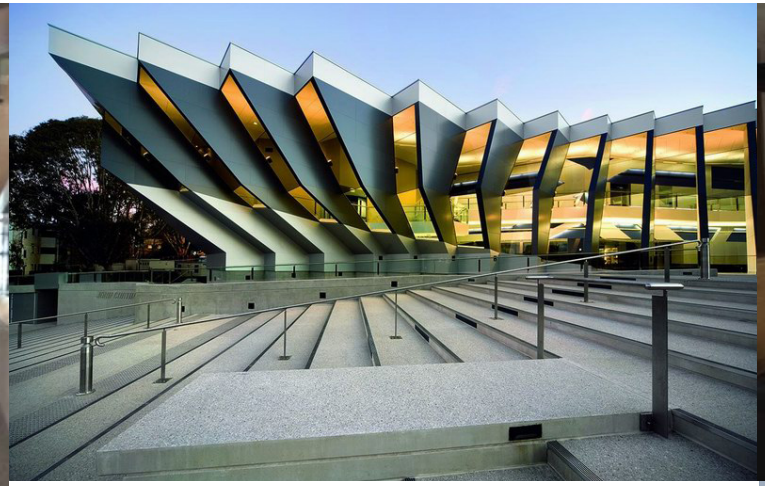
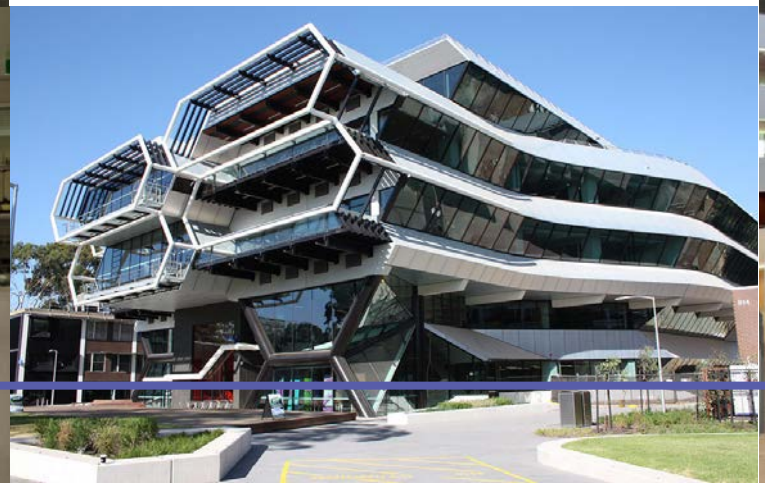
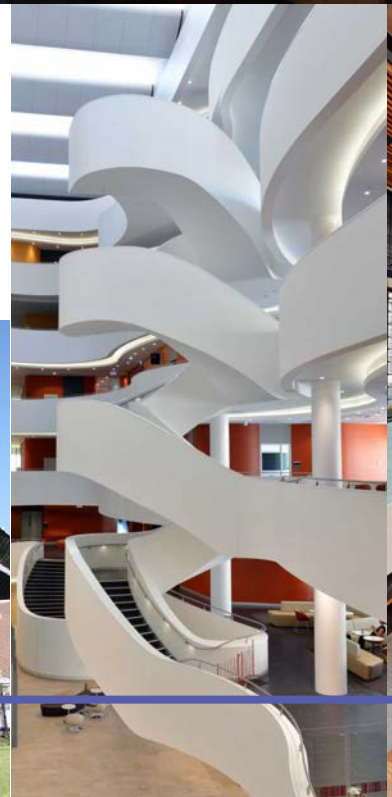
GROUP OF EIGHT AUSTRALIA



Go8 Space Playbook 1.0

July 2016





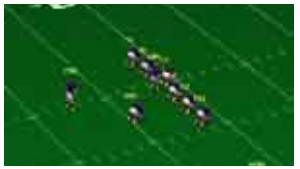
playbook

1. (*in drama*) the script of a play, used by the actors as an acting text
2. a book containing the scripts of one or more plays or a range of possible set plays
3. (*in football*) a notebook containing descriptions of all the plays and strategies used by a team, often accompanied by diagrams, issued to players for studying and memorizing before the season begins
4. (*in business or politics*) any plan or set of strategies, as for outlining a campaign in; the way an organisation handles a particular kind of situation/activity
5. a notional range of possible tactics in any sphere of activity

Power I - Formation

I - Formation

Split Backs Formation



Strong Formation

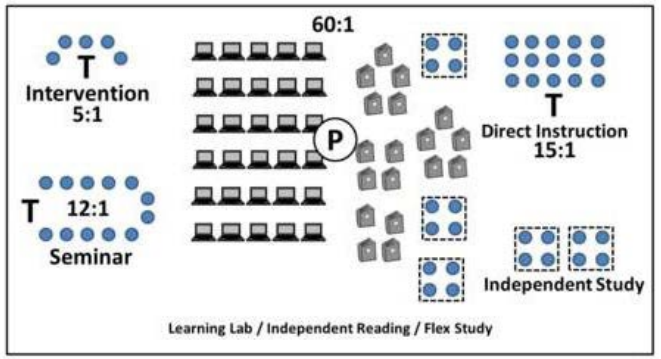
Weak Formation

T - Formation

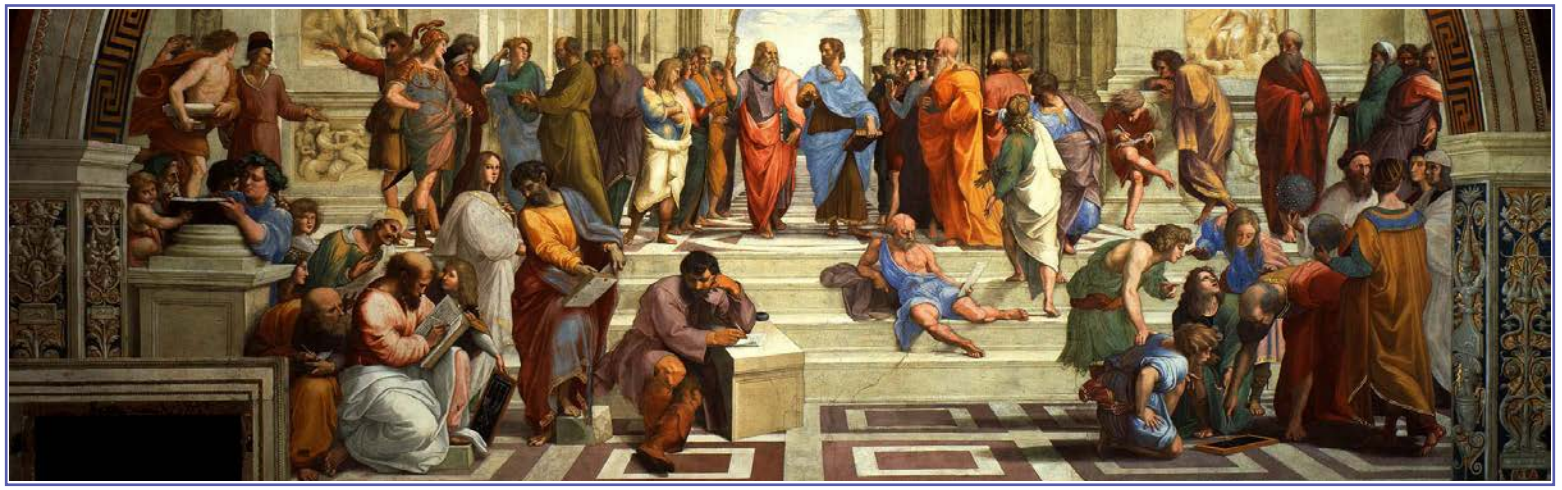
Bone Formation

Shot Gun Formation

Example Play from Competency-Based School



90 students
3 Teachers (T)
1 Paraprofessional (P)



The School of Athens - 1509-1510, fresco by Raphael (Apostolic Palace, Vatican City)

The Go8 playbook acts as a reference guide to provide direction in mapping, coding and reporting of space. It provides supplementary information (descriptions, photos, drawings and examples) to the Go8 Data Dictionary and the TEFMA Space Planning Guidelines. The playbook does not aim to include all space types and metrics, but specifically those space types/definitions/functions/measurements that are more open to interpretation, tending to cause confusion/inconsistency in space mapping, coding and reporting.

Acknowledgement should be given to the Go8 Space Managers and staff who contributed to the development of this document. They are Andrew Border, Lei Huang, Michael Scott (Monash University), Di Montgomerie, Andrew Lewis (University of New South Wales), Barbara Robinson, Abdon Dantas, Hugh Gao (University of Queensland), Lody Dannaoui, Jade Germantis, Jon Peacock (University of Melbourne), Rose Chaaya, Sharon Vaughan, Quentin Parisotto (University of Sydney), Harald Baulis, Oliver Ponsonby, Matt Schapel, Josh Kathigitis (University of Adelaide), Sarah O'Callaghan, Joseph Ting, Lisa Brown, Sam Fernandes (Australian National University), Jillian Loney, Claire Paton, Dani Ivanovski, Natalie Rowe (University of Western Australia).

Elizabeth Kuczek
Go8 Space Project Manager
2016

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1. Measuring and Mapping Space

1.1 Campus Size

Campus size (or area of campus) provides an indication of the size of an Institution's estate and is reported in hectares of total space occupied by all buildings (ie building footprint) and grounds. It is often requested in surveys for the purpose of comparing size of campuses, and the campus size (in hectares) should reflect what is used by the Institution to undertake its core activities. This may include rural properties such as field stations, however, if the field stations are substantial, and/or are not operational for day to day Institutional purposes, then they should be excluded from the campus total hectares count (a comment should be made to this effect on any report /survey), as it can skew any comparisons being made. Alternatively, field stations and remote properties could be included as a total as "Other Campus", but with an appropriate explanatory note.

The best approach is to:

- include buildings /grounds used for day to day core activities
- exclude huge tracts of land/field stations
- exclude investment properties and properties owned (ie bequeathed), which are normally only included in the Institutional whole property portfolio figure.

Sometimes there is confusion in what should be included in the campus area, especially around what is "owned/used/managed".

- TEFMA Survey requires reporting on "GFA maintained" and also "effective area of grounds maintained", as these figures feed into other benchmarking metrics, such as operating maintenance costs of the Institution. "Actively maintained" is interpreted as areas that are used on a day to day basis, have regular occupation, or have cleaning and/or other services provided to them, eg., grounds. The total campus hectare figure would exclude non-maintained Institutional buildings and possibly external areas (eg farms). As such the reported TEFMA figure may be lower than the campus size reported in a Go8 survey.
- Go8 Survey reporting of campus size does not make the distinction of whether the space is maintained or not, but for the same reasons given above, huge tracts of land and investment properties, etc, are excluded from the reported campus area figure.

Campus location can be described in relation to the main type of community it resides in:

- CBD: inner city (a metropolis or metropolitan area has a population usually over a 1,000,000; a city has over 100,000).
- Suburban: a residential area on the outskirts of a city.
- Urban: a commuter town is an urban population near a metropolitan area; urban has a lower population density than inner city.
- Rural: sparsely populated areas settled places outside towns and cities.

1.2 Buildings

A building is normally defined as a discrete structure, or more specifically, eg., as “a roofed enclosed facility” and therefore can include building plant and equipment. If a substantial building was constructed in stages, each stage may be treated as a separate building or as one, or multiple smaller buildings of similar vintage and construction may be grouped as a single building.

Institutional building information may include:

- building purpose (academic, administrative, services & infrastructure, residential, investment, etc),
- status (active, inactive, mothballed, tenanted, demolished),
- total building number.

The best approach to avoid a skewed or inconsistent reporting of a total building number:

- identify what are non-buildings and exclude from the building count. Examples of small buildings, minor structures and non-building structures are shown below.
- identify what should be excluded from reporting. The main consideration here is whether the building count is of the academic estate, or of the whole institutional property portfolio. TEFMA survey requires reporting on building/spaces that are maintained by the Institution. So the actual total building count (or space) owned by an Institution for Go8 reporting may be higher (and not match) the building count reported to TEFMA.

  Typically, the academic estate includes only the first category of buildings listed below. Whereas, the total Institutional estate or property portfolio would include all categories below.
  - Used for day to day core purposes
  - Leased out for non-core purposes
  - Investment
  - Residential
  - Not used because empty/derelict/bequeathed

Small Buildings

As for substantial buildings, small buildings are easily recognisable with structural features of walls (fully enclosed), roof, entries (doors/windows) and should be included in total building number. A space or building count survey may exclude small buildings, usually by setting a GFA m^2 threshold on what is to be excluded.

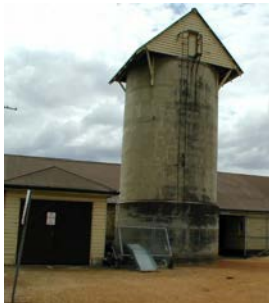


Non-Building Structure

Based on NCC (National Construction Code) building classifications, these would fall under non-habitable Class 10b or non-building, and be excluded from a building count.








Minor Structures

Based on NCC building classifications, these would fall under non-habitable Class 10a, and be excluded from a building count.





1.3 GBA & GFA, FECA & UCA, UFA & NUFA

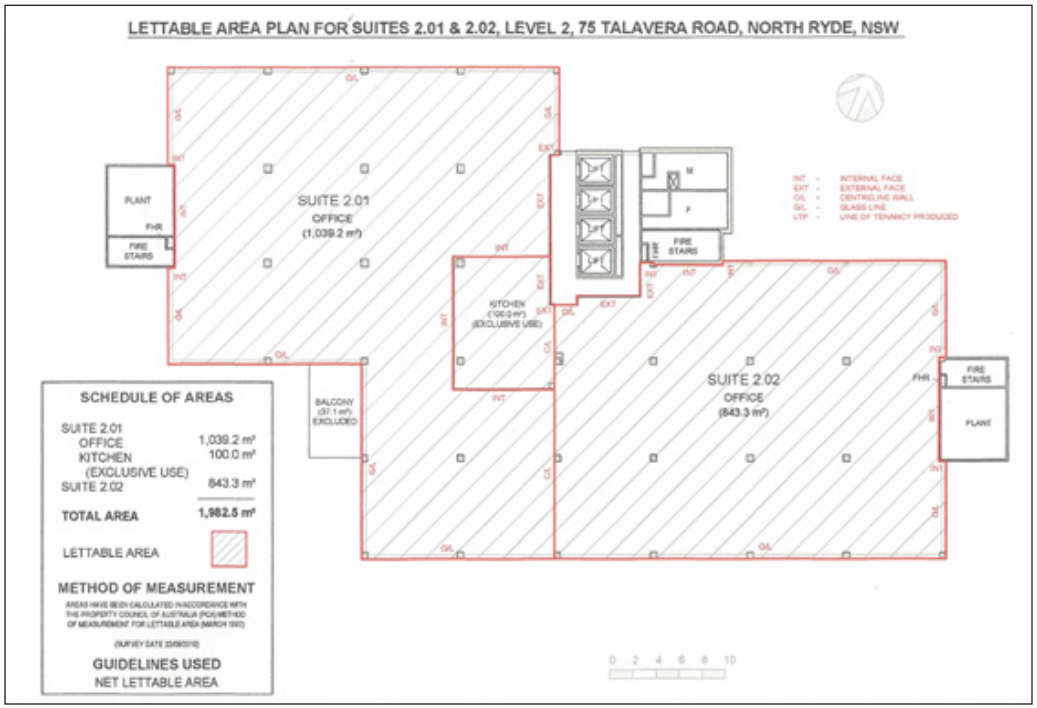
These definitions are as recommended by TEFMA and align with (but are not exactly the same as) the Measurement of Building Areas as published by the Australian Institute of Quantity Surveyors, the Royal Australian Institute of Architects and BOMA (Building Owners and Managers Association).

Space Measurement	Definition
Gross Building Area (GBA)	***GBA (m^2)*** Total floor area inside the building envelope, includes the total enclosed (FECA) and the total unenclosed (UCA) areas at all building floor levels, includes the external walls, balustrades and supports, but excludes the roof. *Measured between the normal OUTSIDE of any enclosing walls, balustrades and supports.*
Gross Floor Area (GFA)	***GFA (m^2)*** Total floor area inside the building envelope, includes FECA and UCA, excludes the external walls, and excludes the roof. *Measured as the sum of FECA and UCA.*
Fully Enclosed Covered Area (FECA)	***FECA (m^2)*** Total floor area fully enclosed and covered at all building levels, includes floored roof spaces, basements, attics, lift shafts, garages, enclosed porches, staircases and attached enclosed covered ways alongside buildings and all other fully enclosed spaces. Excludes open courts, light wells, connecting or isolated covered ways, lobbies, interstitial spaces, etc., which extend through the floor being measured. *Measured from the INSIDE face of exterior walls, ignoring any projections such as plinths, columns, piers etc which project from the normal INSIDE face of exterior walls.* FECA = UFA + NHA + SA + CUA (see below).
Unenclosed Covered Area (UCA)	***UCA (m^2)*** Total floor area unenclosed but covered at all building floor levels, includes roofed balconies, verandahs, porticos, undercrofts, access galleries, etc., attached open covered ways alongside buildings that are trafficable areas of the building. Excludes eaves, overhangs, shading/awinings where these do not relate to clearly defined trafficable covered areas. And excludes connecting or isolated covered ways. *Measured as the area between the INSIDE face of the enclosing walls/balustrades (excluding the wall/balustrade thickness) to the edge of the pavement/cover.*
Usable Floor Area (UFA)	***UFA (m^2)*** Total floor area inside the building envelope related to the primary function of the building, excludes the external walls, and excludes the roof. (Special inclusions are those areas which fulfil a primary functional requirement, eg covered external play area in a Child Care Centre; open, covered hydraulics modelling laboratory). *Measured from the general INSIDE face of walls of all interior spaces at each floor level. Can also be calculated by taking all fully enclosed space (FECA) and deducting Service Areas, Non-Habitable Areas and Common Use Areas (ie., deducting all areas supplementary to the primary function of building).* **UFA = FECA less (SA + NHA+ CUA)**
Non-Usable Floor Area (NUFA)	***NUFA (m^2)*** Total floor area inside the building envelope that is supplementary to the primary function of the building, may include FECA and UCA, excludes the external walls, and excludes the roof. Non-habitable service and common use areas are types of Non-Usable Area.
Service Area (SA)	***(m^2)*** All areas set aside for building plant and associated services (eg., mechanical plant and equipment rooms, electrical equipment and switch rooms, tank rooms, lift motor rooms, meter cupboards, telecommunication switch rooms, refuse collection area) and facilities common to the building for the use of occupants, tenants and/or the public (such as loading bays, internal car-parking areas including their access ways).
Non-Habitable Area (NHA)	***(m^2)*** Areas ocupied by internal columns and other structural supports, internal walls and permanent partitions, lift shafts, service ducts and the like.
Common Use Area (CUA)	***(m^2)*** Floored areas in the building used for circulation and standard facilities provided for the common use of occupiers, tenants and/or public, such as lobbies, foyers to entrances, stairways and lifts, landings and fire escapes, verandahs and balconies, corridors and passages, toilets and rest rooms, cloak and locker areas, cleaner's rooms including stores and cupboards, kitchenettes and similar amenities areas.
Common Area (CA)	***(m^2)*** Those areas within a building or tenancy not leased to a particular tenant, but available for the use of all tenants and, usually, members of the public. This measure is mainly used in lease agreements.

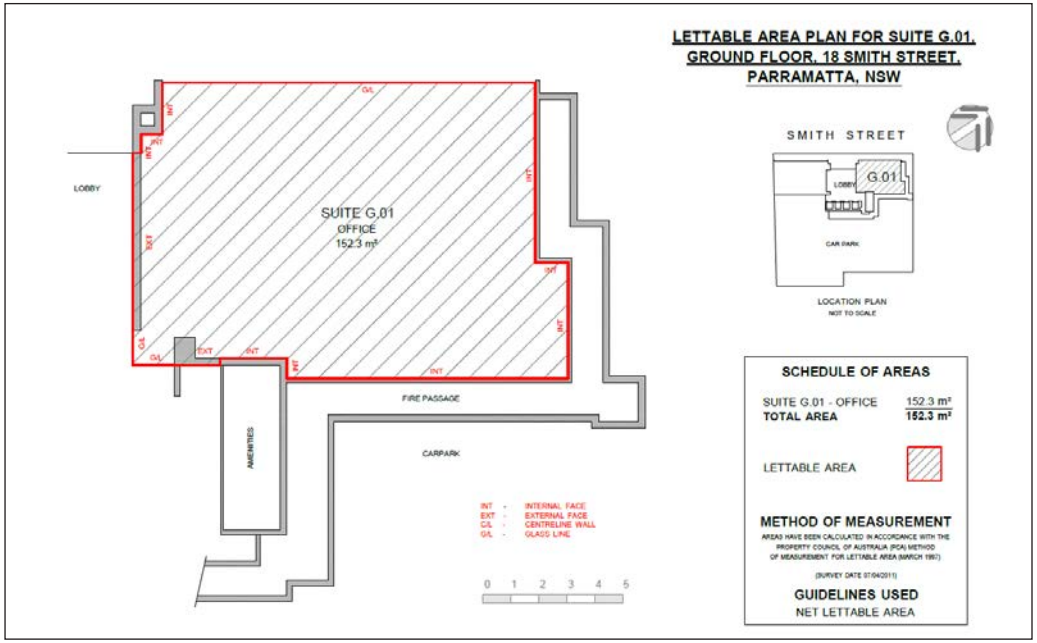
Other Space Related Items used in Reporting

	Definition
Net Lettable Area (NLA)	In instances, where space is leased in or out, the commercial measurement of space (lettable area) is applied. The sum of all lettable areas within a commercial type building, measured from the internal finished surfaces of permanent walls and from the internal finished surfaces of dominant portions of the permanent outer building walls, and including the area occupied by structural columns and engaged perimeter columns.
Excluded from NLA	All stairs, toilets, cleaners cupboards, lift shafts, escalators and tea rooms where provided as standard facilities in the building/floor; lobbies between lifts facing other lifts serving the same floor; public space or thoroughfares (not used exclusively by occupiers of the building/floor); plant and lift motor rooms, areas providing facilities or services to the building/floor (not for the exclusive use of an occupier or occupiers of the building); areas set aside for use by service vehicles and for delivery of goods and access ways; set aside for car parking and access thereto; areas where clear height is less than 1.5m.
Asset Replacement Value (ARV)	The ARV is the best estimate of current cost of buildings, fixed equipment, services and systems, designing, constructing & equipping for its original use, a new facility providing equal service potential as the original asset & which meets currently accepted standards of construction & also complies with all contemporary environmental & other regulatory requirements. Includes the cost of all building services and associated plant, finishes and built-in furniture, all fees, approvals and other incidental expenditure associated with construction and initial occupation. Exclusions from building ARV are student housing, cost of relocating into the building, cost of loose furniture and soft furnishings, laboratory, scientific, loose equipment and all equipment other than that required for the normal functioning of the building, costs normally included in the insured value such as demolition, site clearing and the provision of temporary accommodation.

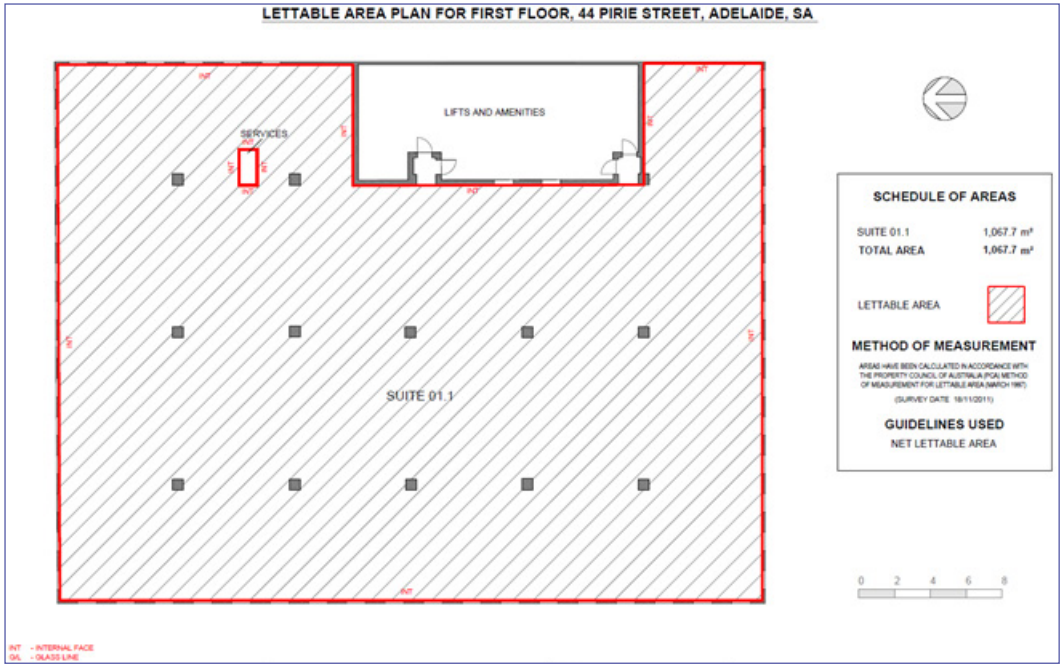
The following pages show examples of lettable areas.



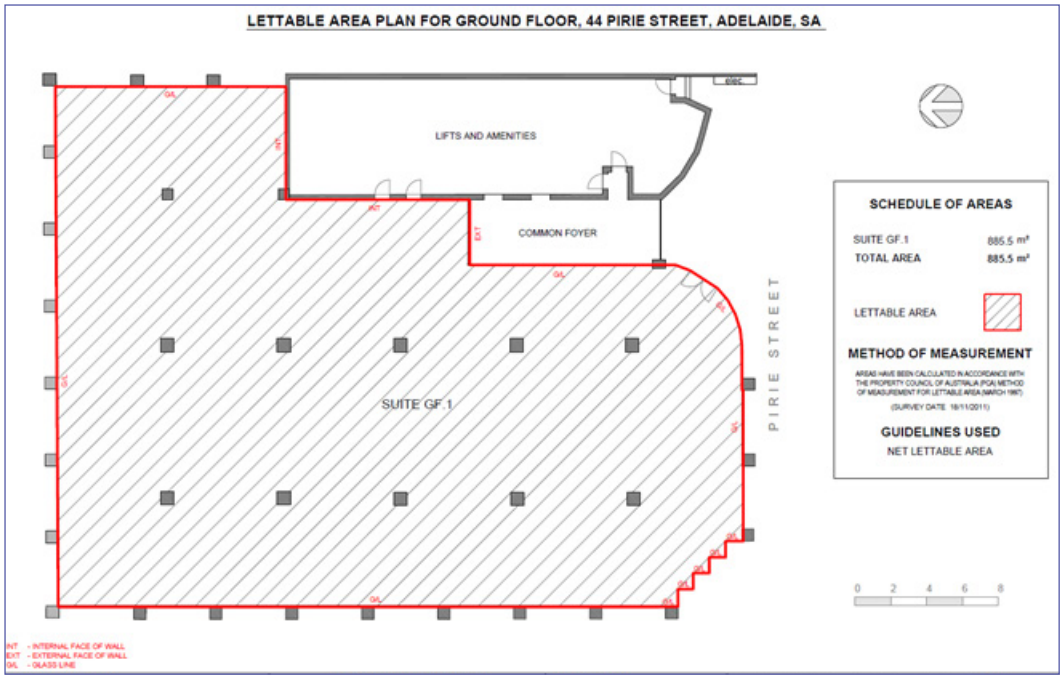
(a) Lettable area (hatched) excludes plant room, fire stairs, foyer, toilets, lifts and balcony, ie., shared or general access areas or building services/structure. The kitchen is of sole use to the tenants on this floor and it is therefore included in the total lettable area.



(b) Lettable area (hatched) excludes lobby, fire passage, plant room, amentiies and car park ie., shared/general access areas or building services/structure.



(c) Lettable area (hatched) excludes lifts, amenities and services duct which are shared/general access areas or building services/structure.



(d) Lettable area (hatched) excludes lifts, amenities, foyer ie., shared/general access areas.

Measuring Methods

GBA Measurement of buildings or spaces are mapped and quantified by a number of methods, but GBA measurement method tends to be the most consistent and conventional in that one continuous polyline is drawn around the OUTSIDE face of the external walls of the building. It includes all spaces within the building, and perimeter wall thicknesses, external projections, loading bays and garages. But excludes open-sided balconies, fire escapes, canopies, and roof terraces. A GBA measurement essentially provides the building volume, and therefore void spaces are included in GBA total m^2.

Another term sometimes used is that of a building perimeter line which also includes the non-structural protrusions, including eaves, cornices, canopies, awnings, sills, ledges, gutters, shutters, attached electrical or mechanical systems or decorative projections.

GFA The GFA of a building or space can be mapped and quantified by a number of methods and variations of these methods are used across the Go8.

Variation 1 is the simplest approach with minimal CAD drawing required as only a single continuous polyline is drawn for the GFA. The GFA line must exclude voids (except at ground level) and may need bridging lines across building/floor features to maintain a continuous line. The GFA m^2 is calculated by summing of room types that are identified as FECA and as UCA. There is a possibility of inaccurate GFA measurement if voids, UCA, etc are overlooked at the CAD drawing stage, as the space management system does not capture any separate information on these spaces.

Variation 2 involves more CAD work as both FECA and UCA spaces are separately polylined. The FECA line must exclude voids and bridging lines across building/floor features may be required. The m^2 figures FECA and UCA are field entries in the Archibus Group Tables view and GFA total m^2 is automatically (system) generated which is an advantage of this method.

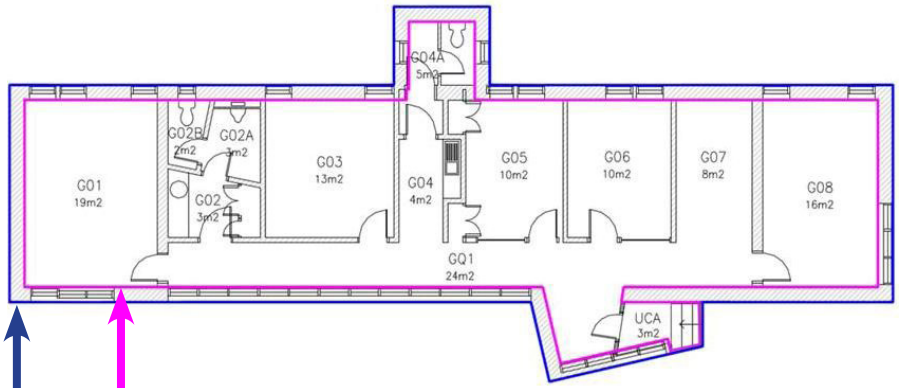
Variation 3 as for Variation 2, involves more CAD work in polylining FECA and UCA spaces separately, but also requires more resources and understanding of the space super-category feature in Archibus. The super-category method applies space terms eg., gross internal and gross external areas, and rules to different space categories eg to exclude voids from total GFA m^2. As for Variation 2, this method provides a number of different m^2 figure field entries in the Archibus Group Tables view and the advantage of an automated (system generated) GFA and other total m^2 calculations. Using the super-category functionality provides more granularity of different space categories (which can be customised by the space system users), but interpretation of the terms and rules used in this method can be difficult to grasp.

The following pages provide details on each of the GFA measurement variations described above, as well as photo examples of FECA and UCA spaces.

In addition, at the end of this section there is a brief description on how total UFA m^2 and non-UFA m^2 are derived for Go8 and TEFMA reporting.

It is important whether using the polylining or summing method that voids are excluded from GFA or FECA polylines and calculations to avoid overstating m^2 GFA area on all floor levels.

Variation 1 - GFA polyline only and summing room areas



GBA - This figure is the enclosed and unenclosed area of the building at all building floor levels measured between the normal OUTSIDE face of any enclosing walls, balustrades and supports.

GFA - This figure is the enclosed and unenclosed area of the building at all building floor levels measured between the normal INSIDE face of any enclosing walls, balustrades and supports.

GBA & GFA

GFA polyline (pink) includes FECA and UCA spaces and does not polyline these areas separately.

GBA polyline (blue) includes FECA and UCA spaces and does not polyline these areas separately.

UFA - The sum of the floor areas measured at floor level from the general inside face of walls of all interior spaces related to the primary function of the building.

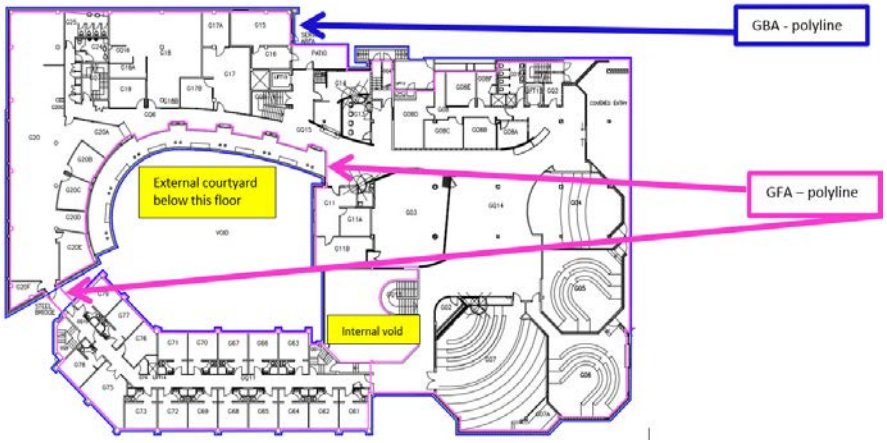
NUFA - All floored areas in the building used for circulation and standard facilities provided for the common use of occupiers such as lobbies and fire escapes, verandahs and balconies, corridors and passages, toilets and rest rooms areas, cleaner's rooms including stores and cupboards, tea making facilities and service areas.

