floor opening and surrounding walls, if any, is more than 0.1 m²/ft². Otherwise, the opening is not separately identified and remains in the Component Area where it is found. |
| Component Area B1 | External Wall  
The enclosing element of a Building, including windows and Walls, that separates the exterior area from the interior area. |
| Component Area B2 | Internal structural elements  
This comprises all internal structural Walls and Pillars. |
| Component Area B3 | Internal non-structural elements  
This comprises all internal, full height, permanent Walls other than those included in Component Areas B1 and B2. |
| Component Area C | Technical services  
Examples of technical and building services include mechanical/electrical plant rooms, lift/elevator motor rooms and maintenance rooms. |
| Component Area D | Hygiene areas  
Examples of hygiene areas include toilet facilities, cleaner’s cupboards, bath/shower rooms and changing rooms. |
| Component Area E1 | Circulation areas – mall  
Comprises all public (shopper) circulation space within the mall area fronting retail outlets. |
Component Area E2  | Circulation areas – other  
---|---
All other circulations areas other than those forming part of the mall (Component Area E1), measured horizontally.

Component Area F  | Amenities  
---|---
Examples of amenities include internal facilities such as food courts, child-minding facilities and prayer rooms for the benefit of shoppers.

Component Area G  | Retailing areas  
---|---
All areas used for retailing comprising retail outlets, areas designated for temporary retail stores and mall promotion areas.

Component Area H  | Other areas  
---|---
Examples of other areas include External Floor Area(s), covered galleries, internal car parking and storage rooms, whether or not in exclusive use.

**Limited use areas**

Limited use areas as defined in Section 2.3 are included within IPMS reported areas, but must be identified, measured and stated separately.
These are technical drawings and do not represent either the tenant or mall owner’s perspective.

Diagram 33: IPMS Components (retail units at level 0)
These are technical drawings and do not represent either the tenant or mall owner’s perspective.

Diagram 34: IPMS Components (retail units at Mezzanine level)
These are technical drawings and do not represent either the tenant or mall owner’s perspective.

Diagram 35: IPMS Components (retail mall at level 0)
These are technical drawings and do not represent either the tenant or mall owner’s perspective.
These are technical drawings and do not represent either the tenant or mall owner’s perspective.

Diagram 37: IPMS Components (retail freestanding unit)
These are technical drawings and do not represent either the tenant or mall owner’s perspective.

Diagram 38: IPMS Components (retail strip centre)
4.2 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 floor, or to the ceiling if lower for each IDF Wall Section. If such does not occur, the Finished Surface is deemed to be the IDF.

An IDF Wall Section is the lateral extent of each section of an External Wall, where the inside Finished Surface area of each part of a window, Wall or external construction feature varies from the inside Finished Surface area of the adjoining window, Wall or external construction feature, ignoring the existence of any Pillars.

If the IDF is not vertical, the measurement is to the Finished Surface.
Diagram 39: Internal Dominant Face (IDF)
4.3 Clear Height and Internal Height

**Clear Height** is the height within a Building or section of a Building measured from the floor to the lowest point of the structural element above, ignoring the existence of any brackets, struts or fixtures and fittings.

**Internal Height** is the height within a Building or section of a Building measured from the floor to the lowest point of the ceiling or suspended ceiling, ignoring the existence of any brackets, struts or fixtures and fittings.

Diagram 40: Internal Height and Clear Height

4.4 Shared walls (IPMS 1)

Where a Building extends over more than one individually owned Property each separated by a shared wall, as in adjoining Retail units, then IPMS 1 is to be measured to the centre-line of the shared wall unless the boundary of the titled area differs, in which case the titled area takes precedence.