UCA - The sum of all such areas at all building floor levels, including roofed balconies, open verandahs, proches and porticos, attached open covered ways alongside buildings, undercrofts and usable space under buildings and any other traficalbe covered areas of the building which are not totally enclosed by full height walls.

FECA & UCA, UFA & NUFA

Polylines (green) measure individual Room Areas from the inside face of the internal walls. Room Type codes then define the spaces as:

- *UFA = 100 - 700 Room Type codes*
- *NUFA = 800 - 900 Room Type codes*
- *UCA = may be designated a UCA prefix/suffix in conjunction with a Room Type code, typically a 800 series Room Type (e.g. 839-Balcony)*.



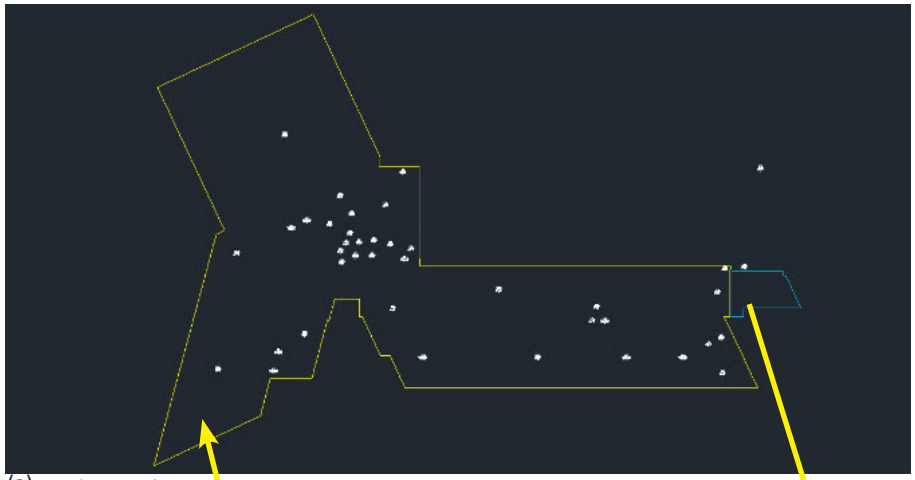
Accounting for Voids

In the CAD drawing to the left, the GBA polyline is a continuous polyline (blue), drawn around the outside face of the building's external walls. The GBA polyline excludes the large void space on this floor level, which is above an external courtyard on the level below, but it includes the smaller internal voids

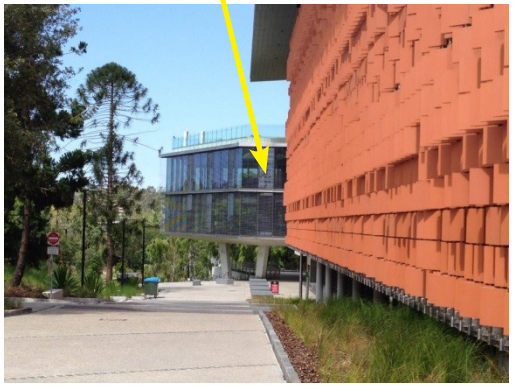
The GFA polyline is a continuous polyline (pink), drawn around the inside face of the external walls. It includes the internal walls, FECA and UCA areas, but excludes columns which project from the exterior spaces.
Both GBA and GFA polylines include the UCA spaces as these are not polylined separately.

Note that 'bridging' GBA polylines (blue) and GFA polylines (pink) are drawn across the internal voids, to maintain a continous polyline.

Variation 2 - Polylines and Archibus fields for FECA and UCA



(a) Level 2 CAD drawing



(b) Level 2 view and Level 1 UCA

(c) Level 2 UCA space

(d) Level 1 cafe area

FECA and UCA Polylines

(a) in this example, the CAD drawing shows two separate polylines for Level 2 of this building -a yellow FECA polyline and a blue UCA polyline. Total GFA for this floor level is the sum of the areas covered within both polylines.

GFA m^2 = FECA m^2 + UCA m^2

The GBA polyline would be drawn in the same manner as in Variation 1 (not shown for this example) and would be a continous polyline encompassing both the FECA and UCA areas.

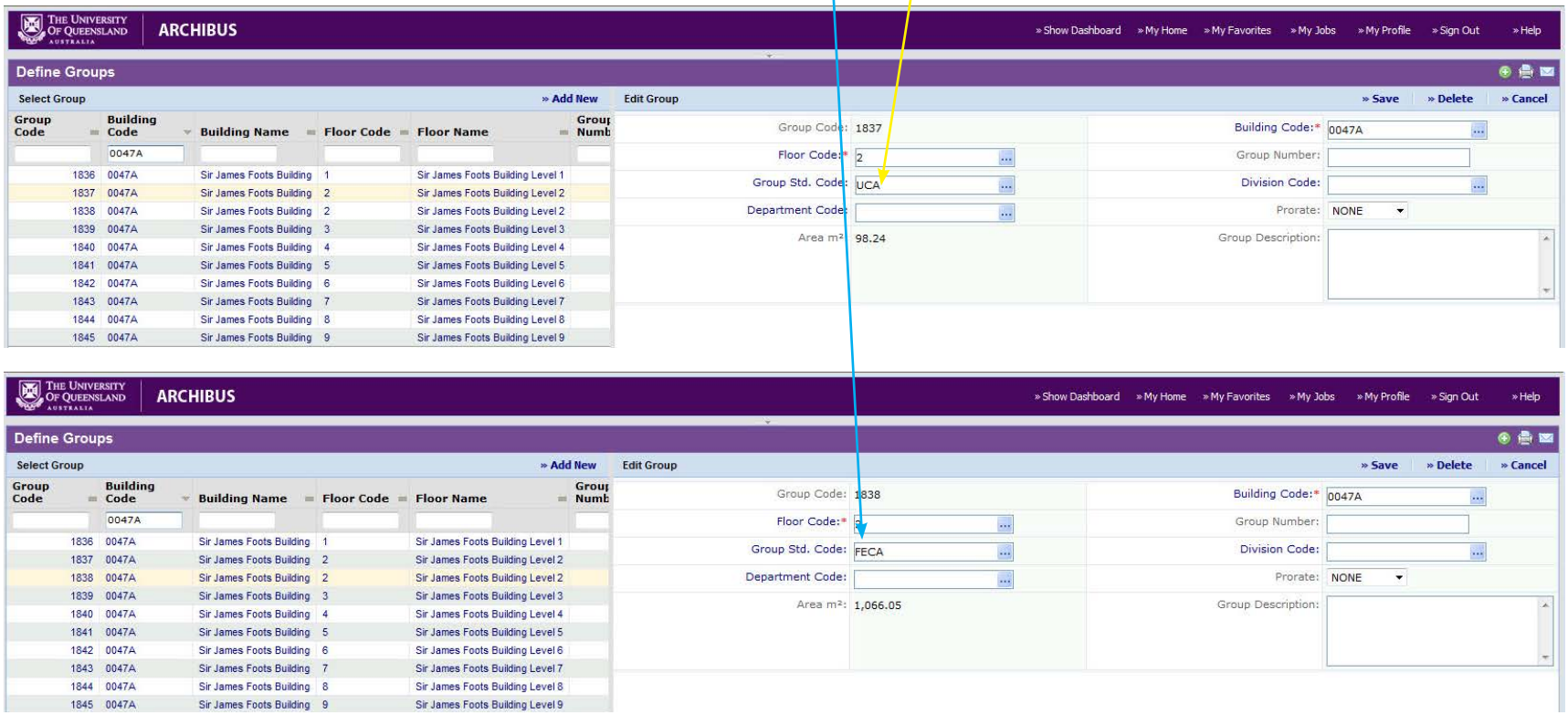
(b) shows a view of Level 2 of this building towards the “pointy end” and the UCA space on Level 1 that houses a café.

(c) shows the UCA space (as per blue polyline in CAD drawing) for the covered entrance on Level 2 of this building. The UCA polyline would measure the area between the enclosing walls, balustrade i.e. from the inside face of the UCA excluding the wall (or balustrade thickness) to the edge of the covered area.

(d)) shows the UCA space on Level 1 of this building. A UCA polyline would be drawn to the edge of the covered area of the café space, but not include the additional eating area (although this area would be included as part of the café lease agreement).

UCA & FECA Fields in Archibus

Variation 2 differs from Variation 1 in that separate polylines are drawn for UCA and FECA, and the FECA and UCA m² figures are represented in Archibus data fields (Space Inventory /Building Performance /View Building Performace Analysis) as per the screenshots below.



Accounting for Voids

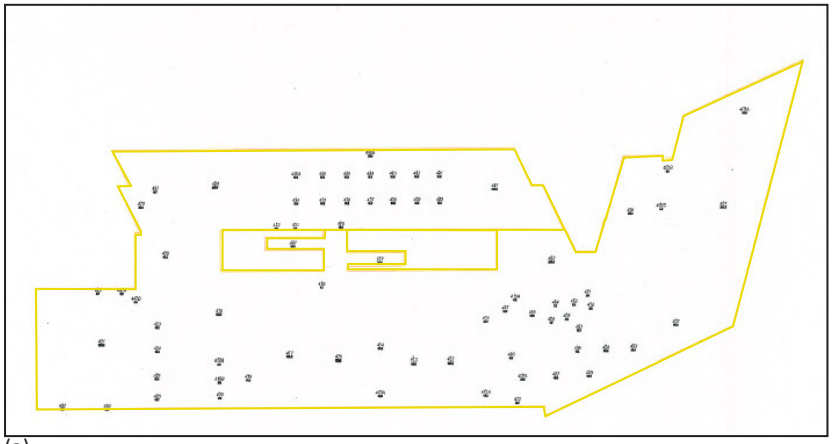
For level 4 of this same building:

(a) and (b) show one continuous FECA (yellow) polyline which excludes the void in the centre of the building and the void spaces associated with the stairs on that level.

(c) stairs are polylined and given a room number (eg 467) on each floor. The method for polylining stairs is detailed in another section of the playbook.

(b) and (c) each different space has a room number, including stairs (Room 467), service risers (Rooms 432/431), corridor (Room 448).

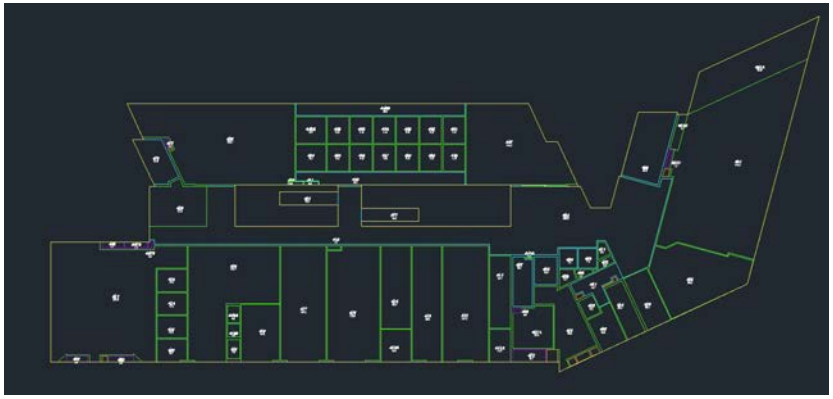
(d) photo of internal stairs (Room 467) within a circulation space and with void space above the stairs. The circulation space also has a void space above, on the next level.



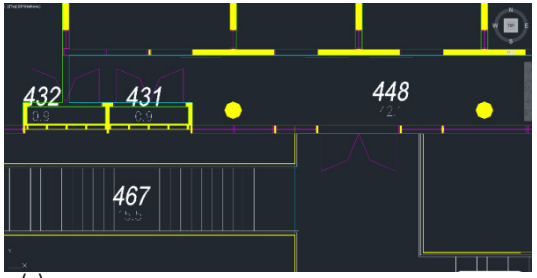
(a)

CAD drawings (a, b, c) show room elements:

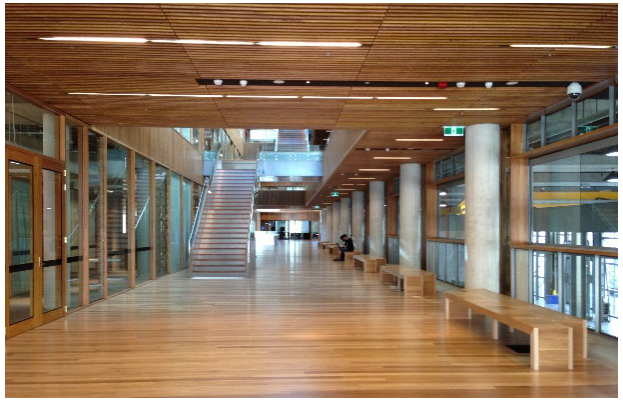
- pink lines = doors/windows;
- green/blue line = individual rooms;
- yellow thick line = solid wall;
- yellow thin line = continuation of internal GFA (FECA) line.



(b)



(c)



(d)

Variation 2 - example polylines for GFA, UCA, FECA, voids and stairs

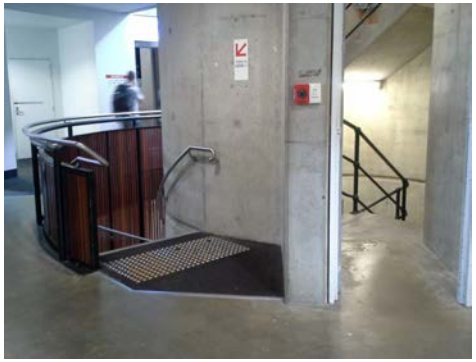
The following pages show CAD drawings (a) to (f) with GFA/FECA/UCA polylines for three floors of a building, and also photos of some relevant building features that influence where these polylines are drawn. The ground floor location of the photos numbered **(1)** to **(8)** are shown on the ground floor CAD drawing.

Of note, this building has two main wings, and a lecture theatre across two levels in one corner of the building. The main open entrances are at ground level at the top and at the right of the building as per the drawing orientation. There is a canopy roof over the central connecting thoroughfares, and covering the main entrances, but this canopy is not fully enclosing. There is a circular stairwell near the large lecture theatre.

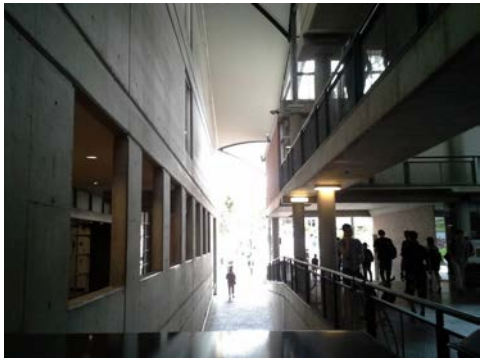
(1)

(2)

(3)



(4)



(5)

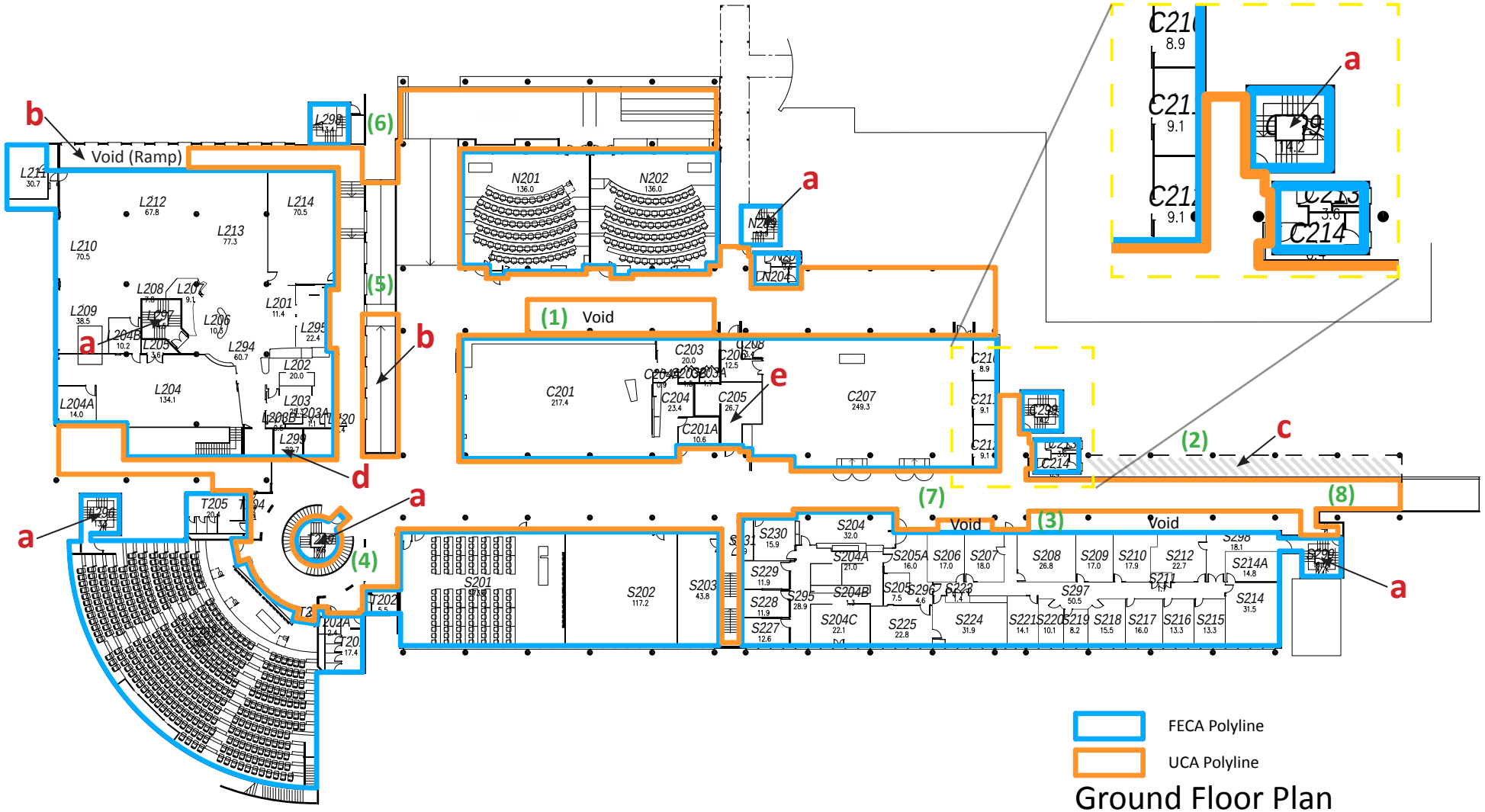
(6)

(7)

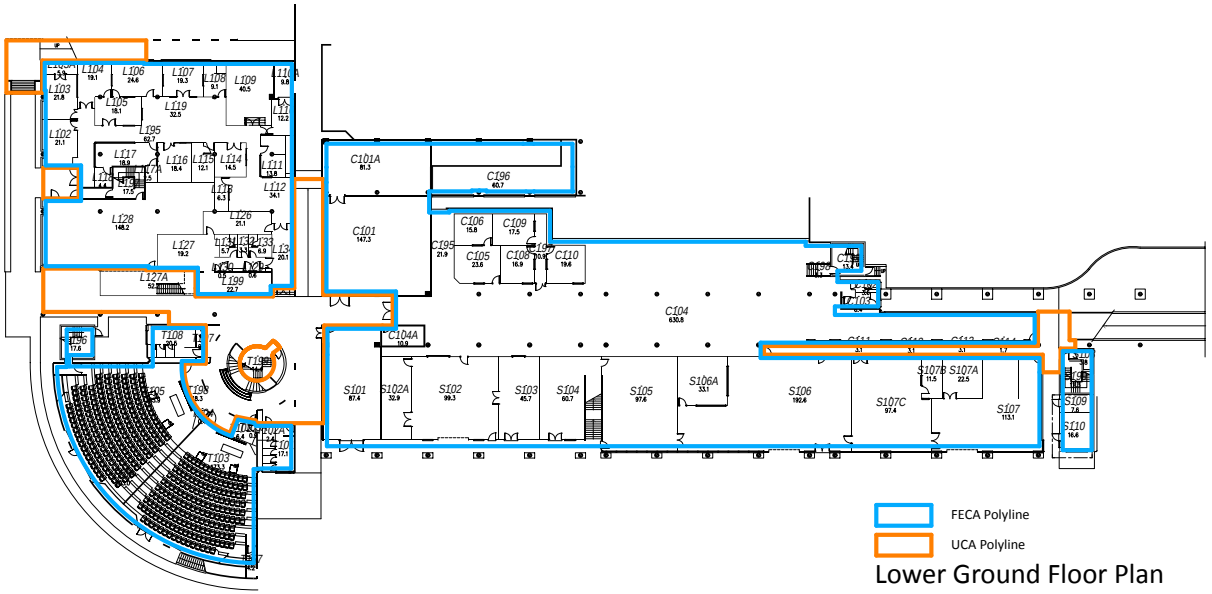
(8)

GFA measurement considerations:

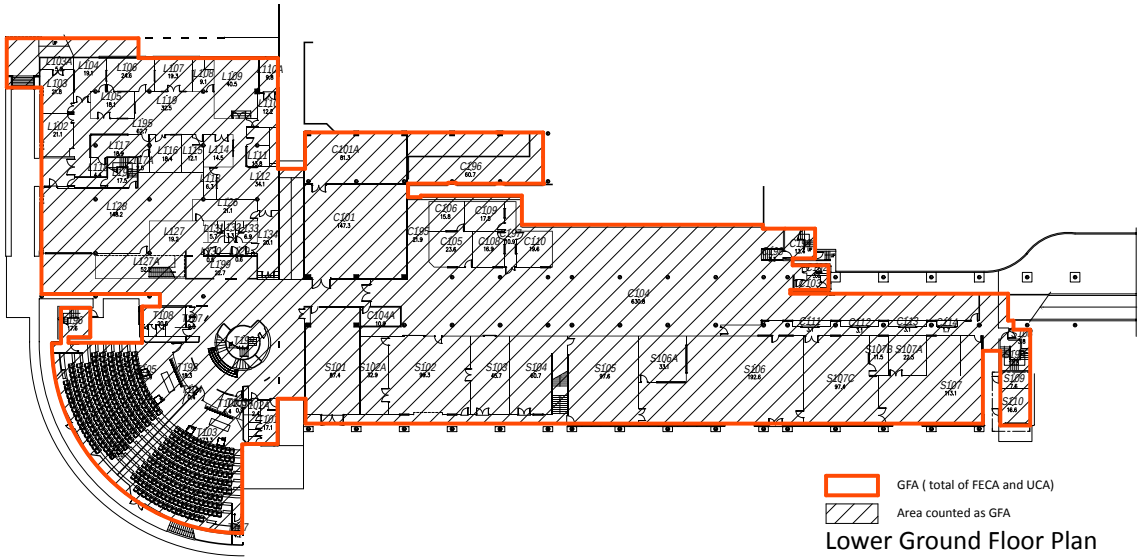
a. Minor voids in the staircases are included.
b. Ramp is calculated half size of the GFA for the connecting floor and half size is considered as void.
c. Covered but not paved/floored area is excluded.
d. Lift well is considered as fully enclosed, and a verticle penetration. Lift is counted only once (not on all floors).
e. FECA is measured from inside face of exterior walls of a space, which means internal columns, and partitions will be included.



Ground Floor Plan

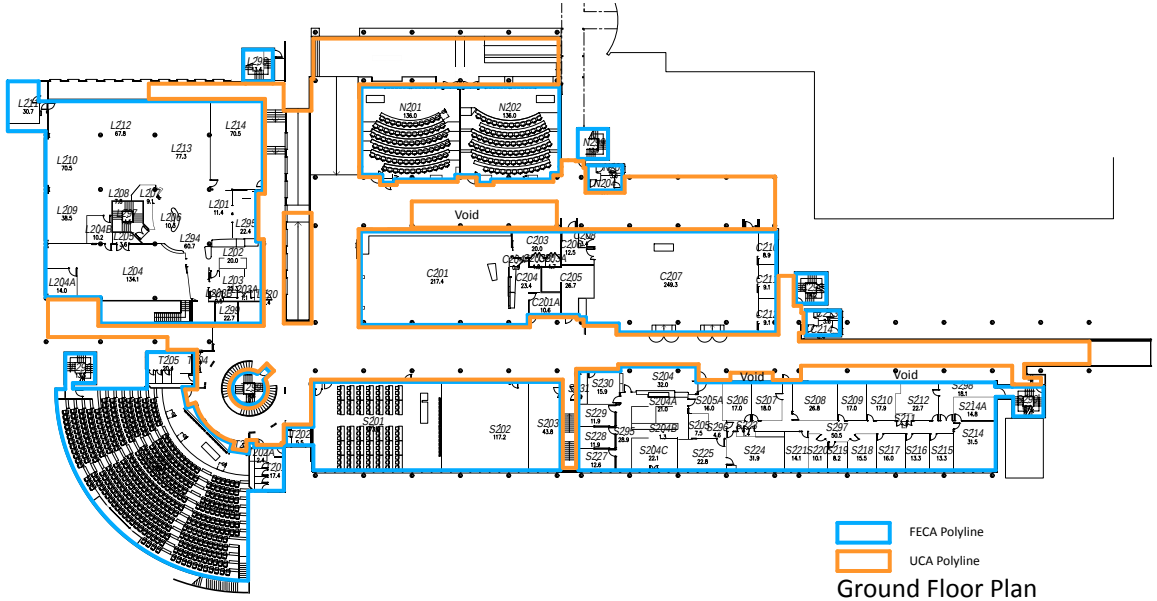


(a)



(b)

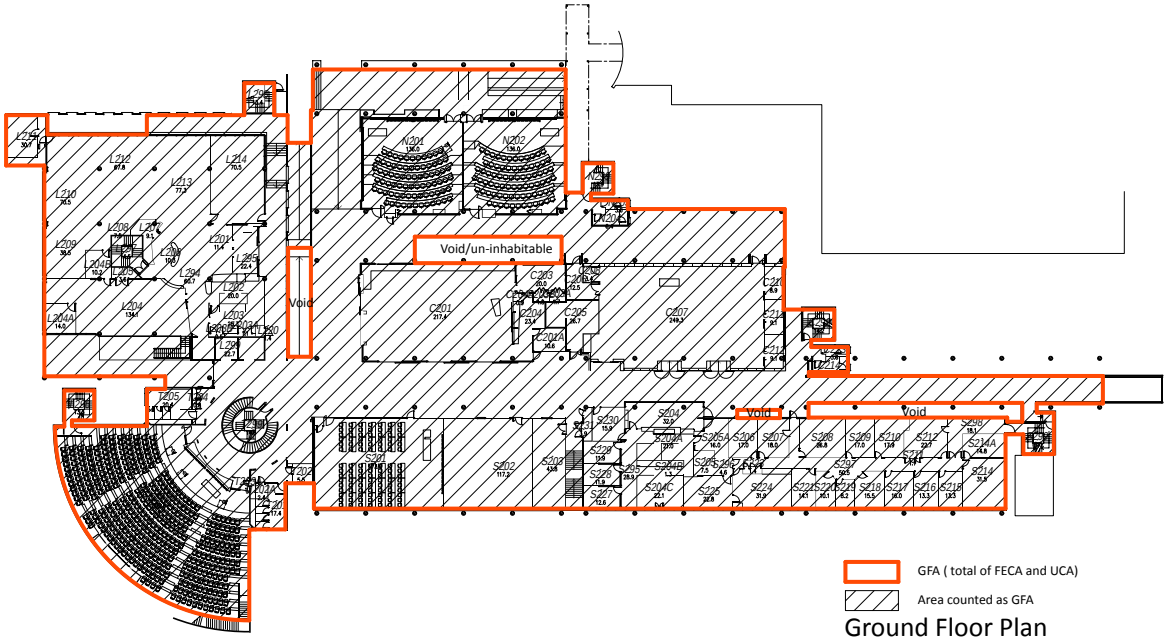
(a) The lower level has minimal UCA, including the ramp that extends from ground level down to the lower level (photo 6). There is a small void at the right end of this building, and half of the tiered lecture theatre is counted as FECA on this level.



Ground Floor Plan

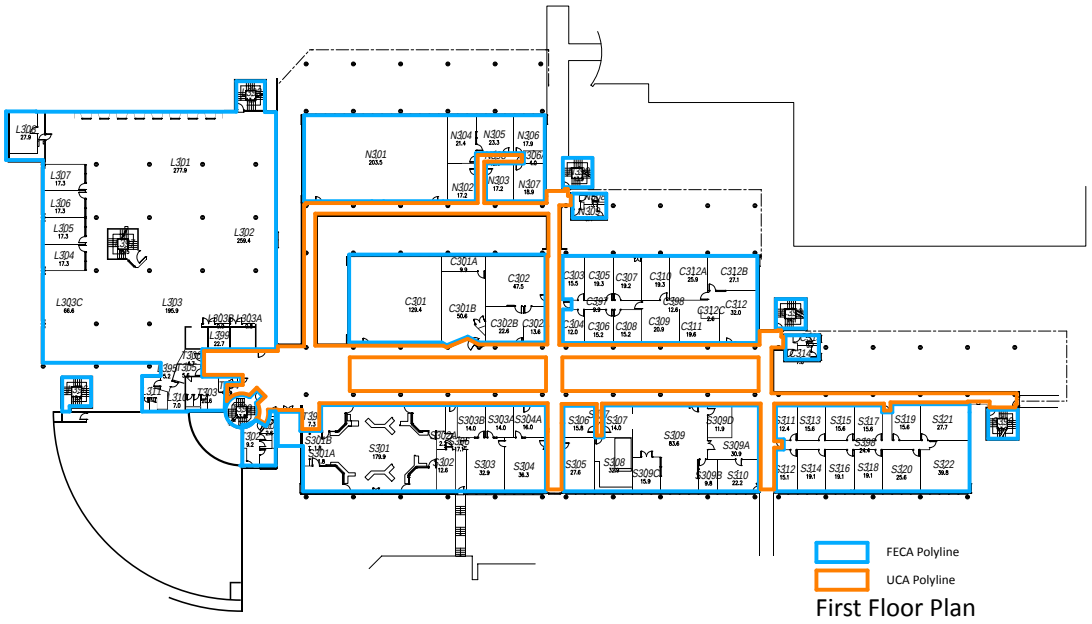
(c)

(c) The ground floor level now includes significant levels of UCA, mostly void spaces. The ramp that extends from ground level down to the lower level (photo 6) is calculated half size of the GFA for the connecting floor and half as void.
Half the tiered lecture theatre is counted as FECA on this level. Lift core is considered as fully enclosed.



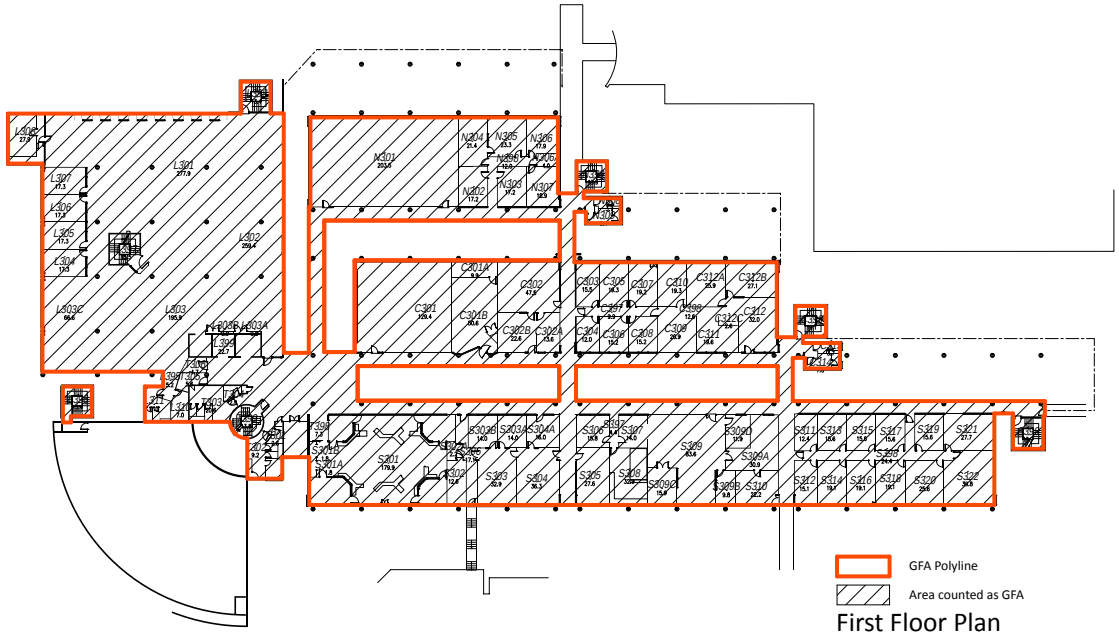
Ground Floor Plan

(d)



(e)

(e) On the first floor level, UCA space has reduced, two main voids remain under the canopy roof. The roof space above the lecture theatre is not included, and only half the circular stair case is included in the GFA.

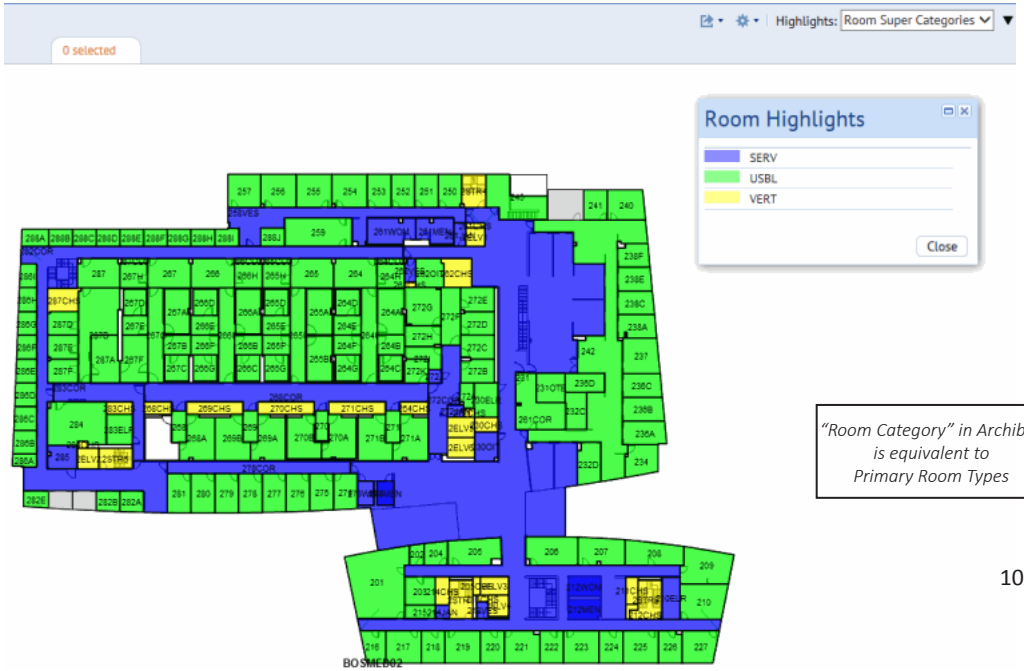


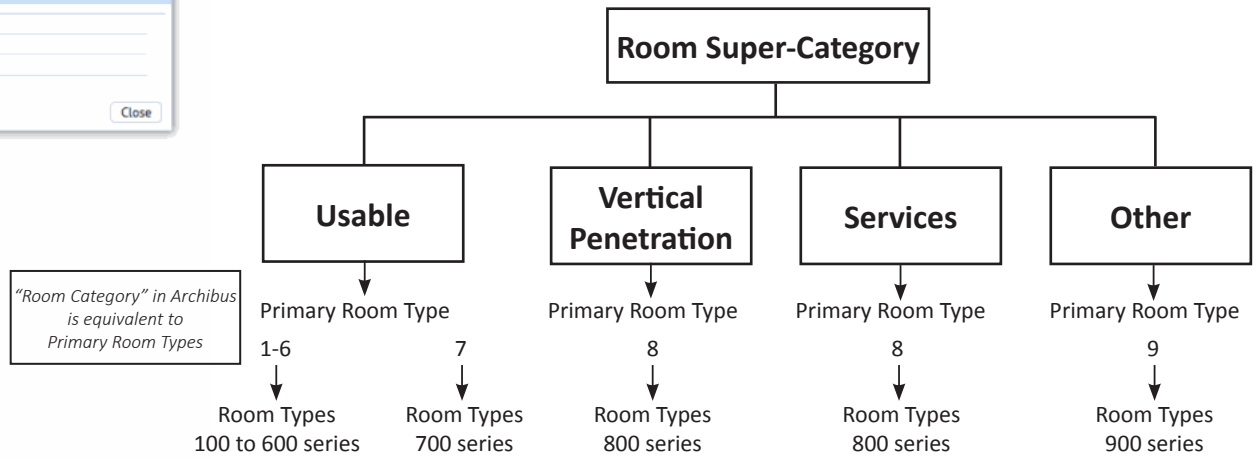
(f)

Variation 3 - Polylines and Super-category Fields

Many sites measure and account for their space according to guidelines developed by BOMA and IFMA. Using the super-category feature of Archibus provides a way to account for all spaces according to IFMA (International Facility Management Association) and BOMA-defined conventions, by adopting an additional layer of room categories with their associated m^2 calculations and room counts, that don't interfere with the true space measurements and true room totals.

Not all space on a floor can be used to house personnel and furniture because a floor typically has vertical penetrations (shafts, stairs, pipe shafts) and service areas (rest rooms, lobbies, mechanical rooms); personnel do not occupy these areas. The super-category approach still draws FECA and UCA polylines, but all areas are also assigned to a higher level space category (super-category) that indicates whether the space is occupiable or non-occupiable. These different space categories are flagged and rules are set in Archibus in how these spaces are used or not used in space calculations. An Archibus drawing can be generated (see below left) that highlights how the floor is divided by super-categories without the need to detail the space types within the super-categories. In this case, the areas have been assigned one of three super-categories: Usable Areas (**USBL** - occupiable), Vertical Penetrations (**VERT** - occupiable or non-occupiable), Service Areas (**SERV** - non-occupiable). A user defined super-category of Other (occupiable or non-occupiable) is assigned for other space types (eg workstations).





So primary circulation areas, mechanical closets, toilets, etc., are still recognised Room Types in Archibus, but are assigned a room super-category of Service, which indicates to the space management system that they do not house personnel and furniture. Similarly, stairs, atriums, etc., can be assigned a room super-category of Vertical Penetration. The super-category fields provide a useful and quick view of the total m^2 figures for vertical penetration, for example, within a building. Using the rules defined for each super-category allows an automatic (system) generated calculation of GFA, although the total m^2 figures require some interpretation because the different space terms employed in the super-category approach do not make some m^2 totals and calculations immediately obvious.

An advantage of Super-category space assignment is that it also readily identifies rooms into usable and non-usable categories, as the super-categories can be aligned with the Go8 Primary Room Types (1 through 9) and Room Types (100 through to 900 series codes), as shown in the chart above.

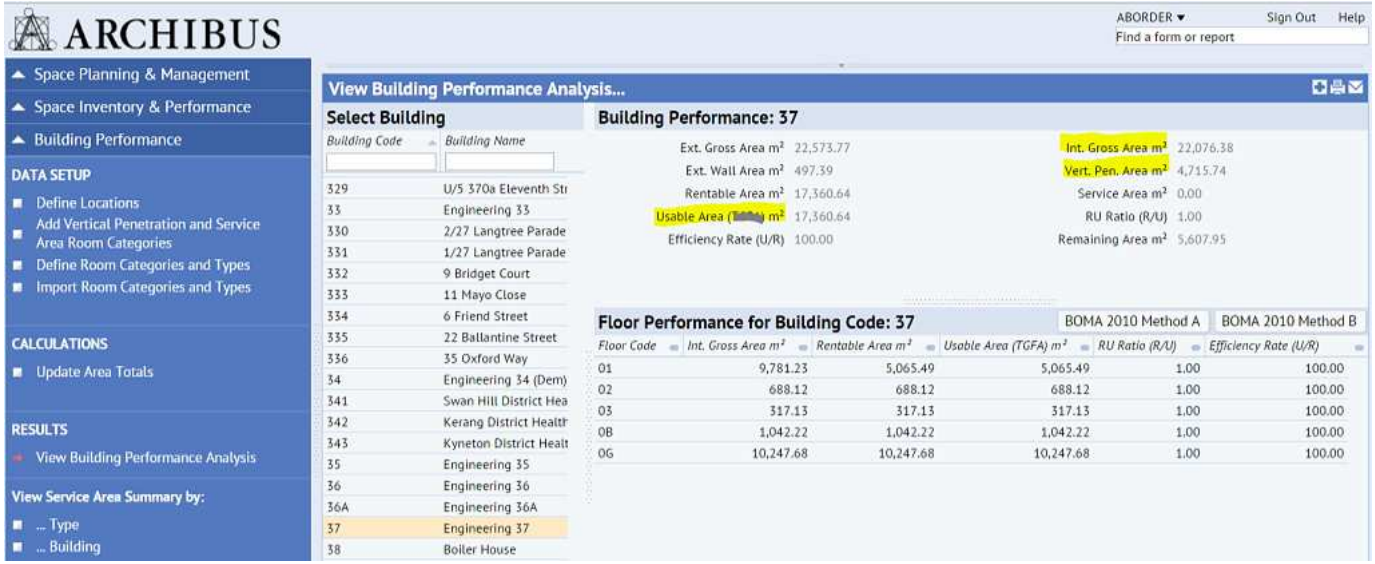
Accounting for Voids using Super-categories

The following screenshots show space measurements using super-categories, and in particular when accounting for voids.

Because of the way that Archibus handles different space types and the rules set for space super-categories, additional space terms are used that may not be common terminology amongst users of the space management system. The legend below defines these terms in order to understand the figures in the **Building Performance Analysis** view.

In this building example,

- there is 4,715.74 m² of Vertical Penetration space (voids, atria, service riser, etc) and no service areas (although some may be accounted in the void space figure)
- Ext. Gross Area of 22,573.77m² is the Int. Gross Aarea of 22,076.38m² (which include voids) plus external wall thickness of 497.39m²
- TEFMA GFA is the sum of Int. Gross Area (22,076.38m²) plus any UCA m² (manually captured and not shown in this view)
- Usable space of 17,360.64m² is the Int. Gross Area of 22,076.38m² less Verticle Penetrations and Service Areas of 4,715.74m². So Usable space represents the sum of remaining FECA (occupiable and non-occupable) plus the Int Wall thickness.
- Remaining area of 5,607.95m² is the Int. Gross Area less total FECA (occupiable and non-occupiable) space. It represents the sum of vertical penetration, non-occupiable service areas and any unacconted for spaces ie internal wall thickness.



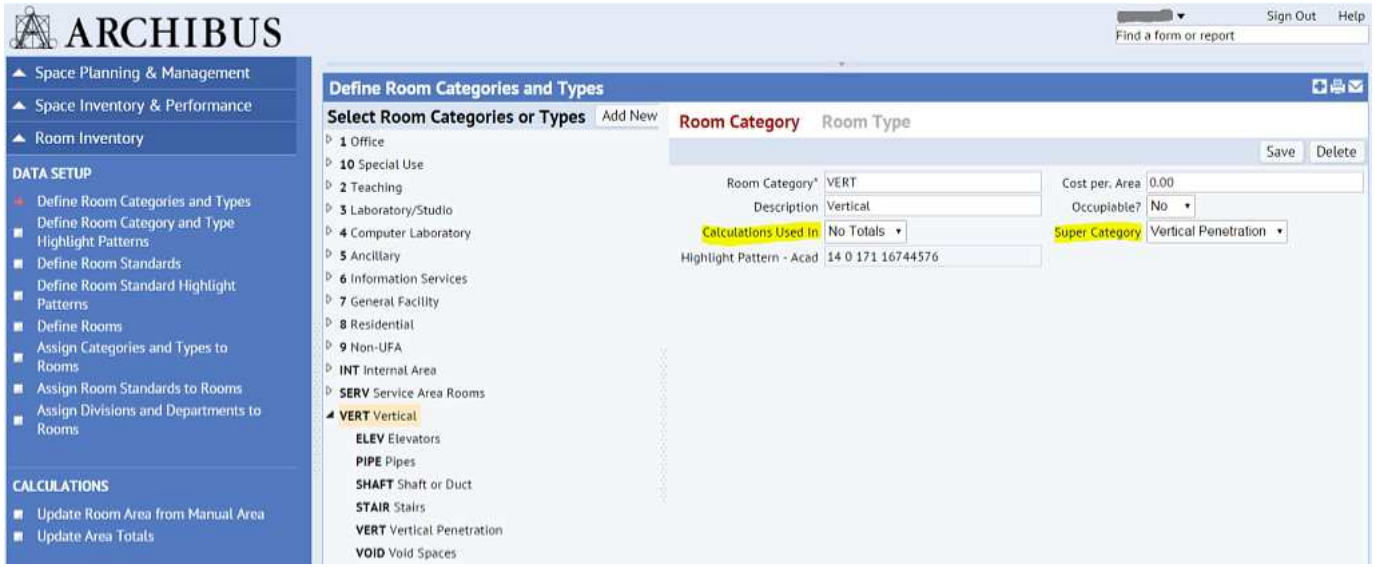
Space terms:

GBA = Ext.Gross Area plus UCA plus Remaining Area
TEFMA GFA = Int. Gross Area (less Void plus UCA)
Ext. Gross Area = Int. Gross Area plus external wall thickness
Ext. Wall Area = difference between Ext. Gross Area and Int. Gross Area
Rentable Area = lettable area (if leased)
Usable Area = Int. Gross Area (less Vert. Penetration and Service Areas) and is equivalent to total FECA (occupiable and non-occupiable) plus Int. Wall thickness
Int.Gross Area = floor area contained within a building measures to the internal face of the external walls, includes voids and internal wall thickness.
Vert.Pen. Area = voids, service risers, etc.
Service Area = circulation, toilets etc
Remaining Area = walls plus cavity areas (represents Int. Gross Area less sum of all FECA areas)

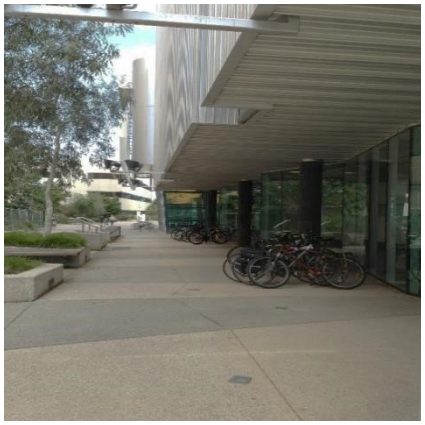
The **Define Room Category and Types** view below shows

- the user defined spaces included in the super-category **VERT** Vertical (elevation, pipes, shafts, stairs, verticle penetration, voids)
- Indicates the rule of Calculation Used In - No Totals which instructs Archibus to not include this space type in certain space total transactions eg., room totals. The rule sets "Verticle Penetration" as **not automatically** included in any space totals.
- Verticle Penetration field selected as the Super-Category, which creates another internal transaction rule that instructs Archibus to subtract Verticle Penetration space from the GFA.

This allows voids to be identified specifically by the super-category AND the space to be automatically excluded from GFA m² figures.



Examples of UCA spaces

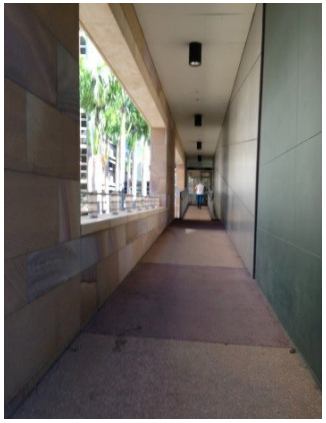


(a)
Unenclosed but covered at all building floor levels, including balconies, etc., attached open covered ways alongside buildings, and are trafficable areas of the building (TEFMA definition).

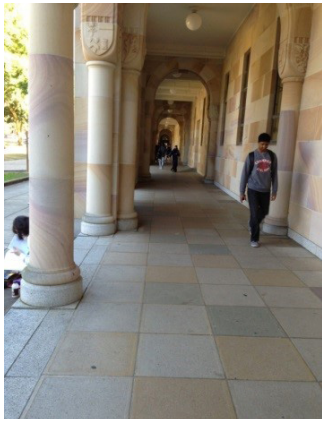
(b)
As in (a)

(c)
As in (a)

(d)
Unenclosed but covered at all building floor levels, including balconies, etc., attached open covered ways alongside buildings, and are trafficable areas of the building (TEFMA definition).



(e)
As in (a)



(f)
As in (a)

(g)
UCA would be measured in line with covered extension only - not to edge of steps (even though they are trafficable areas of this building).

(h)
Similarly, UCA measured to extended edge of the covered portion of the paved walkway (not to edge of pavement, this part is uncovered).

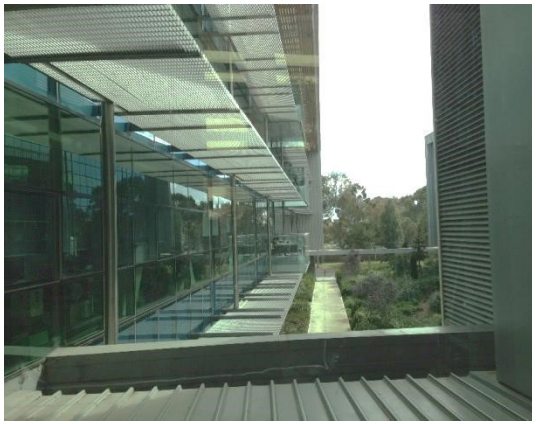
Examples of what spaces are not considered UCA

(a)
UCA shall not include eaves, overhangs, sun shading, awnings and the like where these do not relate to clearly defined trafficable covered areas, nor shall it include connecting or isolated covered ways. ***The overpass is not included as UCA.***

(b)
UCA shall not include eaves, overhangs, sun shading, awnings and the like where these do not relate to clearly defined trafficable covered areas, nor shall include connecting or isolated covered ways. ***The walkway is not included as UCA.***

(c)
As in (b)

(d)
As in (b)



(e)
UCA shall not include eaves, overhangs, sun shading, awnings and the like where these do not relate to clearly defined trafficable covered areas, nor shall it include connecting or isolated covered ways. ***The overhangs are not included as UCA.***

(f)
As in (e). The architectural extension at building height does create a UCA below it, at any level.

(g)
The architectural overhangs extend out over the balconies and are essentially cover enclosed glass spaces. These are used by staff and student of the building as social and dining spaces. These balconies and verandahs are treated as UCA.

(h)
Special note and exception: These external stairs have trafficable space below them and are alongside the building. Possibly, the stairs one level above the ground could be considered as creating a UCA space, as they relate to a practical trafficable area at ground level, but this would not be the case for the higher stair levels.

The best approach for mapping UCA is to consider its relationship and proximity to a trafficable area. Go8 mapping convention is that UCA will apply to a trafficable area at one level high only. This would normally only include entrances on the ground (or possibly another level) and balconies, terraces, etc at all levels. In the photo example (f) above, there is a small UCA space at the ground level, but the large architectural feature, several floors above the ground is not UCA, as it does not have a practical relationship nor proximity to a trafficable below.

Examples of what spaces are not considered FECA

FECA shall not include open courts, light wells, connecting or isolated covered ways and net open areas of upper portions of rooms, lobbies, halls, interstitial spaces and the like, which extend through the storey being computed. Note: atriums and light wells are only measured at the base level.

(a)

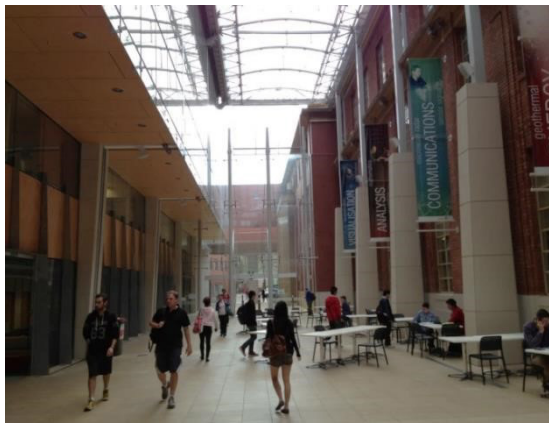
Canopy roof between two wings of a building. Open entrances to the ground level of this level of this building.

(b)

Essentially as in (a)

(c)

At first glance, this may appear to be UCA ie connecting or isolated covered ways. But this overpass is fully enclosed, therefore treated as FECA, and the space mapped as circulation and equally split between the two joining buildings.



(d) EXCEPTION

Glass canopy roof between two separate buildings. Canopy roof and high glass entrance doors at both ends of this inter-building space do not fully enclose the space (but is essentially weather proof), and is considered a special example of FECA. Space is shared circulation and Informal Learning at ground level, and void at all other levels.

Measurement of UFA and non-UFA spaces

The main differences in how TEFMA and Go8 usable and non-usable space is accounted for is noted in the table below.

A total campus efficiency (UFA/GFA) in excess of 70 – 75% historically indicates that efficiencies of this magnitude and greater are difficult to achieve and are unusual. Especially with the modern design of buildings and student teaching and learning spaces, space efficiencies will tend to be lower, perhaps even 60% or lower for some buildings.

Currently TEFMA treats carparks as both UFA and non-UFA, whereas Go8 treats all car parks as non-UFA. This difference is explained in another section of the playbook.

UFA	Non-UFA
A polyline is drawn around the inside face of walls of the usable space. • Go8 total UFA is the sum of m^2 for Primary Room Types 1 to 7 areas. Go8 total UFA includes residential spaces. • TEFMA total UFA is the sum of m^2 for Primary Room Types 1 to 6 areas. TEFMA total UFA excludes residential UFA.	Polyline drawn around the inside face of the walls of the non-usable space. • Go8 total non-UFA is the sum of m^2 for Primary Room Type 8 and Primary Room Type 9 (non-reportable to TEFMA category) areas. • TEFMA total non-UFA is the sum of m^2 for Primary Room Type 8. Note: Some residential non-UFA areas are coded under Primary Room Type 7 series, except for circulation and similar non-UFA spaces, and so these will be included in the Go8 and TEFMA non-UFA totals, but for the most part are immaterial. If substantial residential complexes exist, then an effort must be made to exclude the residential non-UFA space coded under Primary Room Type 8 from TEFMA totals, as it may skew space figures, such as efficiency percentage.
Another method first measures separate Room Areas of FECA and calculates UFA as follows: Usable Room Area = FECA – (SA+NHA+CUA), where usable room areas are determined as FECA of a building/floor less Service areas (SA), Non-habitable areas (NHA), and Common use areas (CUA).	Non-usable areas are typically supplementary to the primary function of the building ie SA, CUA and NHA are assigned as non-UFA. Service areas (SA), Non-habitable areas (NHA), and Common use areas (CUA).

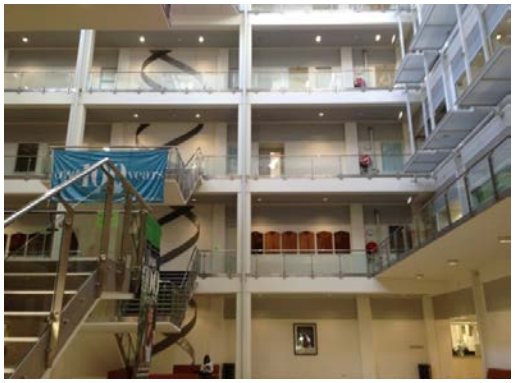
1.4 Void /Atrium /Stairs

Voids and Atriums

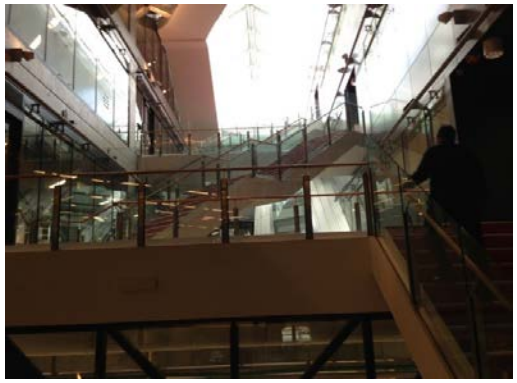
Vertical Penetrations are openings in a floor to accommodate vertical building elements such as stairs, elevators shafts, escalators, an atrium, flues, pipe shafts, vertical ducts, and light wells. If a vertical penetration is adjacent to an exterior wall, polylines are drawn to the inside face of the vertical penetration.

Voids are a distinct type of vertical penetration in that they do not usually provide inter-floor building services (like elevators, stairs, mechanical shafts). A void area is defined as a portion of an enclosed floor area that is open to the floor below, eg upper levels of a multi-story atrium, or a portion of a ramp (above a sloping floor) whose area is included in the floor area of a lower level. The photos below are examples of the complex void spaces (a, b and c) that are common in more recent buildings, compared to the simpler void designs in older buildings (photo d).

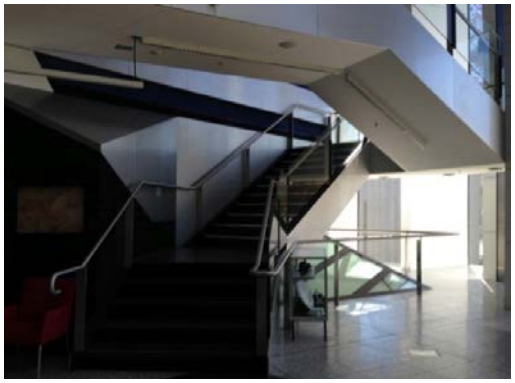
The void space at all floor levels, except ground/base level, needs to be excluded from GFA measurements. Stairs/staircases penetrating an atrium/void space need to be identified by polylines and by Room Type code 805.



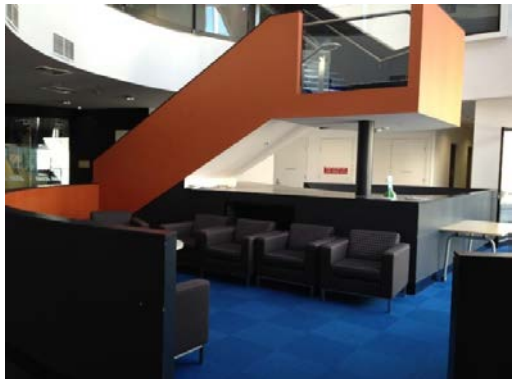
(a)
Example of an atrium with a central stair case and large ground floor foyer. This is a typical simple style of atrium/ void and staircase of older constructed buildings.



(b)
Photos (b), (c) and (d) are examples of more complex atria and staircase styles in modern buildings. These newer designs are more challenging for CAD drawing of polylines around the spaces. These atria also decrease the efficiency of buildings due to the large and non-usable void space.



(c)
As in (b).



(d)
As in (b).

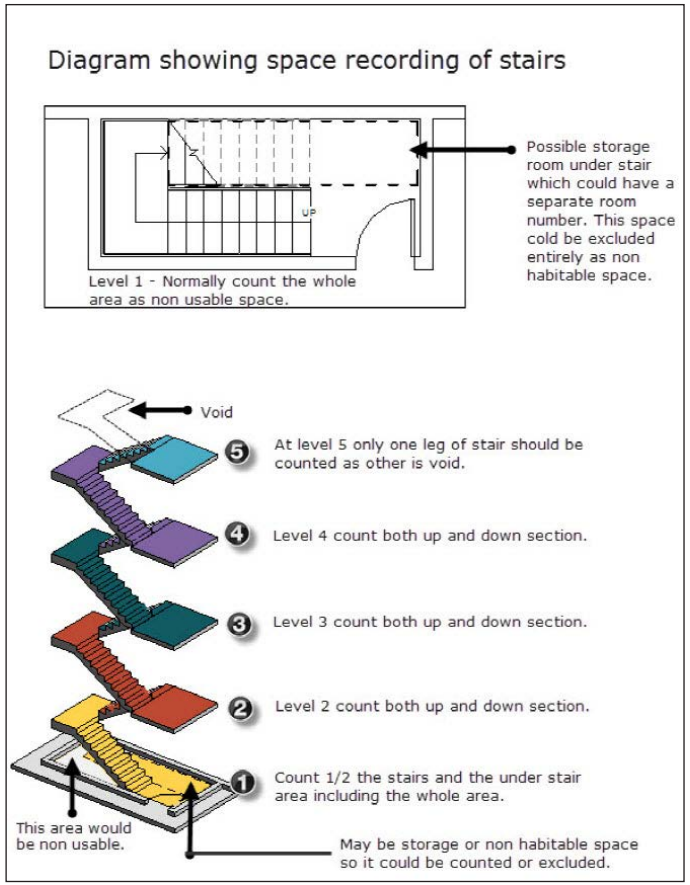
The example CAD drawings on the following page show how polylines are drawn around staircases and voids to accurately represent these space types and their measurements at that level.

Stairs

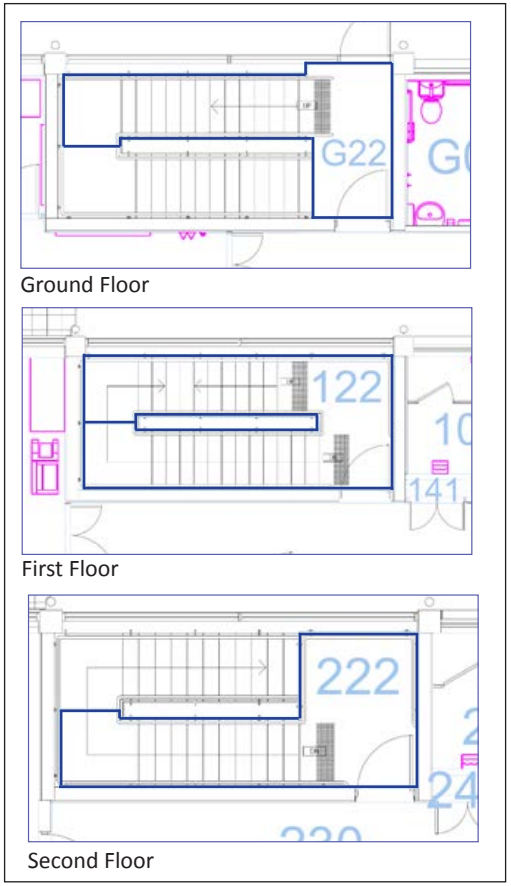
Stairs: Diagram (a) below, shows what part of a staircase are included in which floor level measurement. Except for the top and bottom levels of the building, the area of the stairs to be counted for on each level equate to a rectangular space, as indicated by the colour shaded levels. Diagram (b) shows an example on how this depicted with polylines on three consecutive levels of a building. Stairs are usually given a room number assicated with each floor. In most cases, mezzanine level stairs are best mapped to the floor level below.

Stairwells, gaps between stairs and walls or voids: When there is a wall immediately adjacent to the stairs, the gap between the stairs and wall may be ignored, if the gap is not large, and the stair polylines are drawn to the wall position. In the polylined example (b), each flight of stairs is polylined to the bannister of the stairs at each level, leaving a small void at each level.

External stairs: are polylined at each level of a building, with polyline boundaries being drawn at the building wall on one side and the glass banister (refer to photo g) on the other side. Only the stairs immediately above the ground level would be considered UCA, as a covered, trafficable area. The higher stair levels cannot be considered to be practical covered areas for the ground level area below.

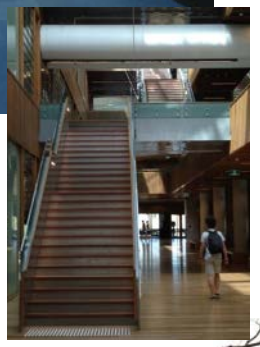


(a)



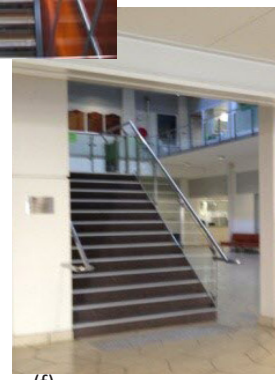
(b)

(c)



(d)

(e)



(f)

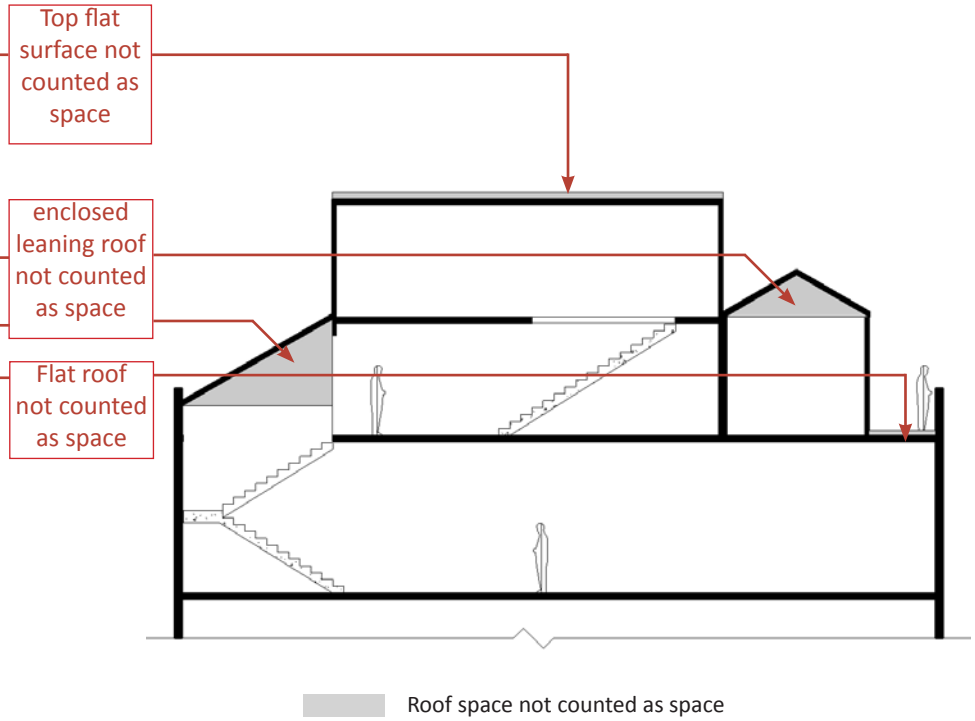
(g)

1.5 Roof space /Balcony /Verandah

Roof spaces are not included in GFA, and are generally not considered UFA. They typically do not have a Room Type assignment or a room number (unless they have a very specific activity eg experimental space associated with them). The photo and schematic below shows different shaped roof spaces and what areas (shaded) are excluded from space measurements.

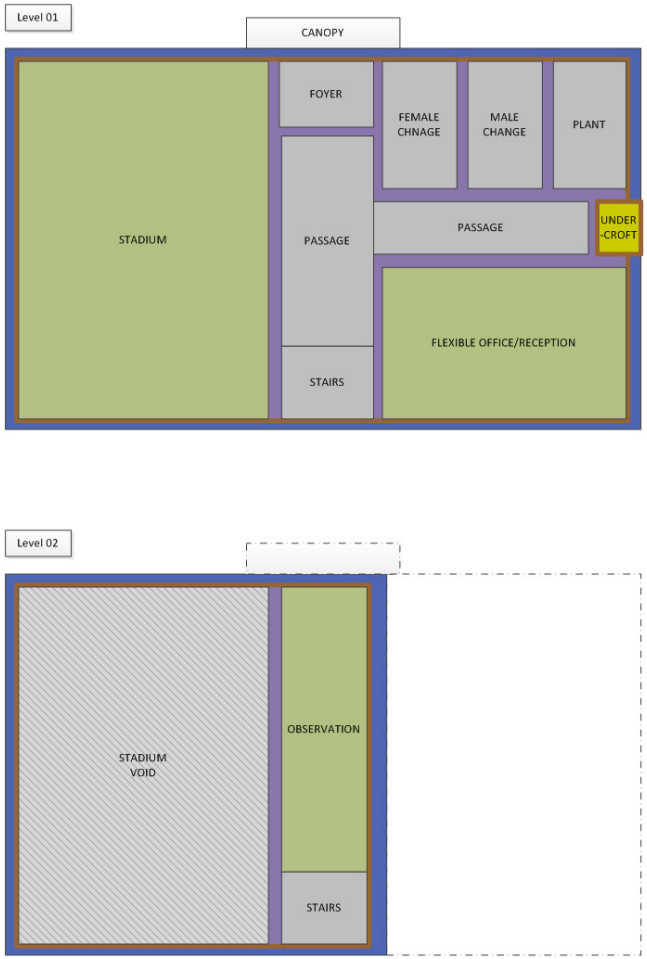
Balconies and verandahs are UCA and included in GFA, but are generally considered as non-UFA (Room Type code 839), even though they may be used as social spaces.
The term “non-usable” is misleading as all spaces tend have a purpose, and “non-usable” space should be viewed in terms of “non-occupiable” where the space is unlikely to house personnel and furniture for day to day working activties of the Institution, and this maybe due to issues relating to egress, ceiling heights, non-weather proofed, other regulatory restrictions, etc.

Terraces are usually covered, unenclosed areas usually adjacent to internal tea/common/dining areas and therefore often used as social spaces. Although they are an extension of the dining /social space, they are treated as non-usable space (Room Type code 839), mainly because they exist outside the building walls and are unlikely to be re-purposed to a usable space for core activities of the Institution.



1.6 Common use /Circulation /Corridor /Foyer

These spaces are for movement of people in/out and within a building, and as such their primary use is considered as non-usable space (and non-occupiable), since these spaces can't be easily re-purposed without affecting movement of traffic into a building or a space. The schematic below shows types of trafficable areas (stairs, foyer, passages) within two floors of a building.



In the schematic above, the green areas represent specifically purposed spaces, light purple areas indicate common use and circulation spaces, and the hatched area is the void above the stadium floor.

Common use areas typically include corridors defined by partitions, passages or secondary circulation areas which are part of open plan spaces (these are treated as UFA secondary circulation, as is the circulation between rows of benches in laboratories). But each floor containing open plan or lab spaces must always identify primary egress/circulation. Primary circulation is assigned a Room Type code, but secondary circulation is not.

For purposes of leases/lettable space, "common areas" also include toilets, stairs, plant areas.

Foyer areas are typically at building/floor entrances. TEFMA suggests that a foyer outside a large lecture theatre may be treated as UFA, but they do not specify what is "large". For consistent Go8 mapping and reporting, treat lecture theatres with 200 seats or greater as a "large lecture theatre", or if the foyer is oversized ie., greater than it needs to be for just managing circulation.

Waiting area and foyer: Waiting areas are specifically purposed areas usually furnished differently to a foyer, although a foyer can have some basic seating/ furniture for ad hoc use. A large foyer with a waiting area could also include some primary circulation.

Activated corridors: Increasingly corridors and circulation spaces on campus are being "activated" for use by students. These spaces provide casual, minimal furniture, and are quite distinct from the informal learning spaces on campus (described in detail in another playbook section). A Go8 Room Type code has been created for Incidental Learning space and the definitions are quite clear on the differences between Informal Learning and Incidental Learning. Incidental Learning most often occurs in a shared space scenario.

Best approach is to assign space according to its predominant use, taking into account the intended activity for that space when it was built. When there is ambiguity about its intended activity (ie., its primary purpose), then taking into account the space's proximity to other room types may be useful, but should not override the room coding decision.

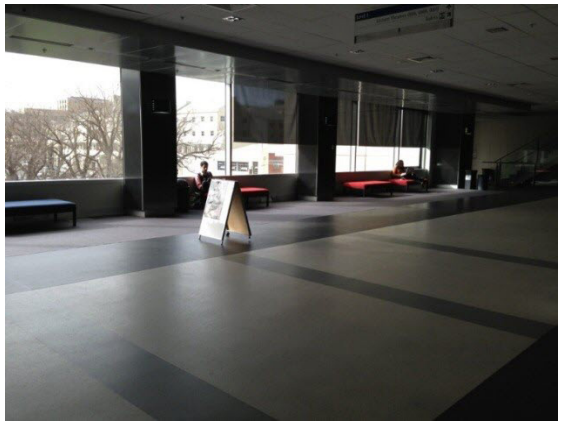
Foyers are more typically shared spaces rather than a multi-purposed space and should not be mapped as a Multi-Function space (Room Type 626). Shared Room Type spaces can be mapped and identified by using separate polyline, Archibus Room Transaction Table or the super-category approach.

The following pages show photos of spaces that are trafficable areas, but may be difficult to map and code because of the proximity of other space types.

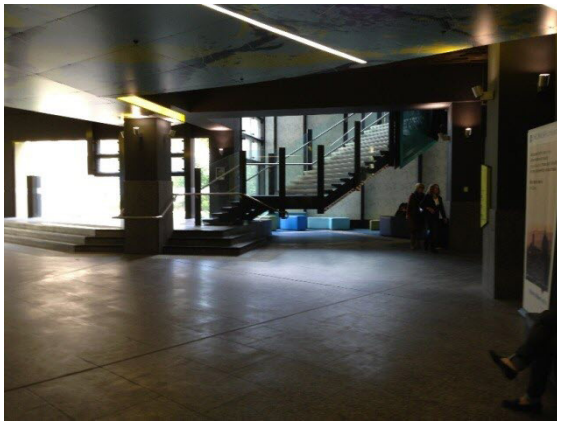
The aim is to consistently map these spaces and be clear as to their primary purpose being for temporary waiting/social meeting, general circulation, etc. The presence of furniture does not automatically mean these are mapped as learning spaces, as often these spaces are located in or near a high traffic area and may be noisy eg., near lifts, entrances on any level. The presence of power points may be equally used by cleaners as by students, and does not automatically suggest a student purposed space, especially as technology become less dependent on hard wired devices.

Learning spaces (incidental and informal) are discussed in more detail in another playbook section. In summary, not all foyer and corridor spaces with furniture/seating should be assigned as learning spaces, and a shared space scenario may need to be considered when mapping and coding the space.

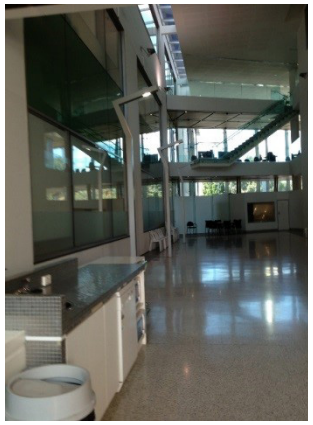
(a)
Foyer, occasionally probably used for functions. Not adjacent to lecture theatres.



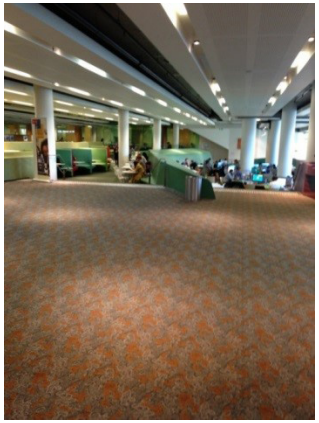
(b)
Incidental learning alongside windows, remaining space is circulation.



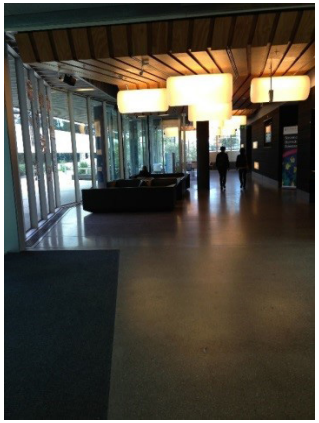
(c)
As for (a)



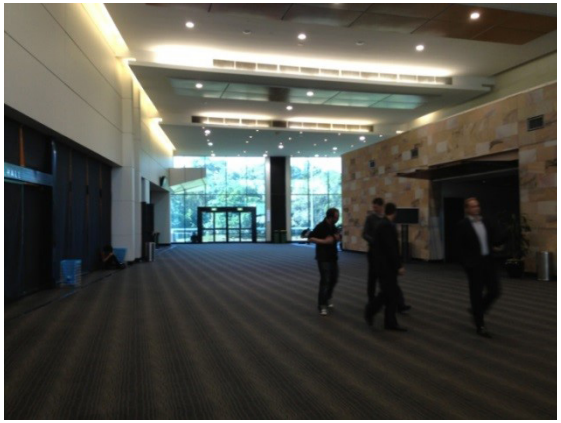
(d)
Circulation space with small kitchenette (all mapped as non-UFA).



(e)
Front section is circulation before entering Informal Learning and Library services areas.



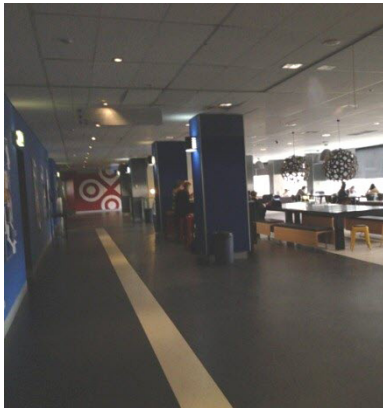
(f)
Foyer with casual seating.



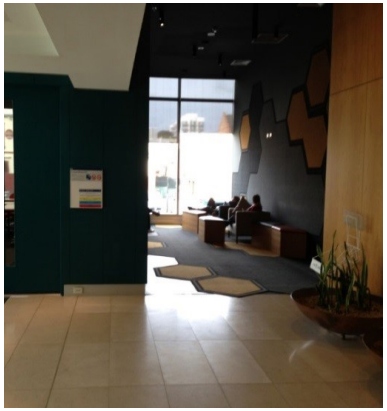
(g)
Foyer and circulation outside auditorium. Most likely used occasionally for exhibitions and social functions.

(h)
Foyer and circulation space providing access to a library (on left, not shown) and student services (front and to the right).

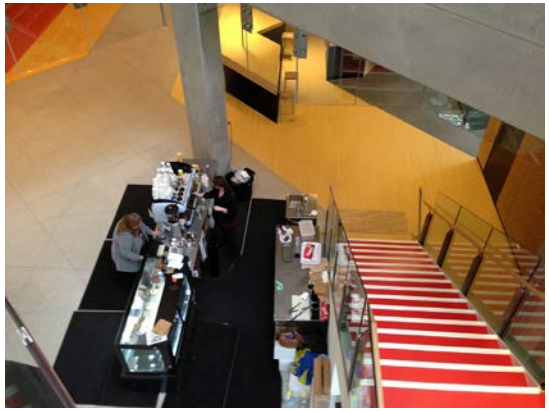
(i)
Carpeted area is Informal Learning (can include vending machines area) and vinyl area is circulation. Area is near to seminar rooms and lifts.



(j)
Essentially, as in (i).



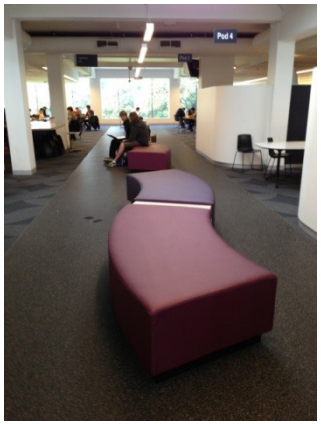
(k)
Essentially, as in (i).



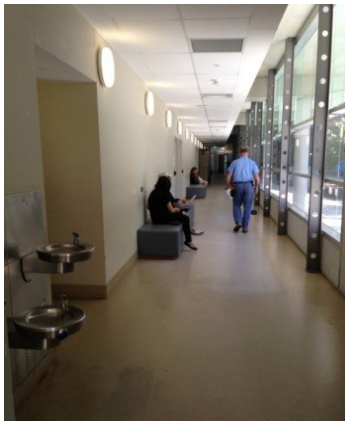
(l)
A foyer area with circulation, a reception area and a small coffee service (adjacent to stairs).

(m)
Essentially, as in (o).

(n)
Circulation up to Informal Learning area near windows.

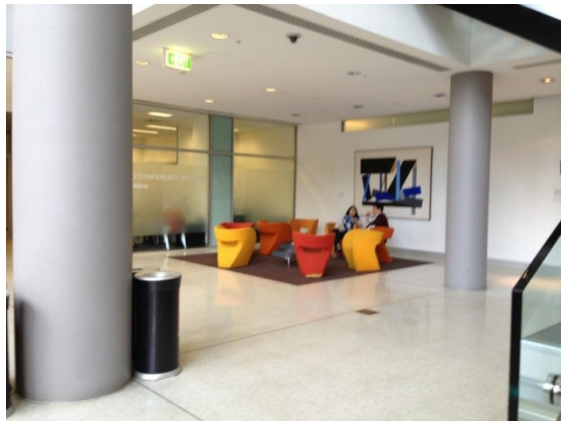


(o)
Incidental Learning shared space with circulation (main thoroughfare into the area) with Informal Learning space on the left and right sides - not visible in this photo.



(p)
Circulation and casual seating in highly trafficable area.

(q)
Circulation and casual seating outside lifts.

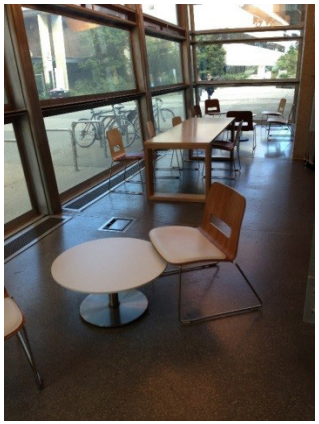


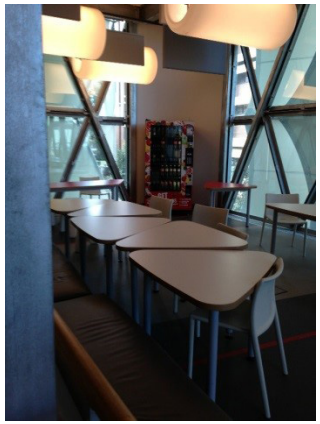
(r)
Large foyer area with casual seating (used as social space) adjacent to stairs and main entrance to other areas on this floor level.

(s)
Casual seating in foyer - not Informal Learning and not Incidental Learning - as located in a highly trafficable area near lifts.

(t)
As in (c). Foyer/circulation space with casual seating. This is <u>not</u> Informal Learning and <u>not</u> Incidental Learning.

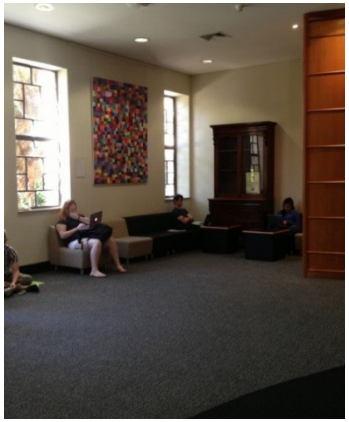
(u)
As in (r) and (t).





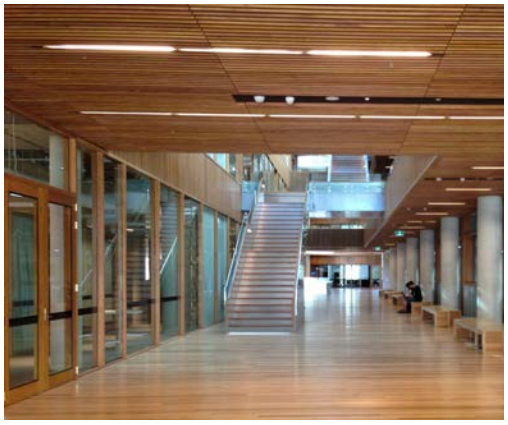
(v) (w)
Photos (v) and (w) are spaces near lifts and a main entrance, and are used for mainly for eating and as a social space. Map as Room Type 604 or 606.

(x)
Main trafficable entrance to building, adjacent to laboratories. Map as Incidental Learning (Room Type 515) within circulation space.



(y)
Incidental Learning space in a foyer area of a library, close to toilets and stairs.

(z)
Incidental Learning area and circulation space outside lecture theatres/seminar rooms.



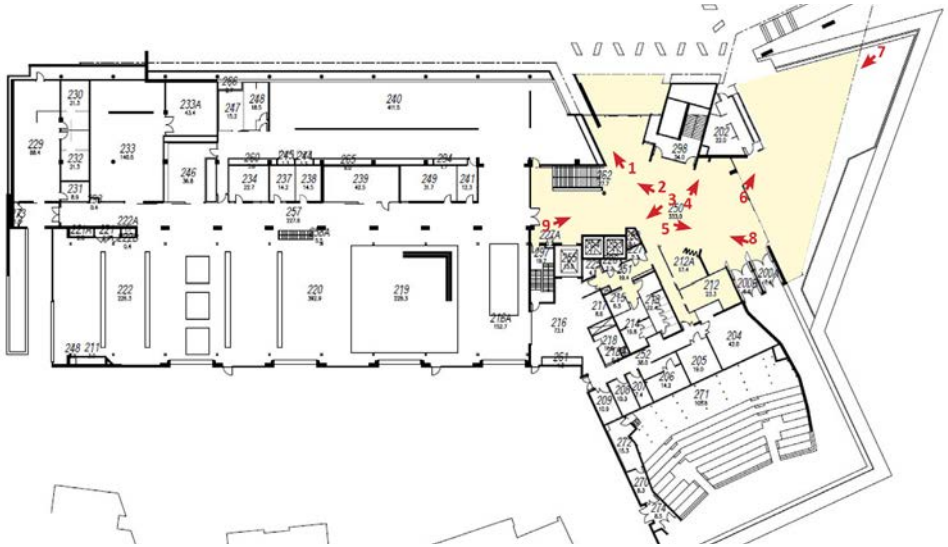
(a1)
Main trafficable area through building, adjacent to offices and teaching spaces. Map as Incidental Learning (Room Type 515) within circulation space (Room Type 805).

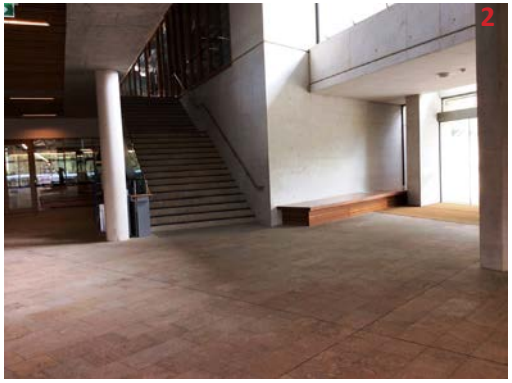
(a2)
Circulation space (thoroughfare) on ground level of building. Adjacent area on right is a garden bed and on left is seating associated with a cafe, not Informal Learning space.

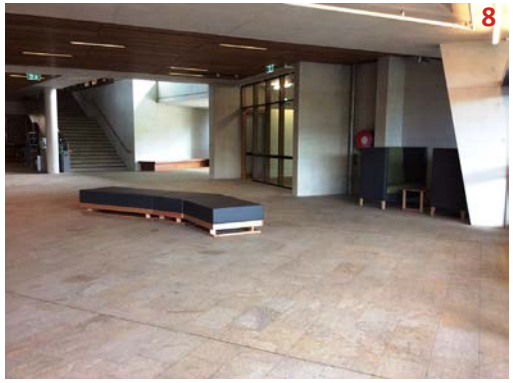
The following photos are an example of a building that has circulation/foyer areas and other spaces that may cause confusion in mapping and assigning of codes.

Photos labelled 1 to 9 show the corresponding locations to the arrows on the CAD drawing

1 = entrance foyer with casual seating
2 = continuation of foyer (becomes circulation) leading to stairs
3 = circulation space next to stairs/lifts
4 = circulation space with Incidental Learning cubicle near main entrance
5 = casual seating next to glass doors leading to terrace, and also near lecture theatre entrance
6 = outside area (UCA) providing access /space for cafe use & seating
7 = view back towards outside cafe seating area
8 = circulation space with casual seating in the middle and Incidental Learning to the right
9 = circulation space leading to various indoor/outdoor spaces







1.7 Shared Space

The main drivers for identifying shared spaces on campus is the increase in multi-disciplinary spaces/ buildings and space charging at some Universities. Also, often rooms or spaces are used by different organisational Units, internal or external vistors, or a mix of these. The challenge to apportion ownership or cost to the correct group. Shared space should not be confused with multi-function space (which has a specific Room Type code, and is a space used for different activities at different times, eg a hall used for as an exams/graduations venue, for teaching, for sporting and other institutional/communal gatherings).

Space shared by different groups is most often seen in open plan offices, labs and support areas. Room splitting or proration is done to indicate that a space or room is shared by several groups to allocate the m^2 against the different user groups, eg., sharing of an office by two or more departments. Room splitting can be done either on the basis of the relative time occupied by the users, but the default is on the basis of the proportion of the room area used by the different groups.

Workstations and hot desks may be shared and these specific spaces are described in another section of the playbook. The method of mapping rooms shared by different organisational units, shared space by different Room Types (eg., a departmental conference room housing a reference library), workstations in an open plan, or a room with shared Room Functions can be applied in similar manner, by a number of different methods.

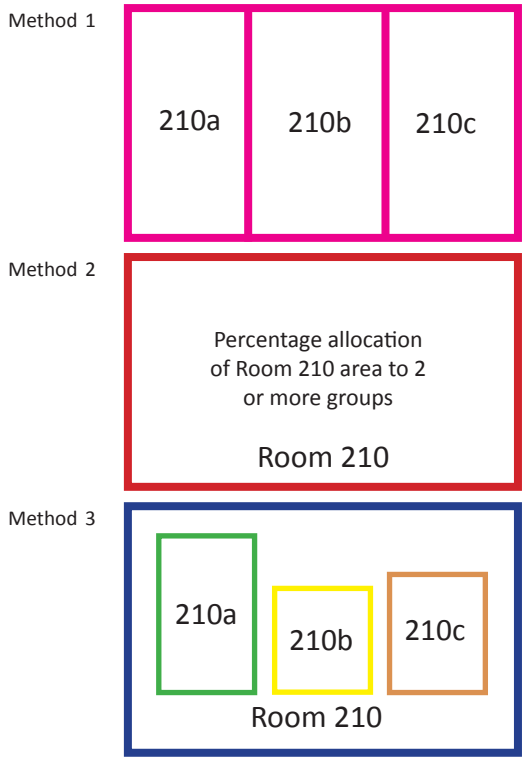
Whichever method is used, shared space information should be amenable to being rolled up into space categories as needed for reporting, utilization studies, and institutional planning, and that it is not double counted as this will distort the m^2 measurement and provide inaccurate total floor/building figures.

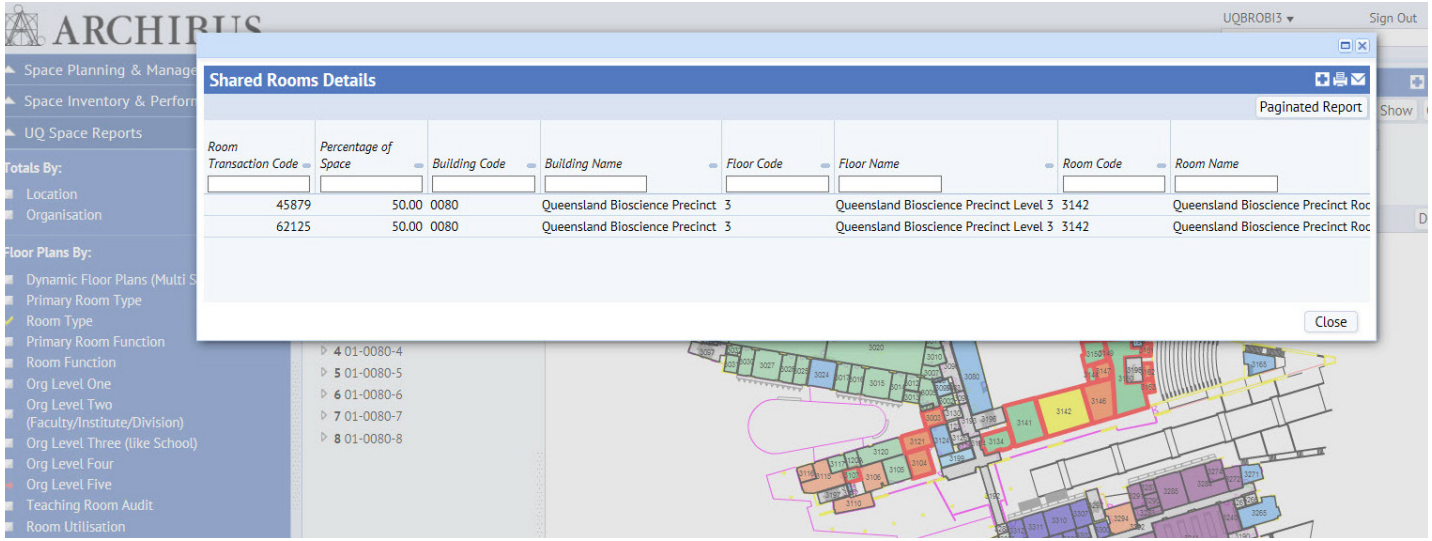
The common approaches to mapping shared space are:

- **METHOD 1: Separate polylines -** areas assigned to different groups on a floor or room are polylined separately. Each space (i.e., each part) of the room is given a unique space identifier, usually by adding an additional digit or character to the existing room identifier. For example, Room 210, has a storage room for both Biology and Chemistry departamental units, identified as 210a and 210b. The pro-rata organizational assignment and share of space can be identified with each. If required, and polylines can be drawn around specific desks/groups of desks, but this requires a lot of effort.

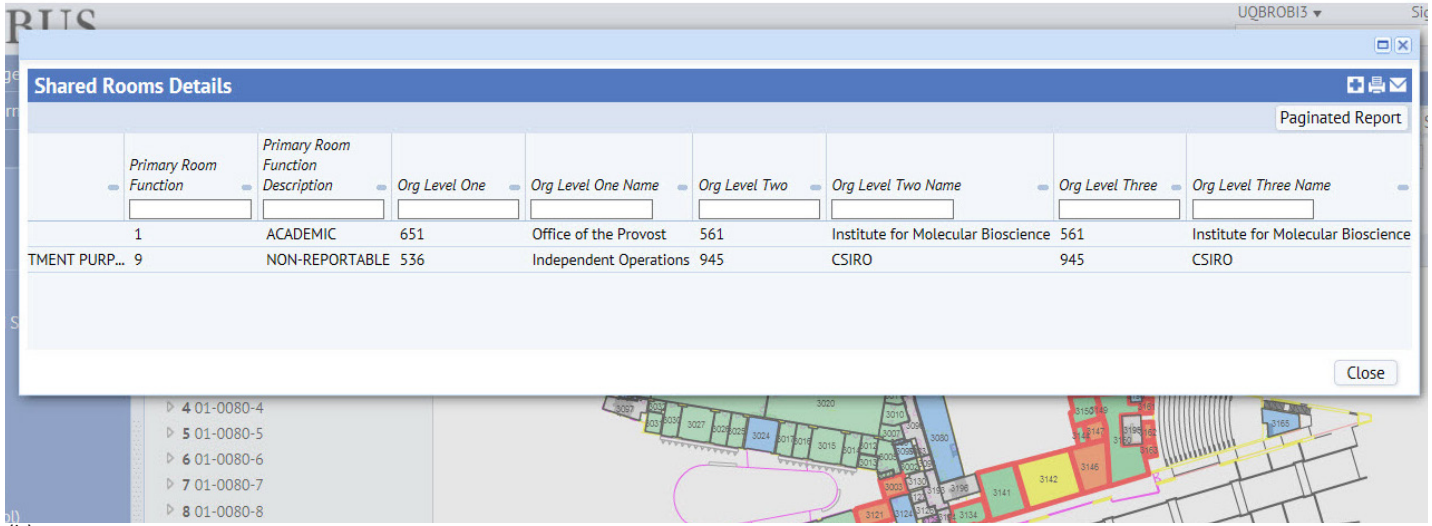
- **METHOD 2: Room percentage split -** using the Room Transactions Table in Archibus, a percentage of that room space allocation is applied to a room number, room m^2, room type and org status. The other method is to apply percentage figures to each assignment. A "phantom wall," eg red border on a floor plan layer indicates the space is shared, but who shares the space cannot be visualised and details of the shared arrangement can be viewed in the Archibus Shared Room Details view (see next page).

- **METHOD 3: Super-category assignment -** A "phantom wall," eg blue border on a floor plan layer indicate the space is shared and has its own m^2 measurement, and super-category 'sub-rooms' are polylined (210a, 210b, 210c) with their own m^2 measurements, essentially polylines are drawn around smaller areas within the larger space. The super-category rule applied does not allow the individual small space m^2 totals to be included in any space calculations, but they are visible and can be reported from Archibus room tables.





(a)



(b)

Method 2 - Example screenshot of **Shared Room Details** view in Archibus for shared space by different Organisational Units.

A thick red polyline around the whole space/ room in questionhighlights that the space is shared by more than one organisational user (or perhaps shared by more than one room type or function

Shared space still has one room number only, d the red line), but the red line drawing does not indicate how many other units/room types/functions are in that space.

The **Shared Room Details** view needs to have a separate line for each unit. They both have the same room number, but the proportion of area used by two Units is indicated by a percentage split of that space.

If a space is occupied by one Organisational Unit then the room percentage field would show 100%, but in this example it shows the equal (50%) percentage allocation against each Unit.

Using the Room Table reporting option in Archibus there are two options for viewing, one that shows one transaction only, and the other that allows multiple transactions.

Example of space shared by different Room Types

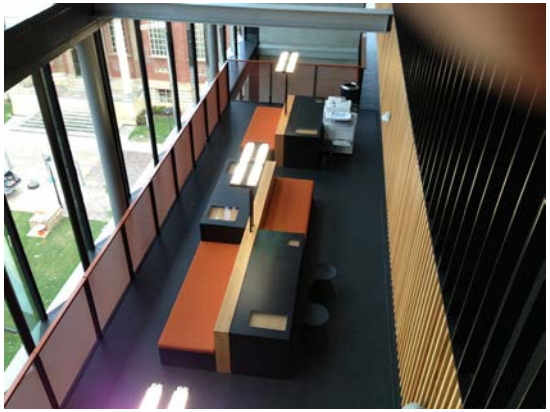
Often resource areas are located within corridors or other spaces. If these resources are permanently located in that space, then polylines could be drawn to indicate this, but this would require a separate room number, or at least a subordinate room number. Alternatively, the shared space can be indicated by a space percentage split between the two room types, using the Archibus Room Transaction Table. Another method to show a “room within a room” scenario would be to use a super-category approach.

The best approach is a common sense approach to avoid too much work in polylining different spaces, and to consider if the amount of space involved is material to internal reporting and benchmarking. But the approach used must be consistent and rules should be enforced so that staff interpretations do not change and that space types are accurately and consistently mapped from year to year.

The most common scenarios of shared space by Room Types are:

- activated corridors
- incidental learning and foyers
- informal work spaces within open plan areas

(a)
Resource space (Room Type 603) and Informal work/ breakout space (Room Type 119) with circulation space.



(b)
View of space in (a) from level above.

(c)
Resource space (Room Type 603) within a circulation (Room Type 805) space.

1.8 Space Codes

A series of codes (and their definitions) are used to map Go8 campus spaces and these are detailed in the **Go8 Data Dictionary 2.0** (current version, April 2016). The purpose of the Go8 Data Dictionary is to help keep space reporting consistent between the Universities, so that benchmarking or other space comparisons are robust, accurate and informative.

TEFMA provides suggestions on space codes in the TEFMA Space Planning Guidelines (Edition 3, 2009), and most tertiary sector institutions use these, often supplementing them with their own University-specific codes for spaces not covered sufficiently by the TEFMA Guidelines. Therefore there is variation of codes used by different Universities in the sector. Having fewer space codes limits granularity (and perhaps accuracy) for space management mapping and reporting, but then too many codes can be over kill with detail, and does necessarily assist accuracy of space data, as subtle differences in definitions are misinterpretated. Too many codes can be burdensome and lead to complacency in mapping to the exact space code. But more codes do allow retrieval of space information at a finer level.

It is important that all codes used can be rolled up into a higher level category for reporting requirements that do not need the space granularity.

Campus space is assigned two main space data dimensions - Room Types and Room Functions. The three groups of Go8 space codes (detailed in the Go8 Data Dictionary 2.0, are described below:

- **Primary Room Type and Room Type codes** - these codes assign a room description of what that room is, eg., is it an office, is it a laboratory. Primary Room Type codes are a small set of higher level codes, whereas Room Type codes provide a series of codes with more granularity. Each Room Type code rolls up under one of the Primary Room Type codes. Primary Room Types align with TEFMA Primary Room Types (1 through to 8). Each room is assigned a single room type code, however, if an area or room has distinct space types within it, then a percentage allocation can be made to the different types of space, or the spaces can be polylined separately.

- **Room SubType codes -** these are Go8 specific codes that provide an intermediary space categorisation, with more granularity than the Primary Room Types, but less detail than Room Types. It provides a very useful, high level view of Room Types on campus. All Go8 SubType codes roll up under one of the Primary Room Type codes.

- **Primary Room Function and Room Function codes** - these codes categorise space differently to Room Types in that they relate to the activity undertaken in the room, eg., the room (type) is an office, but it is used for Central Administration work (function) of the Institution. Primary Room Function codes are a small set of higher level codes, whereas Room Function codes provide a series of codes with more granularity. Each Room Function code rolls up under one of the Primary Room Function codes. Each room is assigned a single function code if it is used for a single purpose, however, if a room serves multiple functions, then a percentage allocation can be made to the different functions for that space. **Room Function assignment should not be made according to the Organisational Unit who pays for the space, as this does not (necessarily) relate to the activity undertaken in that space.**

  Room Function codes provide a useful tool in reporting on how space is used on campus. Sorting an Institution's room table records according to Room Function can readily provide the information required when reporting on Space Types for the TEFMA Survey.

In 2015, a working group submitted recommendations to the TEFMA Board to have their Government space types reporting better aligned with current Institutational space management needs, and to adopt a revised and up to date set of Primary Room Function codes. In 2016, the Go8 adopted these revised (Primary) Room Function codes and definitions.

Go8 Data Dictionary 2.0 - edited November 2014			
Primary Room Type	**Sub-Type Room Code**	**Sub-Type / Room Type Descriptions**	**Sub-Type / Room Type Definitions**
1			
Office	X 100	Office - Type Not Defined	**To be used, as the last resort, for any "Office" primary type space that doesn't fit the codes below.**
	A	Office	*Office - an enclosed space with a distinct entrance and with office furniture*
	101	Academic Staff	A room with office furniture which provides accommodation for one or more Academic or Faculty staff (eg Snr Academic staff, Executive Level staff, PVC, Head of School, Director, Assoc/Professor, Assoc Professor, Lecturer, Tutor, visiting Academics, etc).
	102	Research Staff	A room with office furniture which provides accommodation for one or more Research only staff (eg Professor/Assoc Professor, Academic staff, Fellow, Post Doc, Research Asst, visiting Researcher, etc).
	104	Technical/Laboratory/Store Staff	A room with office furniture which provides accommodation for one or more technical, laboratory ancillary staff (eg Lab Assistant, Lab Manager, Lab Store staff, Technical Workshop staff), either as a separate office or within the bounds of a laboratory. Include accommodation for staff providing multi-media services for eg., graphic artist.
	108	Professional/General Staff	A room with office furniture which provides accommodation for one or more General or Professional staff (eg Directors, Managers, Administration staff, Marketing/IT/Library and Professional (non-academic) staff, other General staff, etc).
	103	Postgraduate Students	A room with office furniture which provides accommodation for one or more Masters, PhD by Research or Higher Degree by Coursework students. May include Honours students.
	B	Open Plan	*Open Plan - usually a large space, divided by freestanding, low or high partitions; where users can see and hear each other freely. Desks, cubicles or workstations may be grouped into teams/pods/ clusters.*
	112	Academic Staff	An open plan area with workstation furniture which provides accommodation for one or more Academic staff (eg Snr Academic staff, Executive Level staff, PVC, Head of School, Director, Assoc/Professor, Assoc Professor, Lecturer, Tutor, visiting Academics, etc).
	113	Research Staff	An open plan area with workstation furniture which provides accommodation for one or more Research staff only (eg Professor/Assoc Professor, Academic staff, Fellow, Post Doc, Research Asst, visiting Researcher, etc).
	115	Technical/Laboratory/Store Staff	An open plan area with a workstation furniture within the bounds of a laboratory, or office furniture in a separate area, which provides accommodation for one or more technical, laboratory or Ancillary support staff (Lab Manager, Lab Assistant, Lab Store/Technical staff, Lab Workshop staff). Include accommodation and equipment for staff providing multi-media services such as photography, video filming.
	116	Professional/General Staff	An open plan area with workstation furniture which provides accommodation for one or more General or Professional staff (eg Directors, Managers, Administration staff, Marketing/IT/Library and Professional (non-academic) staff, other General staff, etc).
	114	Postgraduate Students	An open plan area with workstation furniture which provides accommodation for one or more Masters, PhD by Research or Higher Degree by Coursework students. May include Honours students.
	117	Hot Desk	A workstation or desk space that provides accommodation for casual/part-time Staff /Students/ Visitors (eg Consultants). Not assigned to one particular individual, used as a "drop-in" space or office hotelling. *Note: This may be in an open plan space or within an office.*

The complete and current **Go8 Data Dictionary 2.0 (**version April, 2016) can be found on the Go8 Repository. These tables are excerpts taken from the Go8 Data Dictionary 2.0. to show

- Primary Room Type, Sub-Type and Room Type (top table)
- Primary Room Function and Room Function (bottom table).

The current DD2.0 provides detail on

- 9 Primary Room Types
- 44 Sub-Types
- 161 RoomTypes
- 7 Primary Room Functions
- 21 Room Functions

1	**Research**	
11	RESEARCH	A room used only for research purposes (and/or research training) that is dedicated to a Research Grantee, Faculty, Institute, etc. May include laboratory, specialist room or studio, ancillary room, seminar room, high end research computing facilities or server rooms, academic staff office, postgraduate and research staff office. (These rooms are not generally available for booking via the central timetabling system). Typically, Units that have been funded by a Research Grant should use this code for all their space.
12	RESEARCH ADMINISTRATION	A room used for administrative activities related to the single function of research. Accommodates management and support of research activities within an Academic Organisational Unit (ie in a Faculty, School, Discipline or Institute) and includes administrative staff offices/areas, support rooms such as resource room, meeting room, store room, reception, common room, local area network room. Also include offices and support rooms of the DVCR (Deputy Vice Chancellor Research), Research ethics, Research grants office, or similar relevant Units.
2	**Teaching**	
21	TEACHING	A room used only for teaching purposes (and/or undergraduate training) that may be dedicated to a Faculty, Discipline and/or available for any class through the central timetabling system. May include teaching only staff office, lecture theatre, seminar room, specialist teaching room, laboratory, computer laboratory, studio, etc. The teaching activity in these spaces can be for credit toward a degree or certificate or on a non-credit basis, or a higher degree by course work (but not a higher degree ie Honours, Masters, PhD by research).
22	TEACHING ADMINISTRATION	A room used for administrative activities related to the single function of teaching. Accommodates management and support of teaching activities within an Academic Organisational Unit (ie in a Faculty, School or Discipline) and includes administrative staff offices funded by an academic unit, support rooms such as resource room, meeting room, store room, reception, common room, local area network room. Also include offices and support rooms of the DVCA (Deputy Vice Chancellor Academic/Education) or equivalent relevant Unit. **For Timetabling Administration use Function 61.**
3	**Teaching & Research**	
31	TEACHING & RESEARCH	Use only for a room used for both teaching and research purposes allocated to a Research Grantee, Faculty, Discipline, Institute, etc, where it is not possible to distinguish sufficiently between Teaching or Research. May include specialist teaching room, laboratory or studio, ancillary room, academic staff office, seminar room. (As for any space, shared usage can be recorded accurately as a % room or division of space split, based on time or predominant use).
32	TEACHING & RESEARCH ADMINISTRATION	A room used for the administrative and support activities for both teaching and research purposes and accommodates administrative staff offices, support rooms such as resource room, meeting room, store room, reception, common room, local area network room.

2. Non-Occupiable Spaces

2.1 External structures and spaces

(a)

These external structures belong to the adjacent building. Only the small low roof structure on the left is UCA, adhering to the Go8 convention of one floor high practical trafficable area. In this case it is an outdoor dining space for staff.

(b)

Overhang is not UCA. Space undernath is not used for any purpose, or relates to a trafficable area.

(c)

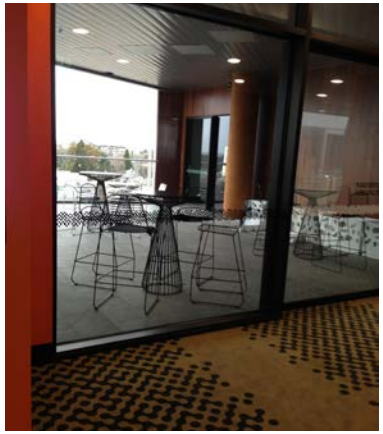
Outdoor general / social seating area is not mapped. Colonnades, part of the building, are UCA.

(d)

As in (c).

(e)

External seating associated with café (lease arrangement), therefore is not mapped or coded.



(f)

Terrace with seating, adjacent to internal staff/tea room. Terrace (covered) area is UCA.

(g)

Outdoor staff and studnet eating aea (UCA) Room Type 817 with adjacent enclosed kitchen Room Type 608.

(h)

Seating provided in a semi-covered (not weather-proof), unenclosed next to student hub/library. This may be treated as External Informal Learning (Room Type 808) due to relationship with student hub/library.

2.2 Animal / Plant Holding

Areas that specifically hold plants or animals vary in their level of complexity or accessibility and there are a number of Go8 Room Type codes to cover these different types of spaces.

Animals can be held in simple open enclosures, sheds (eg., poultry), yards (eg., cattle), or more spohisticated PC-rated or clean areas (eg., mice facility).
Plants can be kept in simple sheds, open glasshouses, or more sophisticated temperature/light controlled rooms or glasshouses, or PC-rated glasshouses.

Some of the animal and plant structures may be classified as non-usable if they are very basis. Others may be clasified as UCA or even FECA (eg., underground bunkers). Some may even be excluded totally from GFA measurements.

In most cases, the animal and plant areas are used for research (Primary Room Function 1) or Teaching & Research (Primary Room Function 3) at the Institution.

2.3 Car Parking

Organisation	Definitions
TEFMA reporting	• Treat space as UFA, if a stand-alone building or if >50% of a building is used for car parking. • Treat space as non–UFA, if <50% of a building is used for parking (TEFMA reporting requirements exclude residential car parks).
Go8 Data Dictionary 2.0 **Go8 reporting**	All car parking is non-usable (Room Type 8 series codes). To assist in TEFMA reporting (of both usable and non-usable car parking), there are three Go8 car parking codes: • Room Type Code 802 = >50% of a building • Room Type code 803= multi-storey/free standing building • Room Type code 804= <50% of a building Therefore, Go8 reported UFA m^2 will not match TEFMA reported UFA m^2 and when completing the TEFMA survey, need to remember to include space mapped to RT codes 802/803 as TEFMA UFA. This effectively increases campus space efficiency (and UFA), even though the space is not useable for a core function of the Institution. Other spaces within a car park structure such as offices, toilets are assigned their appropriate standard Room Type code, but no distinction is made between parking space and access/circulation, so the GFA becomes a significant m^2 statistic.
Other	This method (used in overseas Institutions) treats car parking structures like other campus buildings. In this approach, parking space m^2 are assigned a Vehicle Storage room type code, but the non-usable areas (building service, circulation, and mechanical) are appropriately assigned, as they would be for similar spaces in other buildings (ie an office, toilet, etc.). Ramps and other driving areas are classified as circulation. Currenty, TEFMA does not distinguish car spaces separately from the access /circulation in a car park building.

Data on parking structures need to be maintained and reported as for any other buildings, because parking structures may represent a large portion of campus facilities space, and how these spaces are assigned can have significant impacts on campus space statistics. The current TEFMA car parking reporting as either UFA or NUFA is confusing and so,

Guidance from TEFMA *being sought on whether roadways within the car parking building be counted as UFA, since counting only the parking bays as UFA and the rest as non-UFA (ie circulation), can vary the car park building efficiency from ~50% to >85%. TEFMA have no guideline on this.*

Recommendation to TEFMA *- In 2015, a working group submitted recommendations to the TEFMA Board to have all car parking treated as non-usable space. For Go8 reporting, all car parking is reported as non-usable and mapped as Room Type codes 802, 803 or 804. Using these codes allows easy extraction of car parking space information as usable and non-usable space types when reporting using the current TEFMA survey definitions.*

2.4 Non-Habitable

Organisation	Definitions
TEFMA reporting	No specfic definition on non-habitable space. Although there is an exception of an unenclosed covered area for a Child Care centre, which could be considered as non-habitable space, but is treated as UFA for reporting purposes because the area is a primary function of the centre.
NCC classification	Non-habitable space of a building are spaces occupied by internal columns and other structural supports, internal walls and permanent partitions, lift shafts, service ducts and the like. The NCC codes are set for residential buildings, but can be applied to identify work spaces that a person cannot occupy (it is non-habitable) because it is not safe (possibly illegal) for a person to work in. Usually this is determined by whether the space has proper ventilation, lighting, egress, ie meets minimum habitability standards.
Go8 Reporting	Non-habitable space includes bathrooms, toilet rooms, closets, halls, storage or utility spaces, plant rooms and any other space (car parking) which does not meet the minimum requirements for habitable space as per typical building classifications codes and standards. Non-habitable spaces are a subset of non-usable space on campus, and mapped as Room Function 63 - Non Assignable. However, some non-habitable spaces may be considered as UFA because they have a specialised nature eg., glasshouses, and are used for Institutional core activities (teaching/research).

2.5 Not in use / Non-usable

Space Type	Definition
Under construction	These are spaces that are currently unavailable, and are coded as Room Type 616. But if floor plans/intentions for use exist, then the space is mapped as per the relevant Room Type codes, and is reported as UFA and GFA.
Under refurbishment	TEFMA reporting should include space that has been occupied following construction during that reporting period. The space is coded as Room Type 627.
Vacant /decant /shunt	Usually mapped as a specific room type, but is currently not occupied. It can be coded under the "X" Room Subtype in the relevant 100, 200, 300 Room Type series. Temporary shunt space may be allocated to the organisational unit that currenty occupies it.
Mothballed	This space is not used on a day to day basis for University purposes, and as there's no intention to do so, it coded as non-reportable, Room Type 905. It may include farms, rural buildings. Mothballed space is excluded from UFA and GFA reporting, and can track temporary occupancy period in other Archibus fields.
Non-usable	The term "un-usable' or 'non-usable' is space that is not likely to be readily purposed for occupation due to height, lighting, restrictions, location restrictions. Sometimes there is ad hoc use of these spaces for storage (an unsanctioned use) and for mapping consistency it should be coded as non-usable, for eg., space under a stair well is Room Type 814.

Transitional spaces are not contributing to day to day institutional activities, but in some cases are included in campus space measurements. The first four listed space types in the table above are 'transitional' spaces ie., spaces that are "not in use", which are quite distinct from spaces that are "non-usable".

The term "non-usable" is a misnomer as all spaces tend have a purpose, so "non-usable" should be viewed in terms of "non-occupiable" where the space is unlikely to house personnel and furniture for day to day working activties of the Institution, and this maybe due to issues relating to egress, ceiling heights, non-weather proofed, regulatory restrictions, etc.

3. Teaching, Learning and Research Spaces

3.1 Teaching and Learning

Teaching spaces and learning spaces are evolving on campuses such that there is more variety (and more confusion) in what rooms are called and what activities are undertaken in the spaces. For the purpose of Go8 space mapping consistency, a guiding distinction between teaching and learning spaces is provided below.

General Teaching spaces are those spaces used for a didactic format/more formal style of teaching, with mostly scheduled classes led by a teacher/facilitator/lecturer. They are usually (but not always) centrally controlled spaces and bookable on a centralised booking system (as opposed to those teaching spaces only available for Faculty/Institute use), and typically include

- Lecture theatres
- Seminar /Tutorial rooms
- Collaborative /PBL /project based learning rooms
- Computer labs

Note: All of the above spaces allow for group work (including newer designs of lecture theatres), but they are primary purposed for a more structured teaching delivery and what the space has been called eg., collaborative lecture theatre, may indicate some flexibility in how students and lecturers interact, but the primary type of space is a lecture theatre.

Informal Learning (Room Type 517) are student activity driven spaces, with casual, comfortable furniture, technology-rich, and a flexible physical mix of spaces allowing individual, group learning and ad hoc usage. Informal learning spaces are scattered throughout the campus, and are not limited to the library environs. They may be called informal learning /learning commons /hubs /collaborative space and other names, and may have any (or all) of the following features:

- computer workstations for casual computing/ quick-use stand-and-go
- open group work areas, quiet study rooms, pods, group zones, cubicles, carrels
- moveable whiteboards for group work flexibility
- innovative learning tools eg., multi-media, LED displays
- flexibility of physical space with open area for multiple uses
- student-centred services eg., printing, renting machines, other resources (as opposed to the specific value-added services provided within a Library)
- microwaves and vending machines

Note: Computing activities undertaken in groups or for high-end computer processing/analysis work are typically undertaken in computer labs or research labs respectively, and are not an activity of an informal learning space.

The best approach to decide on whether a space is informal learning, is not to not base it on whether students sit and study in that space at anytime, eg., a lecture theatre when it's not being used, a cafe seating area, but whether the space has been specifically equipped and furnished for different learning habits. Using this approach, bench or ottoman seating in a foyer is not Informal Learning, but may be Incidental Learning.

Assigning inappropriate spaces as Informal Learning space, whilst increasing the total learning m^2 on campus, will distort actual space type functionality on campus. If a broader view is needed of what space is made available to students for learning, then each University may consider its informal learning, incidental learning, and perhaps external informal learning spaces, but this is not part of any current Go8 reporting. Nor is the incidental use by students of spaces such as lecture theatres, seminar rooms, etc, when these spaces are not being used for scheduled classes.

Incidental Learning spaces (Room Type 515): Corridors and hallways are possible informal learning spaces, and these "micro-spaces" are increasing, especially as wireless technology becomes more prevalent. However, the physical location, style of furniture, aesthetics of these spaces have quite different intentions and are more basic than informal learning spaces. Incidental learning allows a more restricted range of learning behaviours (eg limited quiet or group work) due to the physical limitations of the space ie a corridor used as thoroughfare, and is only suitable for short periods due to the more basic furniture and general lack of other features useful for learning activities.

By nature, Incidental Learning is usually in a "shared space" scenario and some proportion of this shared space would normally be assigned to the Room Type for circulation, as it provides access through the area, or to another Room Type that the learning micro-space resides within. The playbook section on shared space describes how polylines and Archibus features are used to manage and map these spaces definitively and accurately.

Difference between Incidental Learning and casual seating (see playbook section on corridors/ foyers/ circulation spaces). Casual seating as the name suggests is usually just seating of some type placed for convenience for anyone in that area for ad hoc waiting or socialising purposes. Casual seating is most often found in trafficable areas near lifts, entries, foyers and in corridors. Informal Learning and Incidental Learning spaces are assigned specific Room Types codes, whereas casual seating is not mapped unless it is a dedicated waiting area.

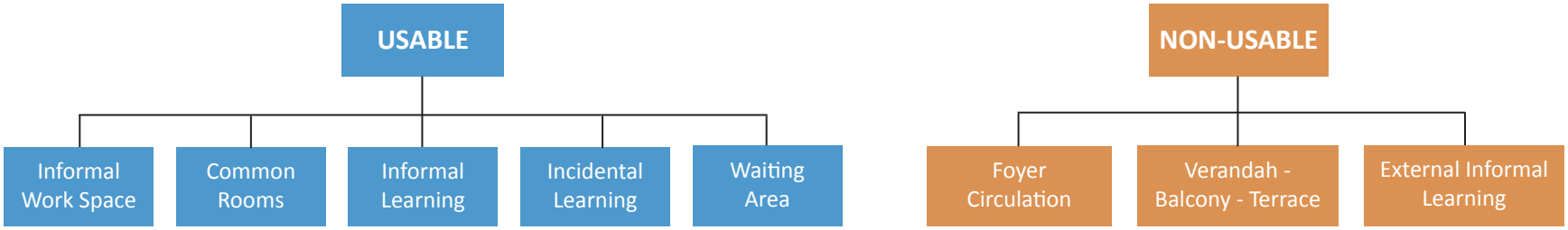
External Learning Spaces (Room Type 808): These are few in number and most institutions do not report on any spaces external to a building envelope. For consistency, m^2 for these spaces are not counted in any TEFMA or Go8 reporting, but some Universities may choose to track these spaces and hence the Room Type code 808 can be used. To assign the Room Type of External Informal Learning, the space must not be primarly a general common use area, must be adjacent to other (internal) learning areas, must be UCA (cannot be uncovered space), and must have seating arrangements that allow individual work or group discussions. (It is not bookable space). If the space does not meet these criteria, then it is likely to be an outdoor social space.

The table below describes the most common teaching and learning spaces on campus and their distinctive features.

Space Types	Structured seating	Primary Purpose	Space considerations	Codes
Lecture Theatre	Yes	Teaching & interactions in a large groups	Also includes modern collaborative lecture theatres	Primary Room Type 2 series
Seminar Room, Tutorial Room	Yes	Teaching & interactions in smaller groups	Also incudes Problem Base Learning, Project Based Learning, and other similarly named rooms	Primary Room Type 2 series
Computer Laboratory, Other Laboratories/Studios	Yes	Teaching / Learning /Research in speciliast spaces	Computers provided in libraries for resource searching or for general student use are not considered to be computer labs.	Primary Room Type 3 series
Informal Learning	No	Individual or group student learning / study	Can be called by a variety of names eg., learning commons, hubs, pods, corrals.	517
External Informal Learning	No	Individual or group student learning / study	Does not include casual seating that could be considered to be social spaces or general waiting spaces.	808
Incidental Learning	No	Individual or group student learning / study	Does not include casual seating that could be considered to be social spaces or general waiting spaces.	515

Schematic showing how various informal learning, work and social spaces are categorised as “Usable’ and “Non-Usable”

Unfortunately “non-usable” is a misleading term as all these spaces are accessible and used by people. But these terms are conventionally applied to whether a space is occupiable according to standard regulations of height, weather proofed, functionality for work or learning activities, etc. Hence spaces external to building walls and spaces in trafficable areas are treated and mapped to a non-usable room type category.



Examples of Informal Learning Spaces

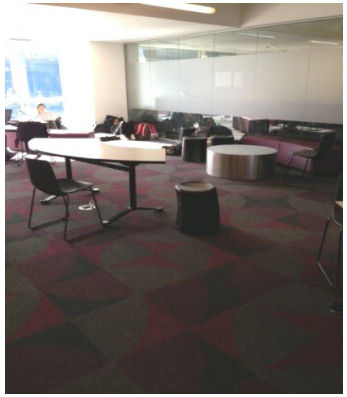
(a)
Informal Learning space - see also (b). Seating and tables with power and USB plugs in booth seating.

(b)
Extension of the area shown in (a) where different types of furniture are provided for student study purposes.

(c)
Informal Learning space - different types of seating and tables on several levels to be used for study and learning as individuals or as groups.

(d)
As for (c).

(e)
Informal Learning Space with seating and tables. Microwaves on back wall also provide for student use. Microwaves within learning spaces are a common feature of student hub areas. If the area is an appointed kitchenette, then Room Type 816 needs to be assigned to the space.



(f)
Extension of area shown in (e) with different furniture styles for study purposes.

(g)
One of several Informal Learning cubicles near seminar rooms.

(h)

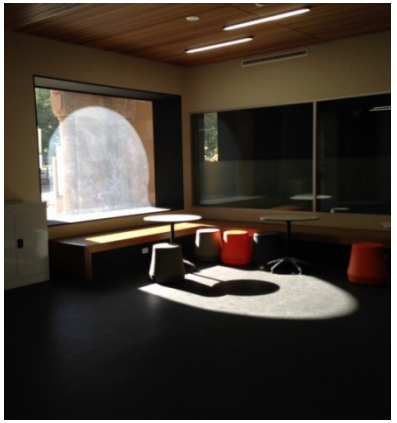
Informal Learning - quiet study space.

(i)

Informal Learning space inside. External seating is associated with a café, and not included in GFA measurement.

(j)

Informal Learning within circulation space outside seminar rooms.



(k)

Informal Learning space adjacent to area shown in (j).

(l)

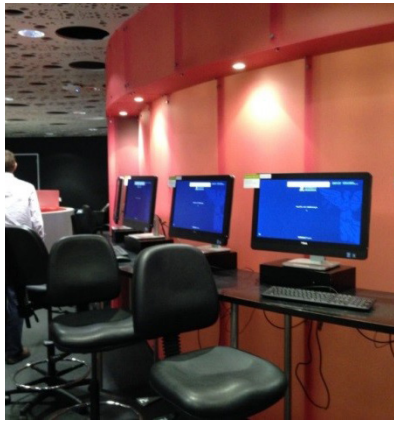
Informal Learning spaces within a library.

(m)

Informal Learning space within a Library showing the mix of furniture styles and technology available for student study purposes. Circulation (Room Type 805) needs to be assigned to allow primary movement through the area.

(n)

Informal Learning space may also include Resource Areas which should be mapped as a Room Type 603.

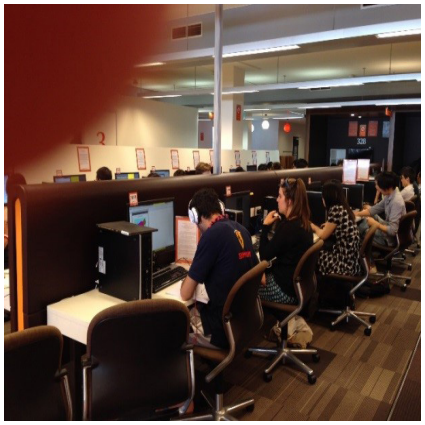


(o)

Quick access computers in a library. Code as Informal Learning, not a Computer Lab.

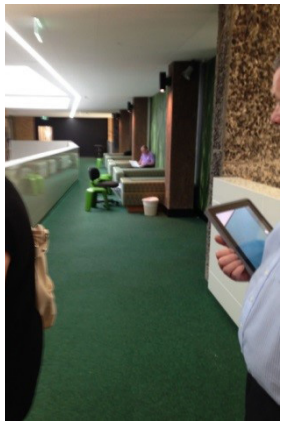
More examples of Informal Learning Spaces

(a)
Corrals and separate tables (on right) for individual study in a library.



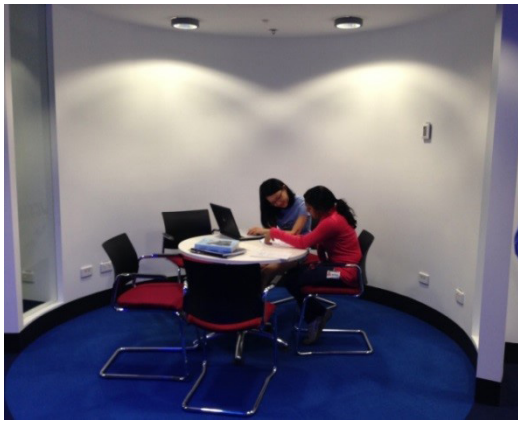
(b)
Essentially as for (a).

(c)
Informal Learning Space

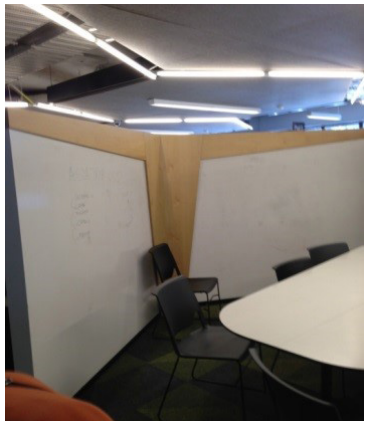


(d)
Tables and seating allowing for informal study.

(e)
This furniture is provided for students for computer work and study within a library.



(f)
Open ended small study area for group work.



(g)
Partitioned, open ended study areas for group work.

(h)
Corral study spaces within a library.

Student Hubs - Informal Learning Spaces

Student hubs are typically large Informal Learning spaces that have a mix of furniture for individual and group study (corrals, large and small tables), open areas with high student movement, as well as quiet rooms, resource areas, lockers, quick reference and general use computers, LED screens, and possibly microwaves/vending machines.

(a)

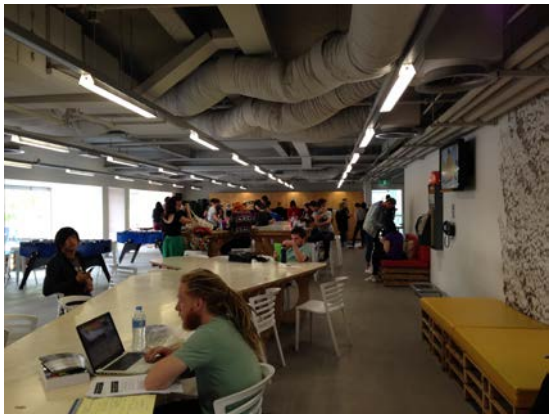
A variety of furniture styles that are easily movable to accommodate individual or group work. Large open hub space that has primary circulation for movement of students, staff and visitors through the hub and adjoining spaces. The Student Hub is access controlled after hours.

(b)

Informal Learning area within Student Hub space.

(c)

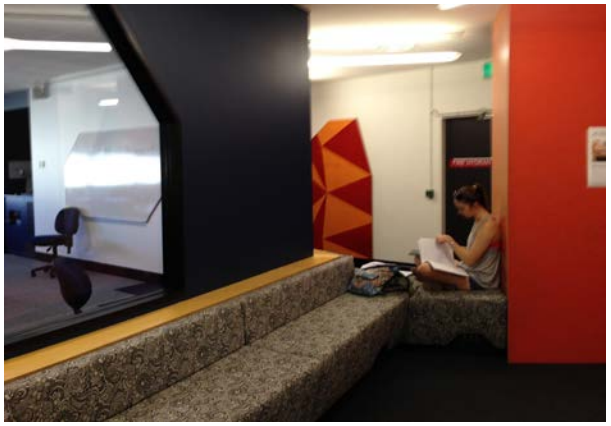
Small quiet/group study rooms, which can be booked.



(d)

Area of student hub providing microwaves and various tables and seating for student use.

Examples of Incidental Learning within Circulation and Foyer Spaces

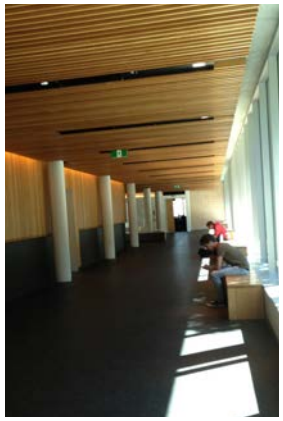


(a)

Photos (a), (b) and (c) show Incidental Learning spaces. These spaces are typified by basic seating (but no tables and other fixtures that provide comfortable study spaces for groups of individuals for extended periods of time). These spaces are generally found in the vicinity of seminar rooms, lectures theatres, etc, as students use these to wait for classes.

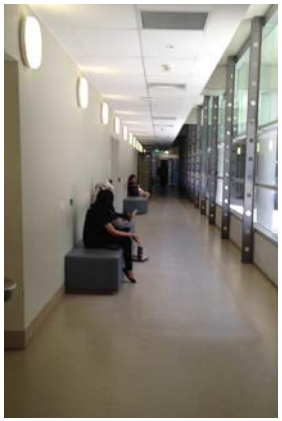
(b)

As for (a).



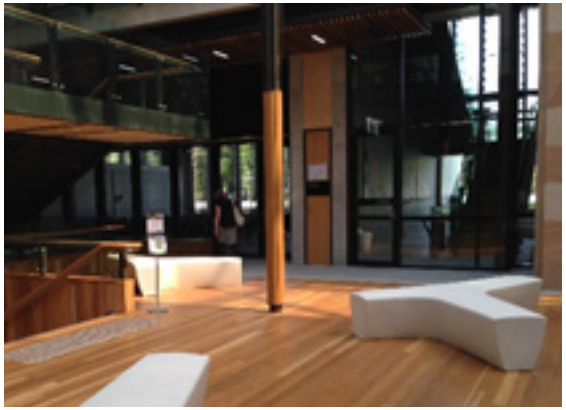
(c)

As for (a).



(d)

Without knowing the activites and rooms in the vicinty of this corridor, it can be viewed as casual seating within a tight, trafficable circulation area (not conducive to study). If located next to general teaching rooms, it could be perceived as Incidental Learning space.



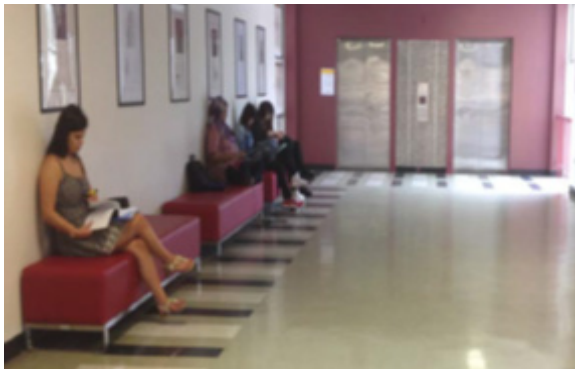
(e)

As for (a).

(f)

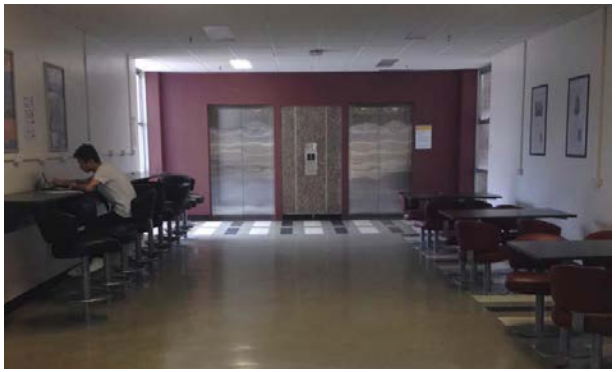
As for (a).

Student learning spaces that are difficult to code due to the overlapping activities or location of these spaces.



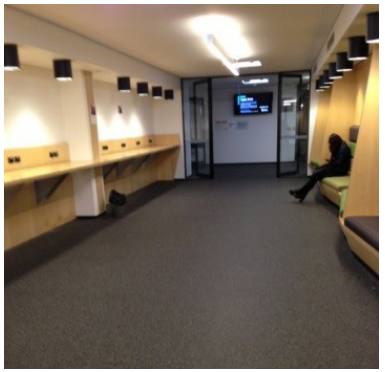
(a)

Incidental Learning within foyer/circulation space near lifts. Compare to (b).



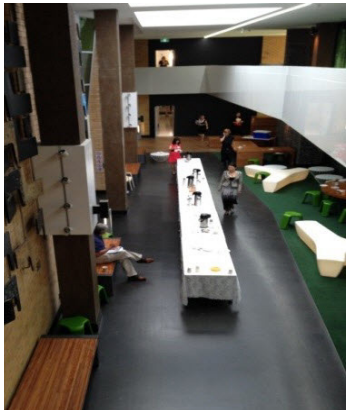
(b)

This space is in within the same building but another floor to that in (a). Specific provision of a variety of tables and chairs for group and individual study. This Informal Learning space is not ideally located near lifts, but it possibly could be in a less trafficable floor of this building.



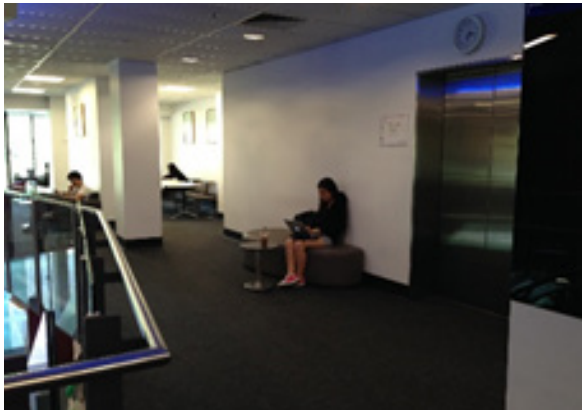
(c)

Incidental Learning spaces against the walls of this passage way. Not furnished for group work or for individual work for extended periods of time. Students would not tend to stand or sit for a long time.



(d)

Informal Learning space on carpeted area on the right (mix of furniture for study provided, but not visible in this photo). Incidental Learning along wall (outside a lecture theatre). Circulation space temporarily used for conference set up.



(e)

Large Informal Learning space in the back area away from lifts. A microspace of Incidental Learning (next to lifts in circulation space). If the whole floor is Informal Learning, could include this seating, as immaterial in the total space. Or the seating could be excluded and treated as casual seating (no coding).

(f)

Informal Learning space at back area of this foyer. Incidental Learning along the wall, adjacent to a lecture theatre, for students waiting for classes in a highly trafficable area.

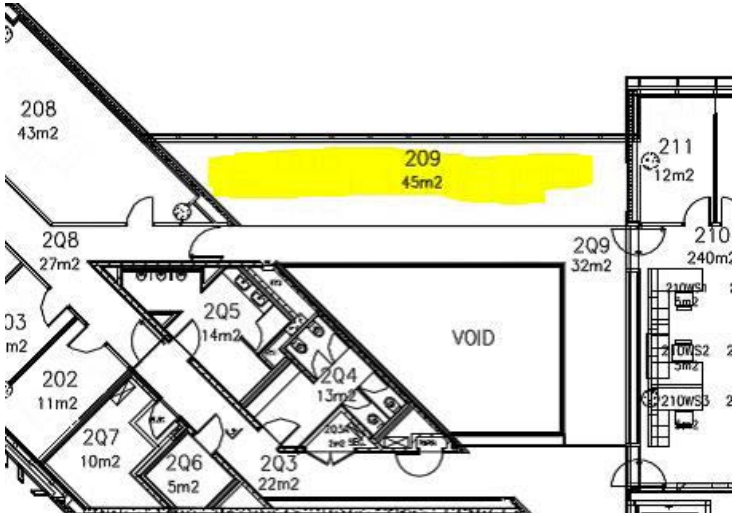
Examples of areas that are <u>not</u> Informal Learning Spaces

(a)

Common Area – an open plan space for HDR students & staff use. See also (b) and (c).

(b)

Photo (b) is from the opposite end to (a) and show sinks and eating area provided for staff and HDR students for social & dining use.

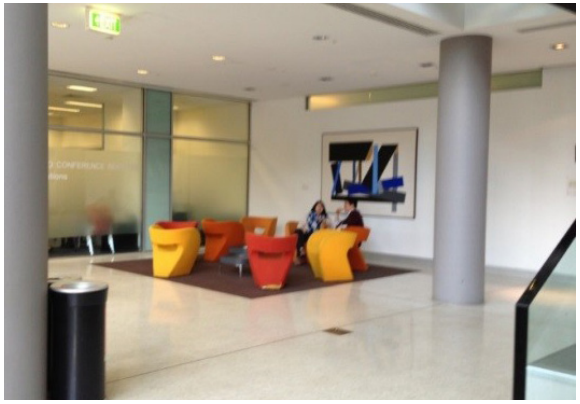


(c)

Floorplan of area for photos (a) and (b) with yellow highlight indicating location of open Common Area alongside the windows.

(d)

This space is located outside a HDR open plan desk area, and used for HDR student discussions, so it is an Informal Work area (Room Type 119).



(e)

Casual seating in a large foyer area near stairs leading to upper levels, see photo (f), and other parts of the building. Used by staff, students or anyone for waiting, eating or socialising purposes.

(f)

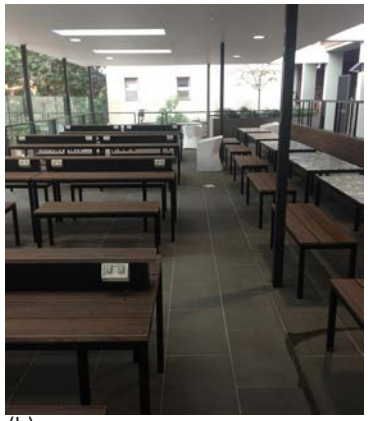
The location of photo (e) can be seen in lower left part of the above photo and gives context to how that space would be mapped and coded.

Examples of External Learning and Teaching Spaces

Currently, few of these space types exist on campuses, but that may change as Universities adopt new areas for teaching and learning activities. TEFMA Space Planning Guidelines (2009) do not provide specific information on how to map or report on these spaces. Some institutions do not report on any spaces external to a building envelope. For consistency, m^2 for these spaces are not counted in any TEFMA or Go8 reporting, but some Universities may choose to track these spaces and hence the Room Type code 808 - External Informal Learning, has been provideed. To assign the Room Type 808, the space must not be primarly a general common use area, must be adjacent to other (internal) learning/teaching areas, must be UCA (cannot be uncovered space), and must have seating arrangements that allow individual work or group discussions. It may be a bookable space. If the space does not meet these criteria, then it is likely to be an outdoor social space.

(a)

External UCA area alongside a main building purposed for teaching classes, see photo (b). Students also use the space for study. Code as External Informal Learning - 808. This particular space in bookable.



(b)

Close up of space in photo (a) shows tables and seating for group or individual study.

(c)

This UCA space is used for teaching and demonstrations outdoors for specific programs. Code as Informal Learning.

(d)

External Informal Learning space (UCA) to be assigned Room Type 808.

(e)

Various tables/seating in a semi-covered (not weather-proof), space outside student hub/library. May be treated as External Informal Learning (Room Type 808) due to relationship with student hub/library. See also (f).

(f)

Close up of student learning space in (e). Seating and tiered decking for individual student and group use.

3.2 Specialist, SEI and Research Space

Specialist spaces are spaces that fall outside the general office or general teaching room type categories because they are either one-off spaces for particular activities, require distinctive temperature or condition controls, or hold equipment or machinery for particular activities. Typically these specialist spaces are associated with research and/or teaching functions and can be any of the space categories defined below (ie studios, labs, SEI, and other specialised spaces).

Studios and specialist labs are specialist rooms or spaces on campus. Studios are typically found in the creative arts or architecture disciplines and are used as development space (as distinct from exhibition space). They are essentially the equivalent of what the laboratory is to a scientist. Multi-media labs (with computers and other equipment for creating editing and publishing multimedia projects) are also referred to as studios. Art studios can be assigned the Root Type 323, as there is no separate Room Type code for art studios.

PC (Physical Containment) rated and Clean rooms have strict requirements on how they are accessed/ used /cleaned /decontaminated, and therefore can be assigned the same RT code as wet labs. Whilst some clean rooms may not have the same level of supply of water, gas and other services, as other wet labs or PC, rated labs, they can be assigned the same RT code. Similarly, support areas such as ante rooms/ airlocks are closely associated with the wet lab areas, and can be assigned the same Room Type code.

SEI space is a Go8 designated term for "Services and/or Equipment Intensive" space. It has been introduced for the purpose of identifying space on campus that costs more to build / refurbish / operate due to the higher requirements for power, services (water, gas, air pressure, temperature control, etc), security (biohazard containment). Examples of SEI space includes PC rated areas, labs with robotics, fume hoods, laminar flow, positive pressure rooms, regulated plant rooms, animal houses, sophisticated equipment or high-performance computing facilities.

Research space is typically only used by research staff and research students, but occasionally can be dual purposed for both research and teaching activities (use Room Function - Teaching & Research). Also when external entities, eg., CSIRO, occupy space on campus, normally under a lease arrangement, they typically are involved in some manner of research or collaborative activity with the University. Therefore the space they occupy can be treated as having a Research Function, rather than a commercial function that is totally unrelated to University activities.

Research space can be an office or a space that is mainly occupied by desks/computers eg bioinformatics, psychology, law research. These disciplines and others undertake desktop, computer-based research work and the decision on whether the space is mapped and coded as an office, dry lab or computer lab is described in another section of the playbook.

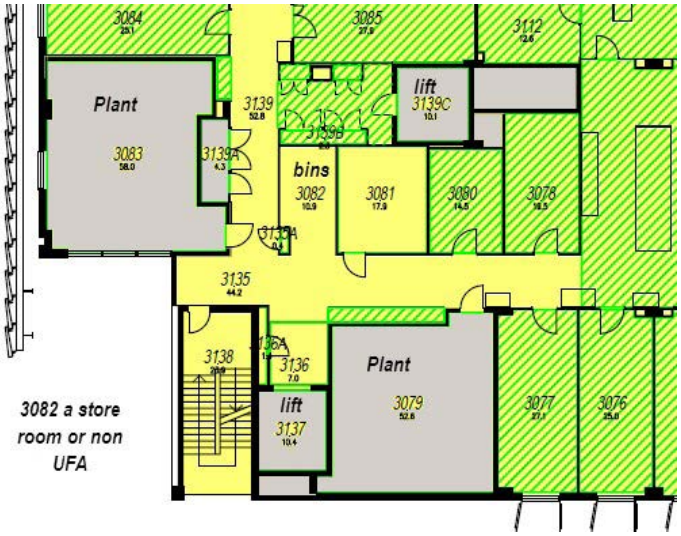
Ancillary spaces

Specialist labs and studios often require areas in close proximity that are support or ancilliary rooms for the main area, and may prove difficult to assign a code.

The best approach is to assess the room in terms of accessibilty, level of services/power, equipment type (computers, grinding machines, robotics), if desks are present. In most cases these ancilliary areas will best fit to Room Types 401, 402, 406, 417 or 400.

Note: There terms ancillary and auxiliary are often used for support areas, and for the most part, they have the same meaning.

Waste bin storage areas are often in a separate room (or semi enclosed space) near specialist areas (Room 3082 on the right). If the waste bin area belongs to a Faculty they are responsible for the cleaning cost, and space is mapped as 400 Room Type, as the Faculty can choose to re-purpose the area to a usable space at any time. However, if the area is a shared bin store, and centrally managed by Campus Services, then it is non-usable space (Room Type 825) just like any other general store room for waste management.



3.3 Wet, Dry and Computer Labs

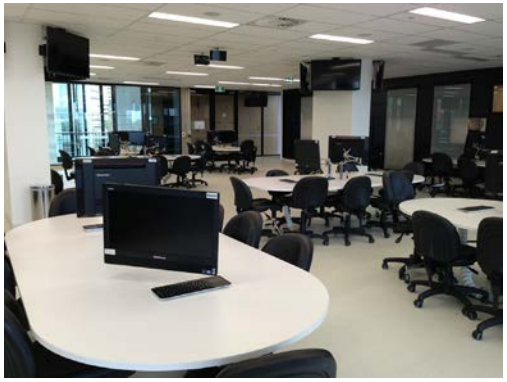
The terminology of wet lab and and dry lab is commonly used and the basic distinction between these two types of laboratories is described below.

Wet labs are laboratories where chemicals, drugs, other reagents or materials, including biological matter, are handled as solutions or volatiles requiring ventilation and specialized piped utilities (eg water and various gases). Wet laboratory space is typically located within a building specifically designed to house them, especially PC (Physical Containment)-rated labs, which are specialised and restricted access wet labs. PC rated labs are biohazard containment areas in microbiology, genetics, biochemistry or biomedical labs, whereas other wet labs may have restricted access or specialised requirements based on dangerous materials handling (radioactivity, etc).

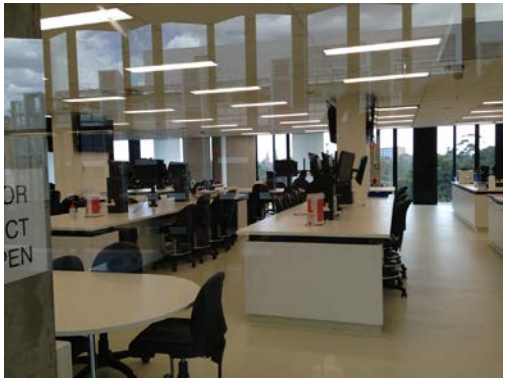
Dry labs are distinct fromwet labs where classical benchtop experiments undertaken using reagents, etc in that *in silico* experimental work is undertaken, using computer data analysis, computer programming/ modelling or theoretical experiments, mainly computers or other electronic equipment egs., robotics lab (minimal wet materials). As a result dry labs are less complex, and only classified as SEI space if they involve using large scale computer equipment (because of the power, cooling, security, etc for the space).

Computer labs are a type of dry lab, where computers are integral to the work being done, refer to (a) and (b) below. These can be teaching labs or research labs (eg. for bioinformatics work is all computational based. So these areas could look like an office or open plan area). Other dry labs could be used in psychology testing, physics and engineering which have only experimental instrumentation in the room, anatomy and geology labs that had specimens mainly, and/ or minimal microscopy work.

(a)
Computer lab used for teaching and also student group work requiring specific computer access.



(b)
Dry lab teaching mediated by computer screens with minimal or no wet/chemical/equipment intensive work involved.



(c)
As for (b). Benches with minimal services and minimal wet work undertaken eg., geology, anatomy classes.

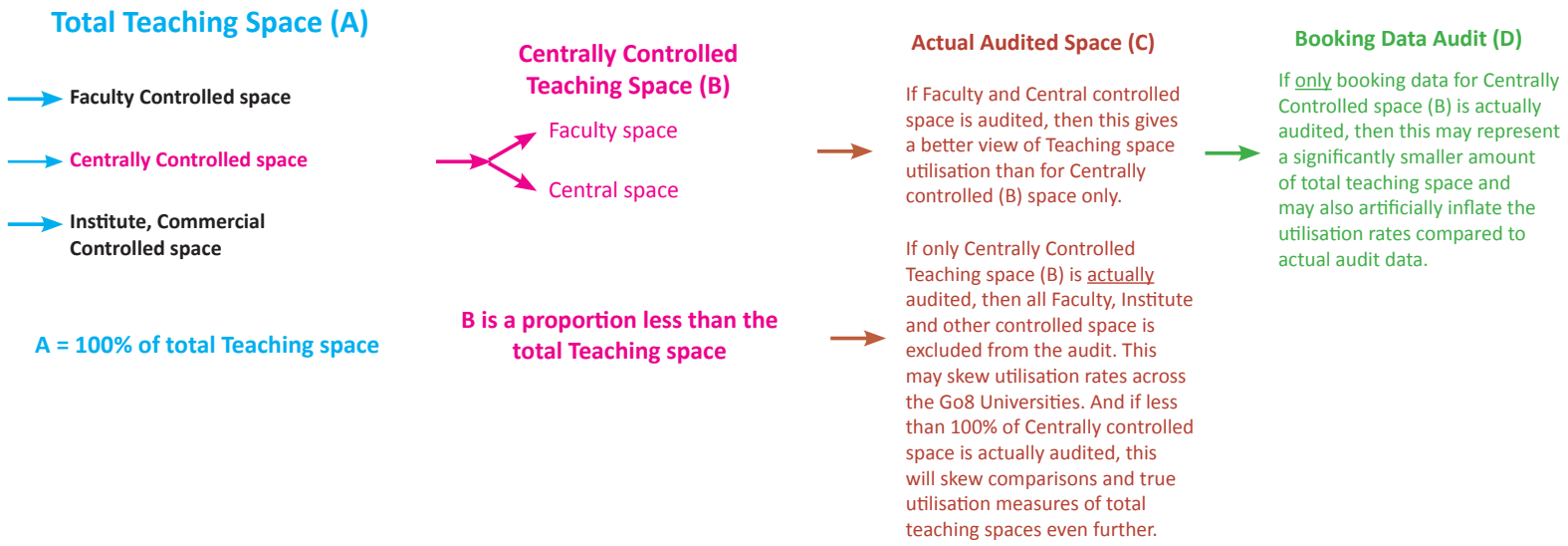
(d)
Wet lab with piped services to benches and fume cupboards along back wall.

3.4 Utilisation of Space

Space utilisation is often done annually to measure and improve the performance of spaces, and typically general teaching and specialist spaces are audited to undertstand the use of facilities in a Univeristy. The TEFMA Space Planning Guidelines (2009) provide information on how to undertake space audits, indicative utilisation rates for different space types, and also the factors that will affect space utilisation rates. More subtle complexities arise that will also affect how valid the utilisation rate comparisons are between any two Universities:

- whether reporting includes usage of all teaching rooms or usage of only the available teaching rooms. Often, availability of teaching rooms may be restricted due to lock out after 6pm, so evening utilisation of all rooms will be lower due to lack of access to rooms that can be potentially used.
- audit data is only for all teaching rooms that were available to be timetabled in the audit week.

The availability of resources may impact whether an annual audit is conducted, and to what degree of teaching spaces are actually audited, such that benchmarking across the Go8 (or the sector) is sometimes not as informative or even misleading. The schematic below shows how different approaches to what space is actually audited may not give a comprehensive view of teaching space utilisation on campus. Thus comparing utilisation rates becomes more problematic, and a less valid comparison across Universities.



The best approach is to follow a consistent methodology, preferably the Go8 method detailed on the following pages. If a variation of this method is used for reporting utilisation of teaching spaces, then comments on the approach used and why should be stated. The proportion and explanation of the total teaching space actually audited is useful information to report as this gives an insight to the proprotion of teaching spaces, not audited and perhaps differences between utilisation rates between Universities.

Methodology for Teaching Space Utilisation Audit

When to undertake utilisation audits

One full week (5 days) during Weeks 4 - 6 of Semester 1 (after the HECS –Hep Census date, typically March 31).
Mon – Fri only (do not use a week that has a Public Holiday). Each day of the week must be included.
Daytime audits: 9am – 5pm. Evening audits: 5pm – 9.30pm.
If your Day/Evening audit does not use 5pm as the split time, please comment on the split time used.

Why and what to audit

Room audit data should give an indication of how well an Institution uses all of its teaching spaces. Total Teaching space includes both centrally controlled and school controlled rooms. The audit methodology captures the utilisation of centrally bookable teaching spaces, and also reports what proportion of the total teaching space has been audited (see table below).

Audit type and space types to audit

OPTIONAL: Physical audit (actual count) every hour on 100% of all 7 space types as listed below. This gives 40 hour slots per room type for the week for a daytime audit.
MANDATORY: Desktop audit (booking data) every hour on 100% of all 7 space types listed above. This gives 40 hour slots per room type for the week for a daytime audit.
Keep physical and desktop figures separate, as the difference in utilisation can be significant.

Teaching Space Type	Lecture Theatres		Seminar/ Tutorial Rooms		Computer Labs		Laboratories		Workshops		Studios		Practice Rooms	
P = Physical Audit D = Desktop Audit	P	D	P	D	P	D	P	D	P	D	P	D	P	D
Percentage of this teaching space that is on the central booking system?	%	%	%	%	%	%	%	%	%	%	%	%	%	%
*Percentage of this centrally bookable teaching space that was **audited***	%	%	%	%	%	%	%	%	%	%	%	%	%	%

Utilisation calculations

Room Utilisation gives an indication, as a percentage, of how well a room is used through the performance indicators of Room Frequency (RF) and Room Occupancy (Occ). Individually, the RF and Occ percentage factors provide valuable information about space usage in addition to the overall room utilisation percentage.

Utilisation (%) = RF % = $\frac{\text{Hours used}}{\text{Hours available}}$ X Occ % = $\frac{\text{Total students present (seats occupied)}}{\text{Capacity x Hours used}}$

Effectively, room utilisation tells how many seats were used out of the seats available and the units of measurement referred to are seat hour and room hour used, available or booked for one hour.

Utilisation calculation	**Definitions:** • Seat hours used **(SHU)** – total number of seats used in the audit period • Seat hours available **(SHA)** – total number of seats available in the audit period • Seat hours booked **(SHB)** – total number of seats booked in the audit period • Room hours used **(RHU)** - total number of hour periods the room is used in the audit period • Room hours available **(RHA)** – total number of hour periods the room is available in the audit period • Room hours booked **(RHB)** – total number of hour periods the room is booked in the audit period • **RF** tells how often the room was used, thus the % of time that the room was used during the audit period. The audit RF pertains to the room being physically in use, not the booking RF (theoretical use) as recorded as on a room booking/scheduling system. • **Occ** tells how full the room was when in use, thus the % of seats used when/if the room was in use during the audit period. It is the number of students (seats occupied) in the room, compared to the total room capacity (which is maximum number of students the room can hold, usually the number of seats in the room). • **Util** tells how many of the total available seat hours were occupied during the audit period, thus the % of seat hours used out of the total seat hours available. eg if you had 40 tickets to sell for each seat during the audit week, the Util tells what % of the total tickets available were sold during that week. **Calculations:** **There is a difference in how to calculate the utilisation values for a single room compared to a set of rooms. The example calculation table provided demonstrates this. The correct calculation may be higher or lower than the incorrect way, and it depends on the actual data.** **RF %** is the sum of all the room hours used divided by the sum of all the room hours available. **RF = RHU / RHA** A room's audited RF % **RF = RHB / RHA** A room's booked RF % For two or more rooms, the audited RF is **RF % = (RHUroom1 + RHUroom2, etc) / (RHAroom1 + RHAroom2, etc)** Use this method for any set of rooms, do not take the average RF % for a set of rooms. In the example provided, the correct RF is 85% whilst the average RF of the rooms is 75%. **Occ %** is the sum of seat hours used for all rooms divided by (the sum of room capacity for all rooms multiplied by the sum of room hours used for all rooms). **Occ = SHU / RHU** A room's audited Occ % **Occ = SHB / RHB** A room's booked Occ % For two or more rooms, the audited Occ is: **Occ % = (SHUroom1 + SHUroom2, etc) / (room1 capacity*RHUroom1 + room2 capacity*RHUroom2, etc).** Use this method for any set of rooms, do not take the average of the Occ % for a set of rooms. In the example provided the correct Occ is 88% whilst the average Occ of the rooms is 57%. **Util %** is the sum of seat hours used for all occupied rooms divided by the sum of all seat hours available for all rooms. For a single room, **Util = SHU / SHA** or RF * Occ A room's audited Util % **Util = SHB / SHA** or RF(bookings) * Occ(bookings) A room's booked Util % For two or more rooms, the audited Util is Util % = (SHUroom1 + SHUroom2, etc) / (room1 capacity*RHAroom1+ room2 capacity*RHAroom2, etc). Use this method for any set of rooms, do not take the average RF % for room 1 and room 2, etc and multiply it by the average Occ % for room 1 and room 2, etc. In the example provided the correct Util is 87% whilst the average Util of the rooms is 51%. Examples of utilisation calculations for a single day are provided in a separate excel file.
Utilisation Targets	The TEFMA target RF for general teaching space is 75% and for laboratories is 50%. The TEFMA target Occ for general teaching space is 75% and for laboratories is 75%. The TEFMA target Util for general teaching space is 56% and for laboratories is 37.5%.

Example for Room Utilisation Calculations

Room Code	Room Capacity	RHA (room hours available)	SHA (seat hours available)	Mon_ 0800 (8AM to 9AM)	Mon_ 0900	Mon_ 1000	Mon_ 1100	Mon_ 1200	Mon_ 1300	Mon_ 1400	Mon_ 1500	Mon_ 1600	SHU (seat hours used)	RHU (room hours used)	capacity *RHU	Room Frequency Room RF (RHU/RHA)	Room Occupancy Room Occ (SHU/ capacity*RHU)	Room Utilisation Room UTIL (SHU/SHA)
room 1	10	4	40	0	0	0	0	2	3	0	0	0	5	2	20	50.0%	25.0%	12.5%
room 2	200	9	1800	150	200	150	200	150	200	150	200	200	1600	9	1800	100.0%	88.9%	88.9%
Total	**210**	**13**	**1840**										**1605**	**11**	**1820**			

	Correct calculations for a set of rooms:		
	RF for set of rooms	***Occ for set of rooms***	***Util for set of rooms***
	sum of RHU / sum of RHA	*sum of SHU / (sum of capacity*RHU)*	*sum of SHU / sum of SHA*
Using expanded calculations	84.6%	88.2%	87.2%
Using calculated totals	84.6%	88.2%	87.2%

Examples of incorrect calculations using averages for RF, Occ or UTIL for a set of rooms	Incorrect calculations for a set of rooms RF	Occ	Util
summing both RF and Occ and taking average to get Util	75.0%	56.9%	50.7%
using average function for RF and Occ to get Util	75.0%	56.9%	50.7%
using incorrect average RF% and correct Occ % to get overall Util			66.1%
using correct RF% and incorrect average Occ % to get overall Util			48.2%
multiplying the averages for RF and Occ to get overall Util			42.7%

4. Office and Other Work Spaces

4.1 Enclosed and Open Plan

Offices are typically bounded by four walls and have a closeable door, and as such are enclosed spaces. Offices may have more than one workstation or desk arrangement, less common, a large office may accommodate 6 people and desks. The general access around the desks and chairs is not mapped separately as circulation space, as the whole office area is mapped to one of the Primary Room Type 1 (Office) codes, and the secondary circulation included in that measurement.

Note: There are no Go8 Room Types codes to map single occupancy and multiple occupancy offices. Office capacity can be shown in the Archibus Occupancy fields in the Rooms Table view.

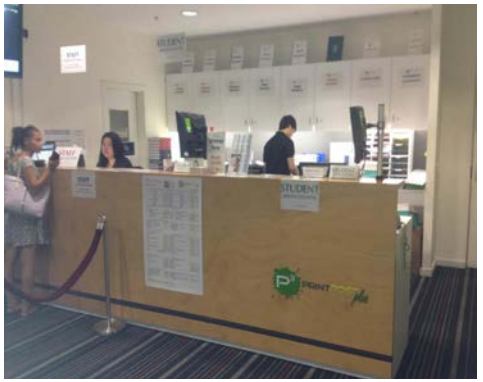
Open plan areas could be bounded by partitions (rather than walls) containing an area of individual workstations/desks/cubicles, groups of workstations, or no partitions at all, all in a large open space. The general access around the desks and chairs is not mapped separately as circulation space, and the whole office area is mapped as one of the Primary Room Type 1 (Office) codes. Breakout spaces on increasing and have a variety of layouts from single seat/desk to pods to large tables. Another section of the playbook describes Informal Work /Breakout spaces in detail.

Note: Hot desks can occur in offices or in open plan areas.

The best approach for consistent Go8 mapping of open plan areas and offices with multiple occupancy, is to take a practical visual and operational view of the space, rather than a prescriptive potential occupant number. Often offices with multiple desk/workstations are not used to full capacity. To avoid confusion between shared offices versus open plan areas, a Go8 convention is that offices with anything less than 6 desks/workstations are not considered as open plan.

(a)
Open plan office area with workstation cubicles. Small table is within secondary circulation. Whole area coded as Open Plan.

(b)
Photo (b) and (c) show a Student Services office with Resources area in small entry foyer. Close up of reception desk in photo (c).



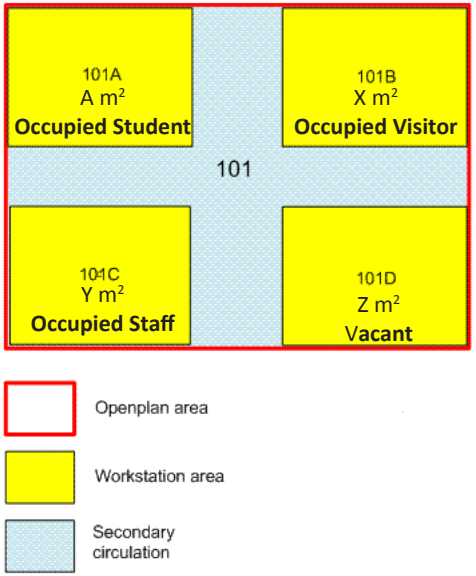
(c)
Layout, low occupancy and furniture similar to a Reception Area (Room Type 118), and provides a services function. Code as Reception Area.

(d)
Large space with collapsible walls that can be reconfigured to smaller rooms. Code as individual meeting rooms with primary circulation (Room Type 805) in between.

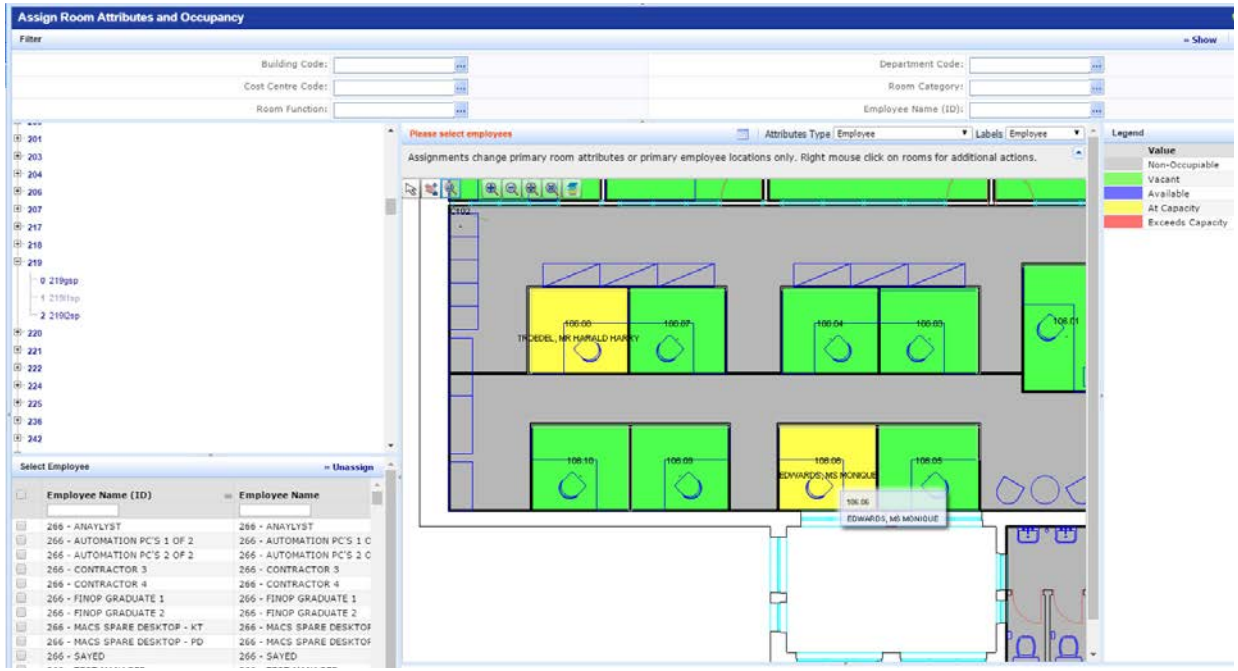
4.2 Workstations

Open plan spaces on campuses are increasing and there is a need for workstation (WKS) information to help Faculty and Departmental units manage/track where people are, and know where there is vacant space. There is also an increase in shared facilities and frequent movement of people, such that endusers want to be able to allocate, report on and manage WKS occupied by staff, visitors and students. The preference is for this information to be in a visual output that can be edited ie be able to enter data via a floor plan interface and assign occupants to rooms containing WKS or to an individual WKS. Facilities /Space Planning Divisions also use WKS information for space reporting and space charging, but need to be confident that WKS data in their space management system doesn't conflict (no double counting in room calculations) when reporting on room types or room area statistics.

End-users would like WKS information as shown in the simple schematic below (a) - a visual ouput identifying Room 101 as having 4 WKS of various m^2 sizes, WKS101D is vacant, WKS101A is occupied by a student, WKS101C is occupied by a staff member, WKS101B is occupied by a visitor. The Archibus Assign Room Attributes and Occupancy view below (b) shows similar features and also the occupant's name visible on the WKS space.



(a)



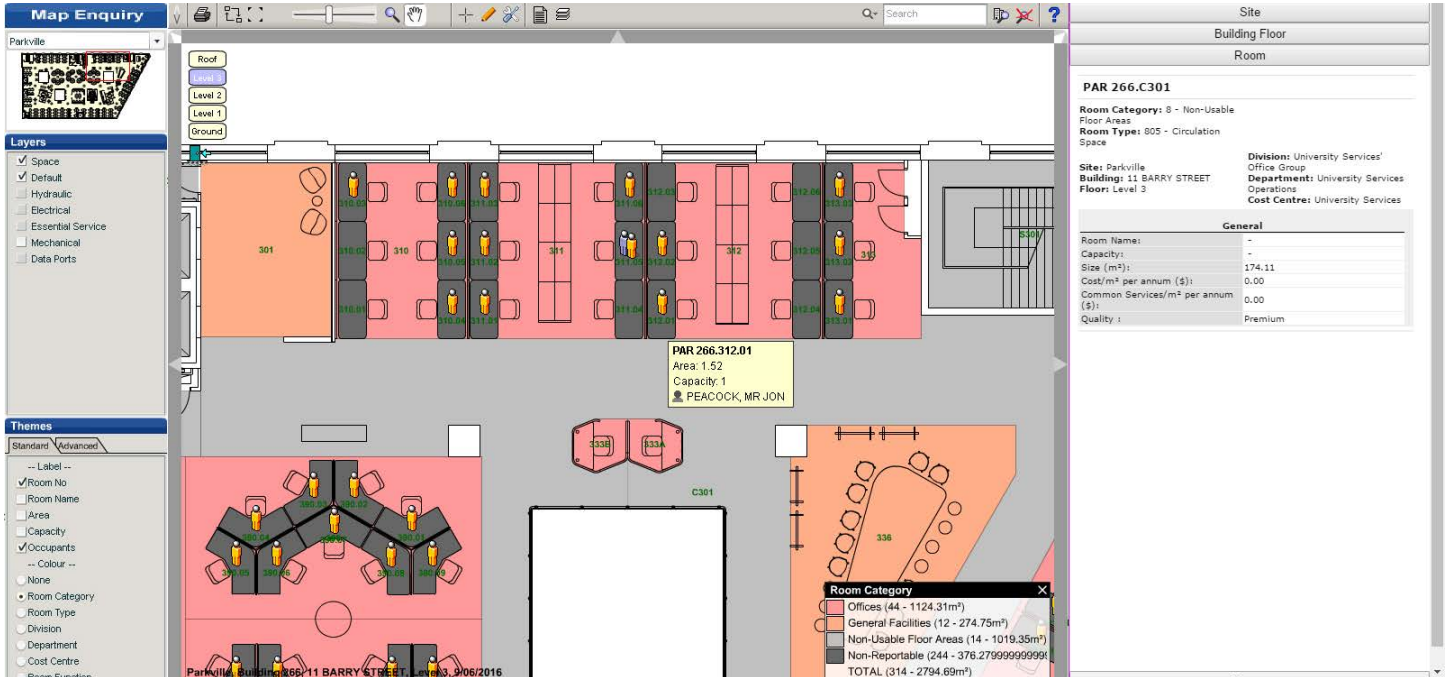
(b)
Archibus WebCentral interface assigning staff to workstations.

The following pages describe the various Go8 approaches for workstation information and visualisation.

There is currently no consistent or preferred Go8 methodology for managing all the WKS information requirements noted above. The following table summarises some of the pros/cons of various current approaches being used (or in development) to capture how many WKS there are in a given space, how many are occupied, who occupies them and how much space does that represent, visual outputs and reporting.

Workstation mapping method	Features	Pros/Cons
1. Polyline each workstation	• Every workstation is polylined and any secondary circulation associated with it is included in that polyline. The circulation space is usually evenly split between a group of WKS, but can depend on particular desk and space configurations. • Mapped back to Room Table. Pooled room record. • Another possible approach would be to create a generic rectangle or circle that sits over the room to indicate the number of WKS but not the exact arrangement - this allows flexibility for end-users to re-arrange the WKS without the need for updating the floor plan.	**PRO:** Exact m^2 for each WKS is known. **CON:** Time consuming by CAD team to draw polylines, especially if polyline the exact outline and arrangement of the WKS, and endusers may re-arrange desks to suit, so difficult to maintain accurate records.
2. Workstation table	• No individual polyline per WKS, a thick polyline is drawn around about 20 WKS group • Maintain Archibus records as WKS # in the WKS Table. • Occupants are named in a label box overlaying the floorplan. WKS Table links the employee via the Employee Table. • Room Percentage Table indicates the % split for the Units/Departments occuping the open plan space. • Use Workstation Table, and roll up % to see which Department has how much space Also WKS Table has fields like FTE count, so can follow the % of time WKS used. Building users update the employee data, WKS Table and Room Table data.	**PRO:** WKS % split takes a few minutes to set up, whilst polylining of WKS takes days to complete. **CON:** Does not identify where in the room the WKS is located, and does not identify exact location of occupant to a WKS. And can't turnoff the WKS group room line (not an on/off layer).
3. Super category	• Treats the WKS as a "room within a room" and utilises super category feature in the Room Category record (typically used to manage Void and Service spaces). • Additional rudimentary polylines are created in CAD drawing internally to the room polyline (ie open plan space). These are selectable and therefore manageable through normal SmartClient CAD Plugin and other space management tools. Archibus currently publishes these on top of the Room Polyline so they are selectable when the floor plan is viewed in Web Central.	**PRO:** full details of a room record available, but is separated from building statistics reporting. Each WKS can be categorised, allocated and assigned and interactivity within the Web Central floor plan viewer. Also WKS number as a CAD layer can be turned on/off. **CON:** depends on AWC SmartClient continuing to publish the internal polylines (ie WKS) on top of the main room (ie open plan) polyline. Also internal polyline must be drawn by the CAD team and changes must be coordinated and republished.
Workstation occupant identification	Considerations: • Numbering of WKS has no standard Go8 system, but a typical format provides a unique ID by physical location for example - Site/Bldg/Room#/W01, or 104WS04, etc. • Relocation Activity – and also maintain capacity on one floor plans. Plan to display the furniture on the floor plans and include a WKS # on the image. Units can manage the information and some end-users keep their own floorplans with WKS numbered, but can't link or view an individual WKS on a floor plan in Archibus together with the name allocated to that WKS. This meets some enduser's needs without extra work in polylining.	**CON**: Archibus only allows an employee to be allocated to one WKS (can have a secondary location).
	Use People Manager (EM Table) module to link WKS with occupant. Archibus Room Table and Percentage Table link with Move Manager and/or EM table.	**CON:** Can only link employees, but not visitors or students
	Use Move Manager module to link WKS with occupant	
Workstation reporting	A WKS Table Report (excel export) from Archibus on staff assigned to WKS/rooms. Source of data for WKS Report needs to be identified - • % occupied • WKS space m^2 occupied • Shared WKS • Occupant names • In/out dates of occupants • days of week or regular hours used. Desired endpoint for end-uers: a dashboard output on the allocations with metrics specific to reporting requirements to provide quick access for managers to view staff accommodation.	**PRO**: Workstation Table easy to extract from Archibus. **CON**: Ensuring WKS data in Archibus doesn't conflict with room area reporting (ie don't double up room calculations). **PRO**: Use a 'non-reportable' category or 'super-category' to filter out WKS when reporting.
Workstation visuals	Enduser prefer a visual input to enter the data via a floor plan interface to assign occupants to rooms. Edits to floor plan reduces inaccuracies in tabulated WKS information.	Desired endpoint to highlight individual WKS on floor plans. A visual capability could be achieved without a polyline using a CAD layer (for furniture), with WKS # displayed on the furniture layer (or furniture text layer).

Example of Workstation location of staff member using SISfm and Archibus Room Transaction Table



(a)

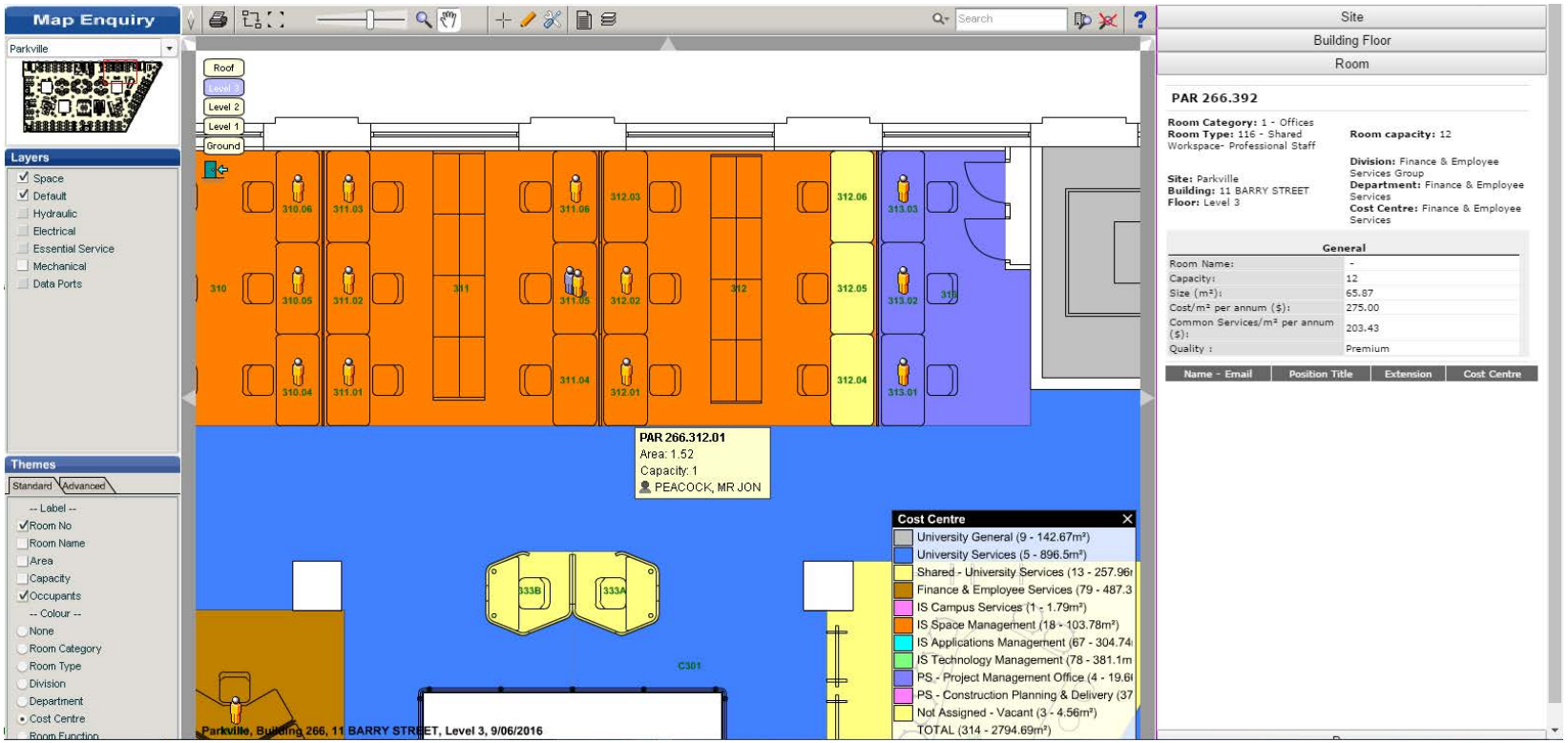
SISfm **Room Category** view of an open plan area showing workstations arrangement and people icons if workstation is occupied. In one instance there is a 2-people icon indicating a shared workstation.

Selecting a workstation shows a pop-up window with the workstation number, workstation size in m², and the current occupant's name.

(b)

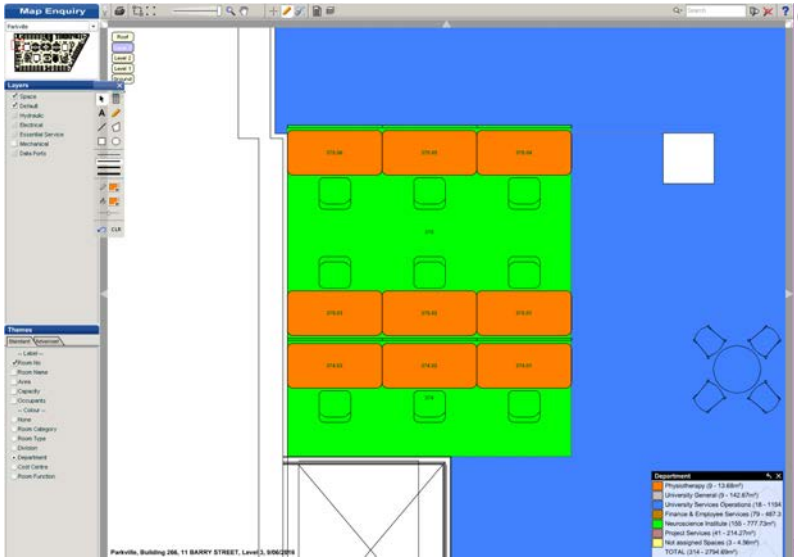
This screenshot is essentially a magnification of (a), but in this case shows the SISfm **Room Type** view. Refer also to (c).

Note: Rooms 333A and 333B are Informal Work/Breakout spaces, and photos of these spaces are shown in playbook section on Informal Work/Breakout spaces.

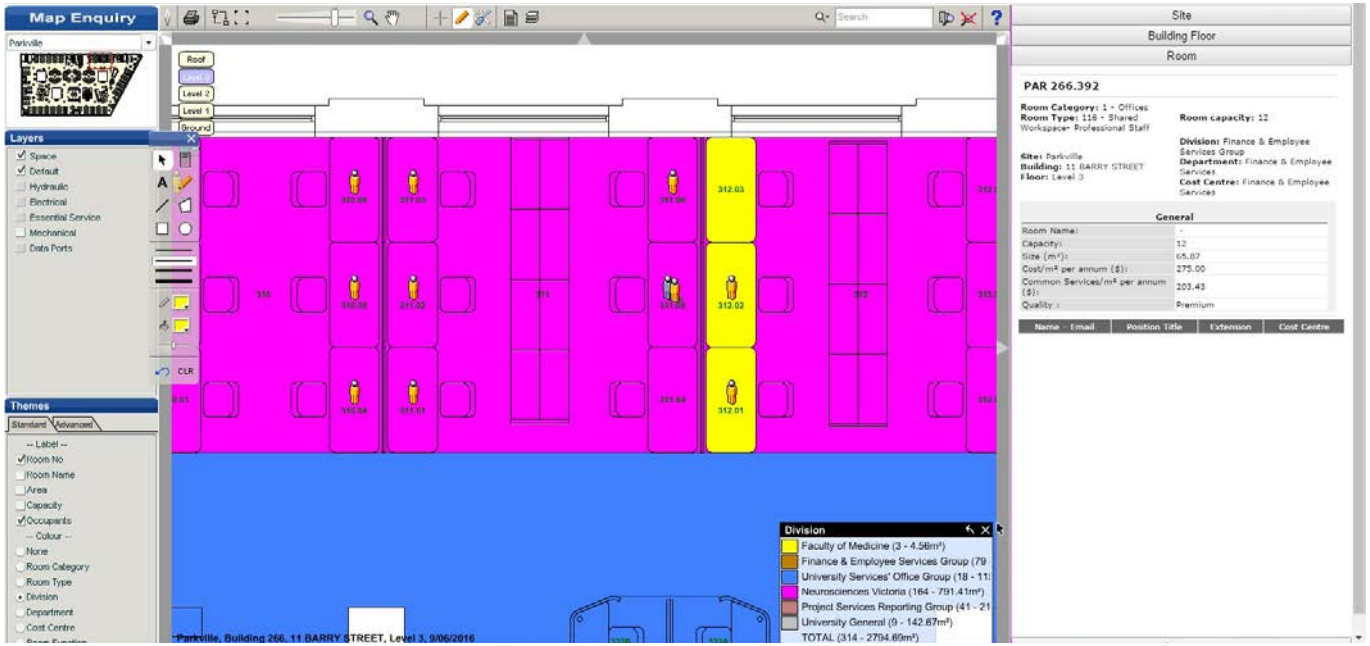


(c)
SISfm **Cost Centre** view of an open plan area showing workstations arrangement and people icons, if workstation is occupied.
This view is essentially the same as in (a) and (b) but shows the different units (or departments) occupying space in the open plan area.

Example of Organisational Structure Complications in Workstation Reporting



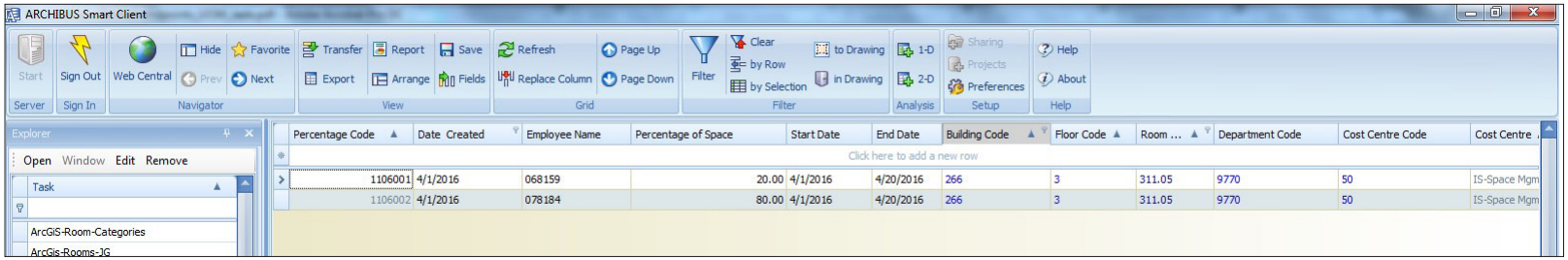
(a)
SISfm web interface showing a complex space allocation where Faculty of Medicine Physiotherapy staff are working in a private Neuroscience Institute tenanted space within a university building. Their workstations are allocated to the Faculty of Medicine but the room underneath is allocated to the private tenancy.
Therefore space reporting is complicated, the Faculty of Medicine can report on the number of staff on the floor but the m^2 areas would need to be taken from the room underneath and divided by the number of workstations.



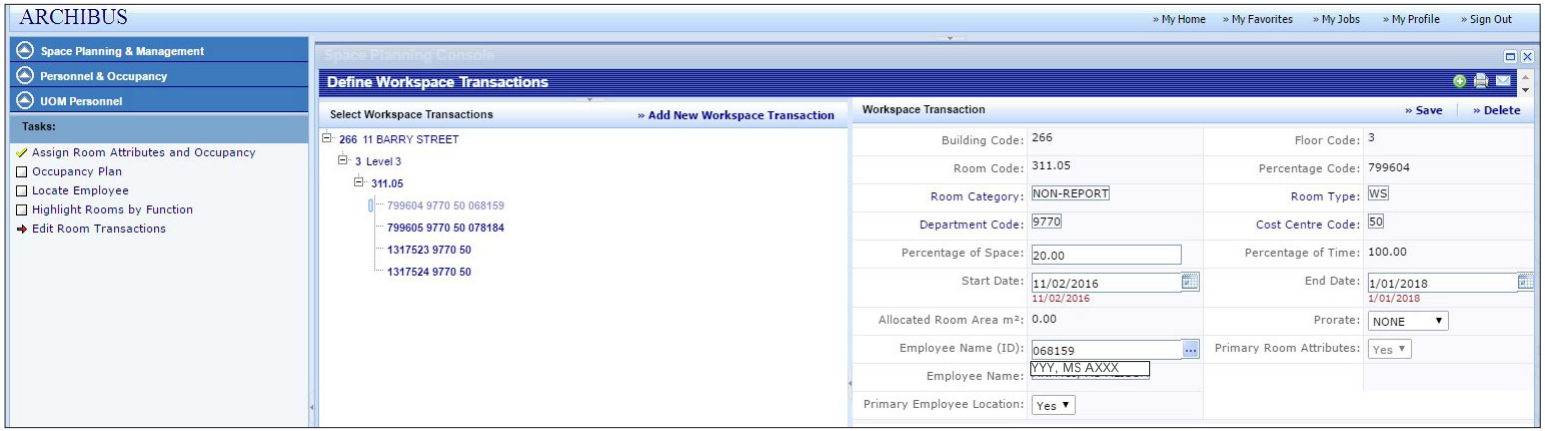
(b)
SISfm **Division** view showing the workstations occupied by Faculty of Medicine Physiotherapy staff located within the private Neuroscience Institute tenanted space within a university building.

Example of a Shared Workstation using Archibus Room Transaction Table

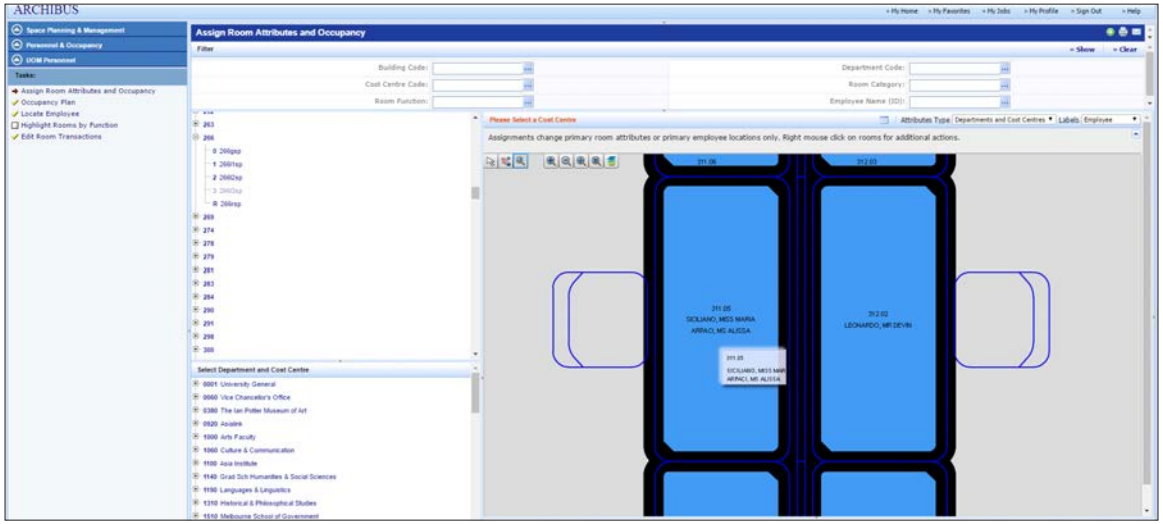
The Archibus Room Transactions Table can allocate a share of a room by a percentage split. This works well for reporting in spreadsheets, but cannot display the percentage split graphically (for example on SIS FM web interface). A shared workstation with multiple occupants can be viewed via the Archibus Web central interface, and the screenshots below show how a workstation shared between two staff 80/20 is handled in the Archibus Room Transaction table (a) and shows the occupants' names on a visual output through SIS FM interface (c). Screenshot (b) and (c) shows the detail behind the Archibus Room Transaction Table that can be edited through the SIS FM interface.



(a)
The Room Transaction table in Archibus showing a workstation shared by two staff (80/20 split).



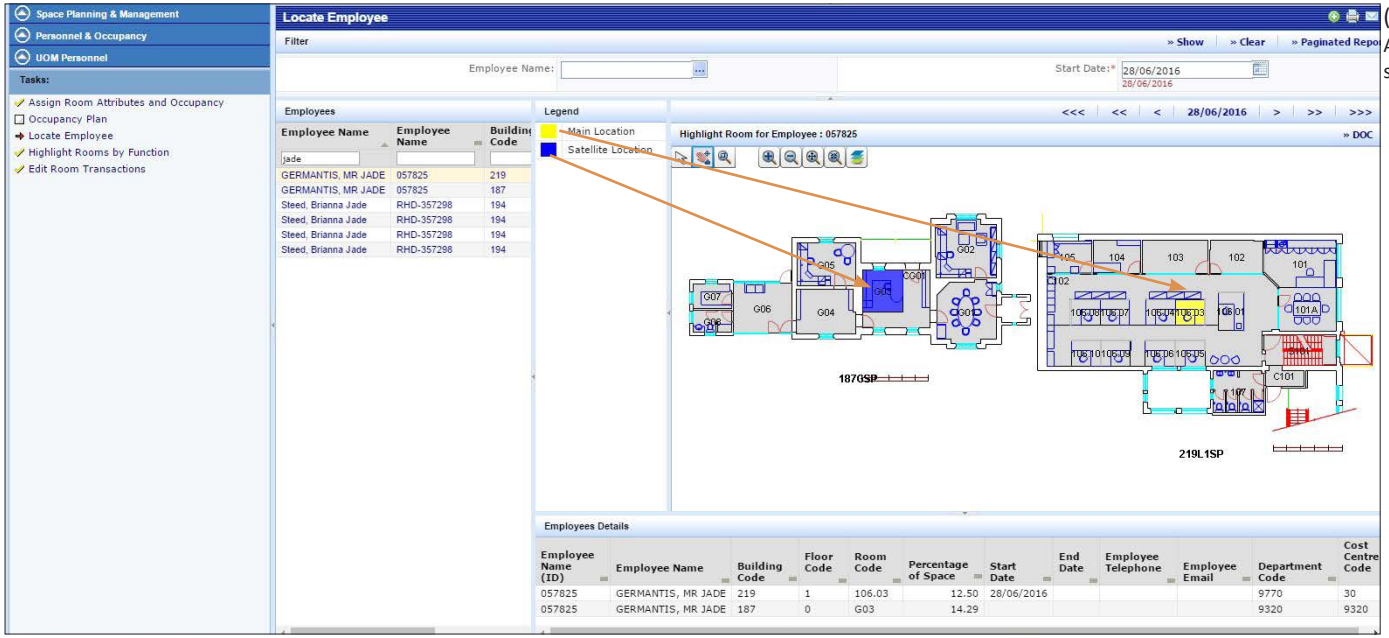
(b)
The Archibus WebCentral interface details information behind the shared workstation and can be edited by end users, such as modifying the shared percentage split. Other attributes can also be updated by the end-users including start/end dates.



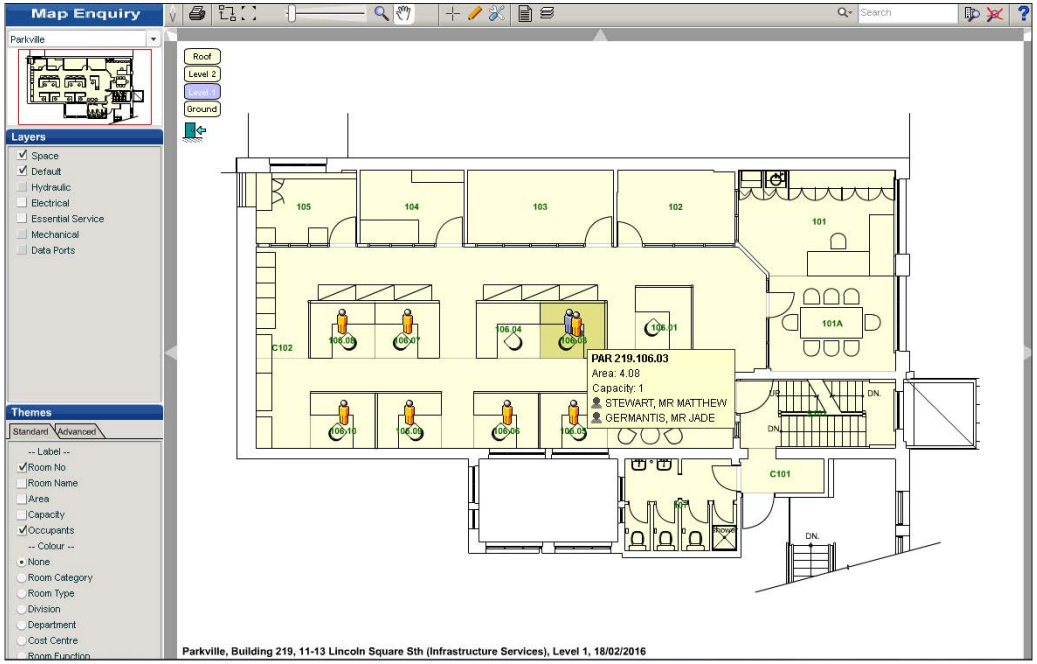
(a)

The Archibus WebCentral interface shows the two names over the workstation.

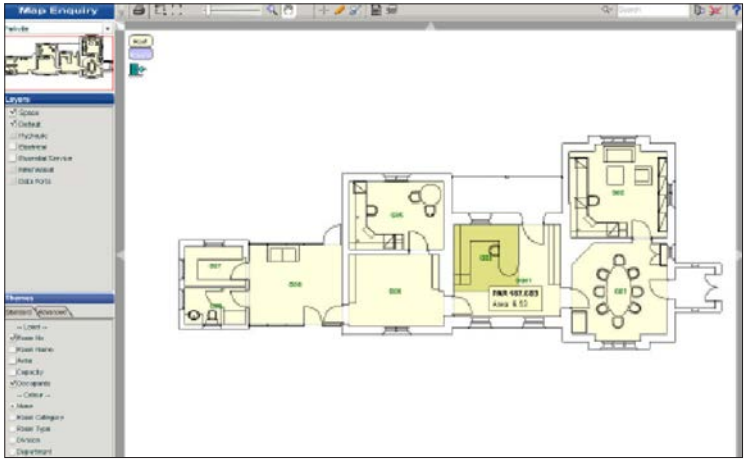
Example of a Staff Member with Multiple Workstation Locations using SISfm



(a)
Archibus WebCentral interface shows the primary location in yellow and the secondary location in blue.



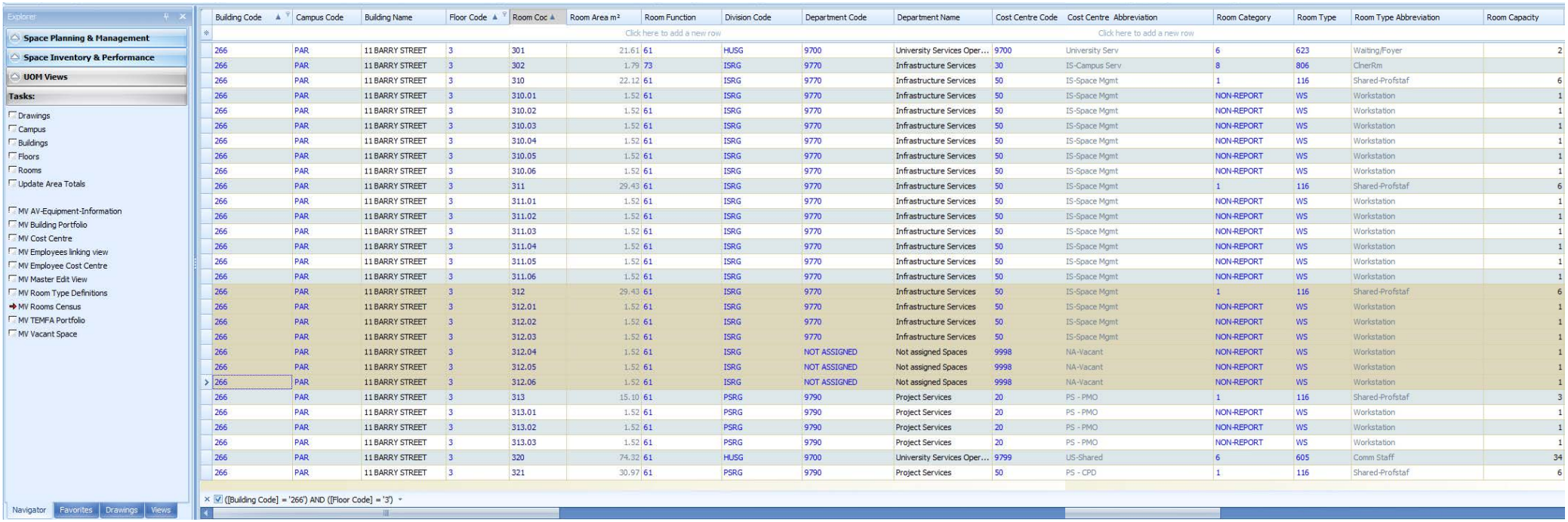
(b)
SISfm interface showing the occupant correctly in the primary location. (In this case, it's a shared office location).



(c) SISfm interface does not display the occupant in the secondary location, because only primary locations exist in the Archibus 'EM' table. Secondary locations exist in the Room Transactions table. Currently, endusers use Archibus Webcentral interface to see both location floor plans.

Workstation Information in Archibus Smart Client View

The highlighted section in the Archibus Smart Client view below shows the detailed workstation information as related to workstation examples on previous pages. The one table contains information on floor, room location, workstation number and size in m^2, room function, room type, room capacity, Department occupied by, cost centre, etc. Note: some columns have been removed in order to show detail relevant to end users interrogating workstation allocation, but can be tailored to include other information as needed. The exception is that the work-station occupant's name is not available in this view.



Building Code	Campus Code	Building Name	Floor Code	Room Coc	Room Area m²	Room Function	Division Code	Department Code	Department Name	Cost Centre Code	Cost Centre Abbreviation	Room Category	Room Type	Room Type Abbreviation	Room Capacity
Click here to add a new row											Click here to add a new row				
266	PAR	11 BARRY STREET	3	301	21.61	61	HUSG	9700	University Services Oper...	9700	University Serv	6	623	Waiting/Foyer	2
266	PAR	11 BARRY STREET	3	302	1.79	73	ISRG	9770	Infrastructure Services	30	IS-Campus Serv	8	806	ClnerRm	
266	PAR	11 BARRY STREET	3	310	22.12	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	1	116	Shared-Profstaf	6
266	PAR	11 BARRY STREET	3	310.01	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	310.02	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	310.03	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	310.04	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	310.05	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	310.06	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	311	29.43	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	1	116	Shared-Profstaf	6
266	PAR	11 BARRY STREET	3	311.01	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	311.02	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	311.03	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	311.04	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	311.05	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	311.06	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	312	29.43	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	1	116	Shared-Profstaf	6
266	PAR	11 BARRY STREET	3	312.01	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	312.02	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	312.03	1.52	61	ISRG	9770	Infrastructure Services	50	IS-Space Mgmt	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	312.04	1.52	61	ISRG	NOT ASSIGNED	Not assigned Spaces	9998	NA-Vacant	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	312.05	1.52	61	ISRG	NOT ASSIGNED	Not assigned Spaces	9998	NA-Vacant	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	312.06	1.52	61	ISRG	NOT ASSIGNED	Not assigned Spaces	9998	NA-Vacant	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	313	15.10	61	PSRG	9790	Project Services	20	PS - PMO	1	116	Shared-Profstaf	3
266	PAR	11 BARRY STREET	3	313.01	1.52	61	PSRG	9790	Project Services	20	PS - PMO	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	313.02	1.52	61	PSRG	9790	Project Services	20	PS - PMO	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	313.03	1.52	61	PSRG	9790	Project Services	20	PS - PMO	NON-REPORT	WS	Workstation	1
266	PAR	11 BARRY STREET	3	320	74.32	61	HUSG	9700	University Services Oper...	9799	US-Shared	6	605	Comm Staff	34
266	PAR	11 BARRY STREET	3	321	30.97	61	PSRG	9790	Project Services	50	PS - CPD	1	116	Shared-Profstaf	6

Example of Archibus Super-category Method for Workstations

Organisations often need to account for the same space in different ways. For example, to negotiate housekeeping contracts or to perform energy analyses, they need to sum the physical area. Yet to allocate space and charge departments for the use of space, they need to assign portions of the same areas, such as workstations, desks, or lab benches, to a department.

Using the Room Category feature in Archibus to classify each space can help distinguish physical spaces, such as open plan areas, from common-sense spaces, such as workstations, by developing an open plan area room along with its component workstation rooms. With this “room within a room” approach, the inventory includes rooms for purposes other than rolling up their areas into space totals. The example shown below has a Room Category table that offers **OPENPLAN** and **WORKSTATION** as room categories for implementing this type of situation. The table’s **Calculations Used In** field ensures that the areas are not accounted for more than once.

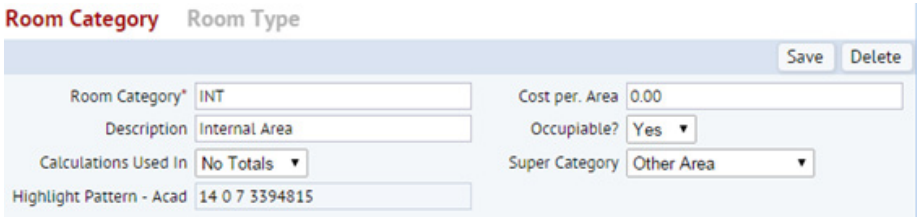
The following screenshots identify the use of the super-category feature, noting particular details, for workstation management.

(a)

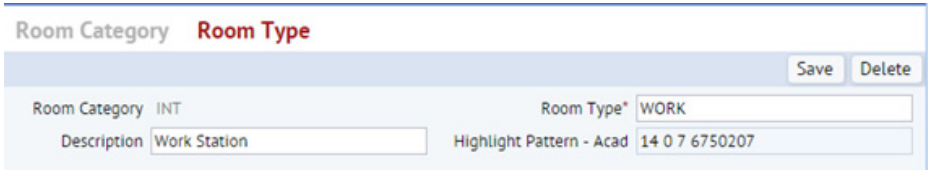
SISfm **Department** view of an open plan area on one floor of a building with workstations allocated against different Units occupying that floor. Each workstation is numbered according to a room or open plan area eg 104, 110, 111, 120 and 122.

Archibus Set-up Information for Super-category Workstation Allocations

(a)
The **Define Room Categories and Types** menu shows the end-user defined super-categories. **INT** is a super-category that includes workstations as spaces, but also other spaces (MISC, SEATING) that allows other internal space management assignments, calculations and reporting.

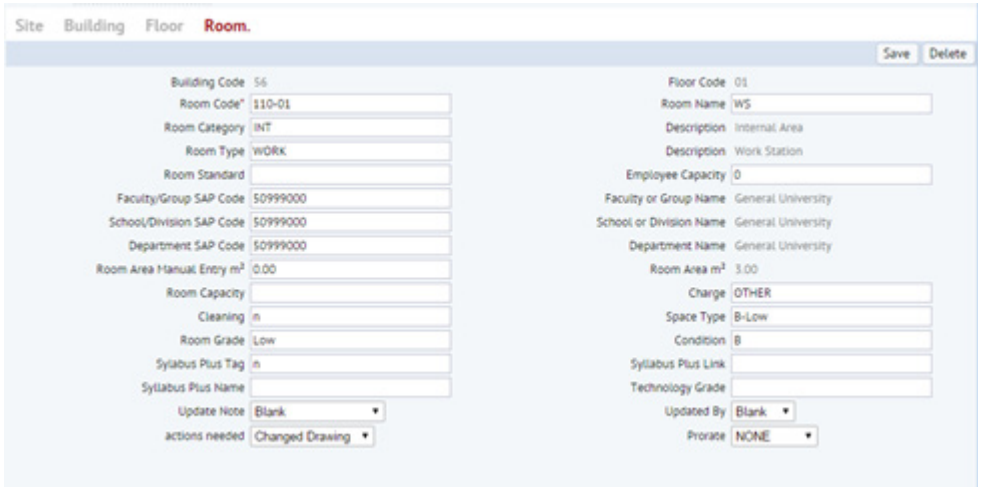


(b)
In defining the Room Category (super-category) of INT, a number of rules are set such as **Calculations Used In - No Totals,** so the INT space is not automatically included in total room counts or m². Also the indication that the space is **Occupiable** but under the super-category of **Other Area**.



(c)
Defining the Room Type as **Work Station** under the Room (super) category of INT.

In (d) the Archibus **Room** view provides the full workstation attributions of workstation 110-01, such as floor, room location, workstation number and size in m², room type, room capacity, Department occupied by, cost centre, etc.



(d)
Archibus **Room** view provides full room attributes for workstation 110-01.

(e)
Archibus **Room Category Table** dictionary. This is the back-end user defined fields for setting up super-categories. Note "**Other**" as an additional super-category to **VERT**, **SERV** and **USBL** (explained in another section of the playbook).

Table Na...	Field N...	Multi-Line Heading	Enumeration List	ARCHIBUS Type	Allow Null
			Click here to add a new row		
rmcat	area	Total Area		None	Yes
rmcat	area_avg	Average Area per Category		Calculated	Yes
rmcat	cost_sqft	Cost per. Area		None	No
rmcat	count_em	Employee Headcount		Calculated	No
rmcat	description	Description		Desc	Yes
rmcat	hpattern	Highlight Pattern		HPattern	Yes
rmcat	hpattern_ac...	Highlight Pattern - Acad		HPattern Acad Ext	Yes
rmcat	occupiable	Occupiable?	0;No;1;Yes	None	Yes
rmcat	rm_cat	Room Category		None	No
rmcat	supercat	Super Category	VERT;Vertical Penetration;SERV;Service Area;USBL;Usable Area;OTHR;Other Area	None	No
rmcat	tot_count	Category Count		Calculated	Yes
rmcat	used_in_calcs	Calculations Used In	all_totals;All Totals;no_totals;No Totals	None	No

Example of Super-category Method for Workstations in Archibus

(a)
Archibus floor plan with main open plan Room 110 selected (blue line). It shows the **Room Details** (pop up window) for 110 and also some individual workstations numbered.

(b)
Archibus floor plan with workstation 18 selected. The pop-up window provides "**Room Details**" for that specific workstation, 110-18.

Super-category method enables representation of internal spaces as a workstation, and to obtain full space attribution without compromising building statistics and space categorisation or require customisation of space management functionality, ie., configuration only. This method takes advantage of a feature in the Room Category record (available since Archibus v18) called super category, used typically to manage Void and Service spaces. Additional rudimentary polylines are created in the CAD drawing internally to the room polyline ie open plan space (blue line below). These are selectable and therefore manageable through normal SmartClient CAD Plugin and other space management tools. Archibus currently and conveniently publishes these on top of the Room polyline, so they are selectable when the floor plan is viewed in Web Central.

PRO:
The advantage of this method is that the full attribution and functionally of a room record is available but isolated from building statistics/KPI reporting. Each space can be fully categorised, allocated and assigned giving full intelligence and interactivity within the Web Central floor plan viewer.

CON:
It depends on AWC SmartClient continuing to publish the internal polylines (Workstations) on top of the main room polyline. Additionally, internal polylines must be drawn by the CAD team and changes must be coordinated and republished.

(c)
Highlight Rooms view in Archibus. Note room count is 13 so Super-category WS (workstations) are not counted (nor area summed).

4.3 Informal Work / Breakout and Social Spaces

Informal work spaces are a common part of modern workplace design. Breakout space have also been traditionally with spaces associated with lecture theatres, galleries, seminar rooms, and meeting rooms, but the term has become a broader term that can include office informal work spaces.

They are usually adjacent to office/work zones with the purpose to get away from the workstation/desk for primarily spontaneous collaboration, They are furnished in less structured arrangements, have communal ownership, and are not bookable (unless linked to meeting rooms). Informal work spaces are an increasingly important area as they support workplace interactions and spontaneous meetings and can significantly reduce the demand on traditional meeting rooms.

Informal work spaces (Room Type 119) and Informal Learning (Room Type 517): Informal learning spaces are student driven active spaces with casual furniture arrangement and ad hoc occupancy. Informal work or breakout spaces are office-related staff spaces and may be furnished in a variety of styles.

Informal work spaces (Room Type 119) and Social Spaces: Informal work spaces may be more noisy and less private, but they are not the social or common staff area. It is an office-related informal work space, with intended purpose and setting. They are microspaces typically in circulation space of open plan areas or near to offices /laboratory areas. If mapped as per the Room Type definition, then the space needs to be poly-lined (or space percentage split allocated) to separate it from circulation space. Whilst social interactions may/do take places in these areas, the primary intention of Infromal Work/Breakout spaces is for individual or staff groups to use. Some Informal Work spaces may be booked as is done for meeting rooms.

Incidental Learning (Room Type 515) and Social Spaces: Incidental Learning is described in detail elsewhere in the playbook. They are microspaces typically in corridors and foyer areas, and if mapped as per the Room Type definition, then the space also needs to be poly-lined (or space percentage split allocated) to separate it from circulation space. Whilst social interactions may/do take places in these areas, the primary intention of Incidental Learning spaces on campus is for students to use for short periods whilst waiting for a class. Social spaces are typically near dining areas.

Social spaces are typically within or closely associated with dining areas, and would be either assigned Room Type codes that such as staff/student tea rooms, or they could be specifically purposed seating/tables associated with a food court, cafe, bar, cafeteria, in which case they are usually under licence agreement with tenants. As the purpose is dining, they are not considered a learning space for students (although students do use these areas for ad hoc learning, just as staff go to a cafe for a meeting).

External Informal Learning (Room Type 808) is described in another section of the playbook, as it needs to a specifically purposed space located adjacent to or an extension of other learning spaces. It cannot be an uncovered area and must have furniture conducive to group/individual interactions. It is expected that social interactions do take place in these areas, but the intention of the space is for informal study/learning.

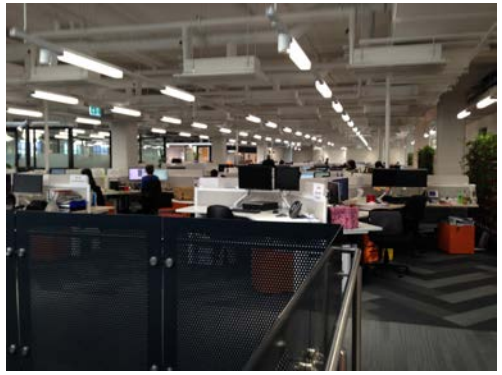
The best approaches for mapping informal work and social spaces are:

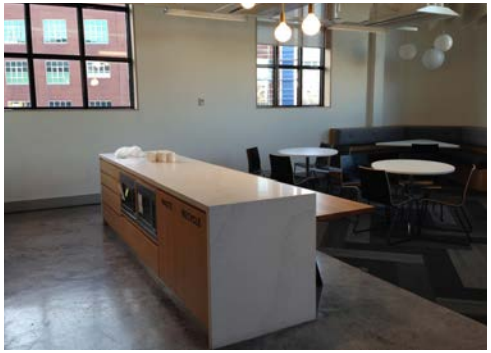
- staff office-related work is an activity in informal work or break out spaces (Room Type 119).
- social spaces for staff are typically staff tea rooms, staff club, cafes, etc.
- students may study/learn in informal and incidental learning spaces
- external undercover tea rooms (Room Type 817), external Informal Learning space (Room Type 808) are classified as non-usable space.

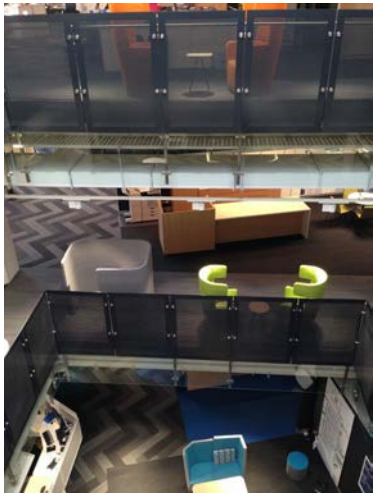
Example of a Large Open Plan Work Area with Mutiple Informal Work/Breakout Spaces

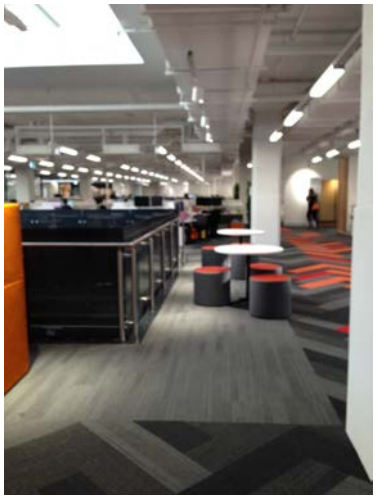
An example of a large open plan area (b) with a variety of informal work areas/ breakout spaces on several floors of this building. Each floor is colour coordinated (e). Breakout/informal work spaces includes stools/tables, pods for single or multi person use, large tables (b), (f), (g), (h), (i). A common tea rom is located in one corner (c), there are a small number of enclosed meeting rooms on each floor (d), and expectations of use of informal work area/breakout spaces clearly displayed (a).

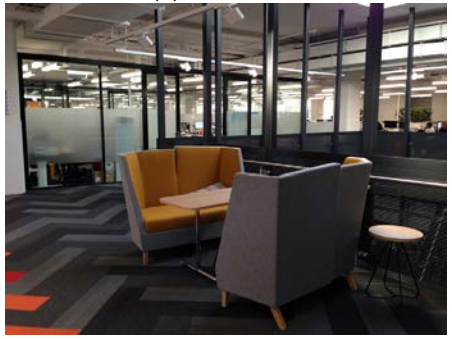
(a)

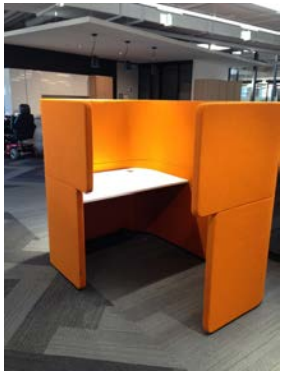

(b)

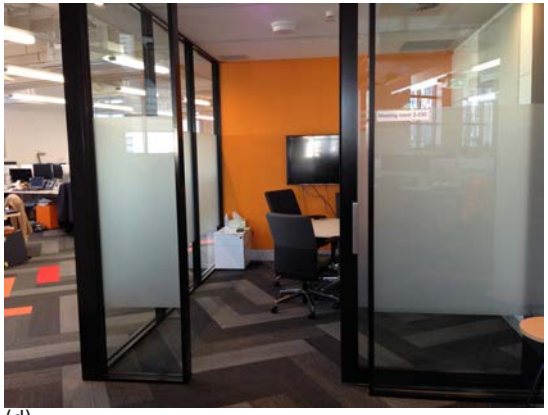

(c)

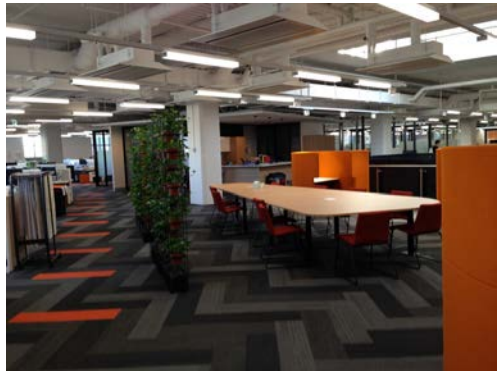

(e)

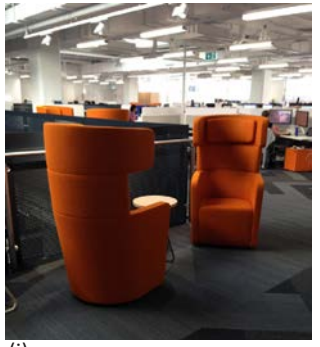

(b)

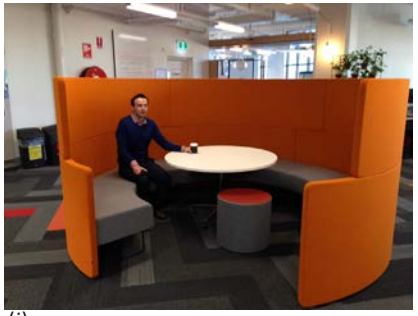

(f)


(g)


(d)


(h)

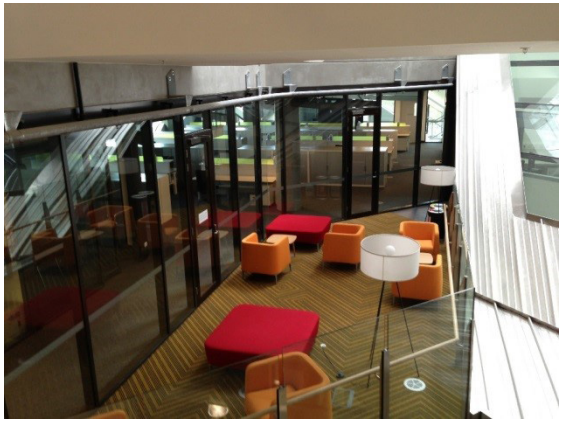

(i)


(j)

Other examples of Informal Work/Breakout Spaces

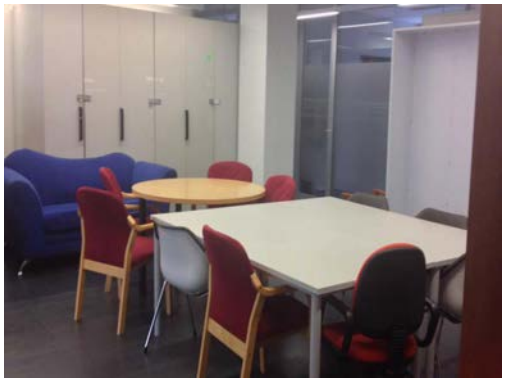
(a)
Ground floor level shows casual seating in foyer/circulation area. Upper three levels have Breakout spaces as shown in photos (b) and (c).

(b)
Informal work space outside lab area for use by staff and students. See also (c).

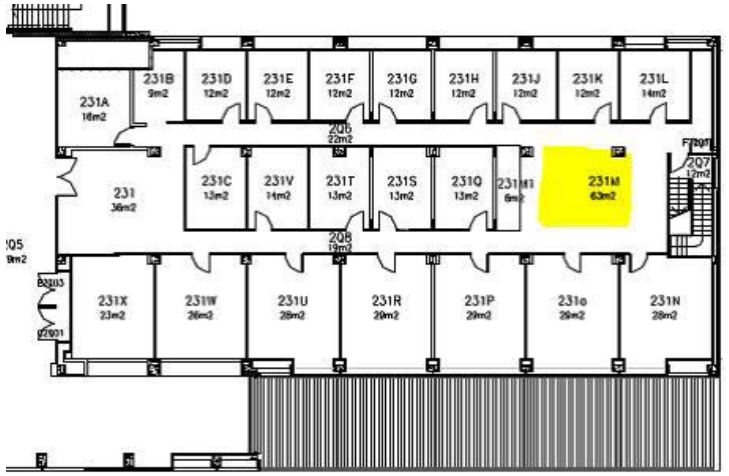


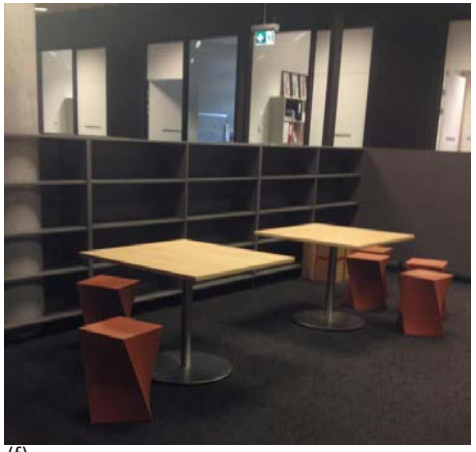
(c)
View of similar informal work space in same building as shown in (b).

(d)
Tables (and book cases) in an open space used for discussions by staff. This space is shown in (e) and on the floorplan - the highlighted yellow area. This informal work space is separate to an available formal meeting room.



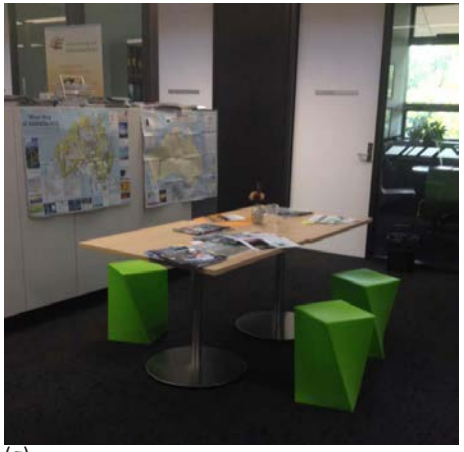
(e)
Another view of informal work space in (a).





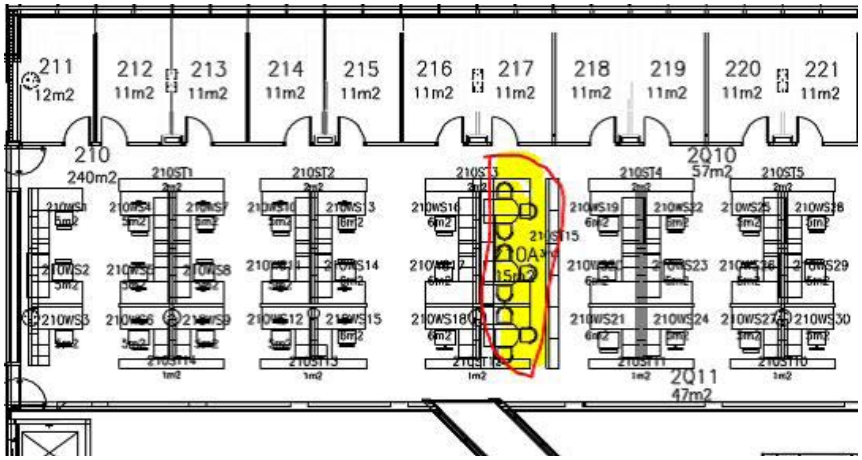
(f)

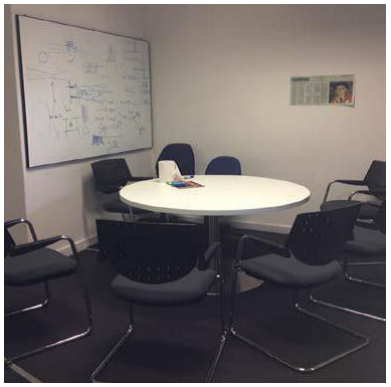
Tables and seating for informal work located inside an open plan area. Refer to yellow highlighted area shown on the floor plan to the right.



(g)

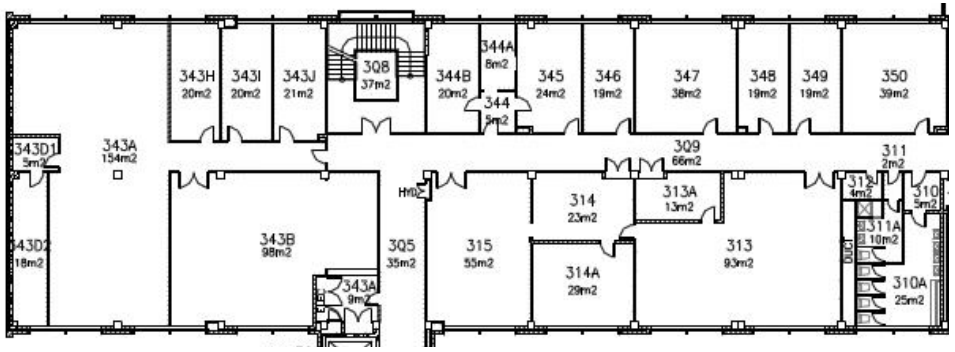
Another table and seating in the vicinity of space shown in (f).

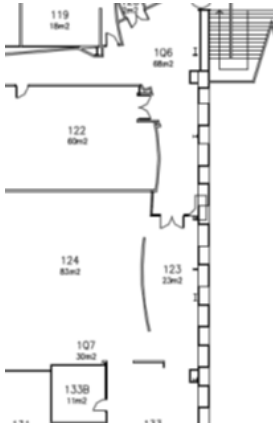




(h)

informal work area (plus kitchenette) located off a lab area for staff to discuss work matters. Sometimes meeting are held in the space. Space has restricted access. Refer to yellow highlighted area shown on the floor plan to the right.





(i)

Informal work space located outside HDR open plan desk area. Used for student discussions. Refer to yellow highlighted area shown on the floor plan above.

Kitchenettes

Common areas for food and drink preparations are provided for staff and HDR students but they may not necessarily be enclosed tea rooms. Often kitchenettes, see examples (a), (b), (c), and (d) below, are located in corridors and circulation areas, often occupying a corner or alongside a wall, most likley due to space constraints on that floor. Kitchenettes are mapped and coded as Room Type 816, to distinguish them from enclosed kitchens (Room Type 608) and tea rooms (Room Types 605, 606, 607).

External tea rooms are described in another section of the playbook.

(a)
Kitchenette in circulation area.

(b)
As for (a), and with possible casual seating in circulation area.

(c)
As for (a).

(d)
As for (a).

4.4 Multi-function and External Spaces

Multi-function space: Rooom Type 626 should be used only when a space is routinely used for more than one purpose. If there is ad hoc usage for a second or third purpose then a pragmatic approach should be adopted, and perhaps a time based rule applied (eg at least 30% of the time AND on a regular basis), before it is considered a multi-function space. If this is not feasible, then consider the predominant purpose and map the room against a Room Type code that reflects that predominant space type. This also applies equally to how Room Functions should be chosen, ie., on the basis of the predominant function of a space.

External spaces: Spaces that are used, but are external to a building need careful consideration when mapping and coding these spaces, and for the most part are not incuded GFA.

External Learning Spaces: are described in another section of the playbook.

External Dining Spaces:

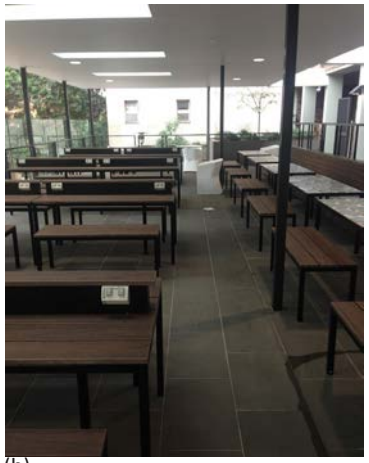
- External staff tea rooms are mapped to Room Type 817.
- Outdoor **uncovered** court yards used for eating are not UFA and not included in GFA.
- Umbrella or shading covered eating areas near refectories, retail and food courts are not included in GFA.
- Undercover outdoor eating areas associated with cafés are only included in GFA if the covering element is supported by columns, and excluded if uncovered or if cover is only eaves overhangs, sun shading or awning, as these are omitted from UCA. These spaces are usually under lease arrangments set by chair and table capacity, not by $m^{2.}$ For two reasons, of it is part of a lease do not include and as they are not internal spaces as part of the building, another reason exclude from GFA.

Note: Excessive mapping of these external (UCA) spaces may distort the efficiency (UFA/nonUFA) of buildings.

Example of External Spaces

(a)

External UCA area alongside a main building purposed for teaching classes, see photo (b). Students also use the space for study. Code as External Informal Learning - 808. This particular space in bookable.



(b)

Close up of space in photo (a) shows tables and seating for group or individual study.

(c)

These external structures belong to the adjacent building. Only the small low roof structure on the left is UCA, adhering to the Go8 convention of one floor high practical trafficable area. In this case it is an outdoor dining space for staff.

(d)

External tea room area - UCA space polylined to the edge of the covered space.

5. Commercial and Residential Spaces

5.1 Retail and Commercial

"Retail" and "Commercial" are terms often used interchangeably because common use terminology describes commercial properties as either retail, residential or industrial, and the lease agreements normally follow a prescribed format for these types of spaces. A commercial lease arrangement is most likely in place, when an external entity is using University space (thus providing income for the University) hence why some Universities refer to this space as "commercial", and especially if that Institution also space charges for its institutional core function space.

To standardise the use of these terms for Go8 space mapping and reporting,

- Retail spaces are those spaces used for selling services or goods, and as such their function is best aligned with Primary Function of Staff + Students Services. For instance, student associations, clubs and sports centres which lease space - are classified as University space leased out for purposes of Staff & Student Services.

- Commercial space is space being used by an entity undertaking a more technical enterprise such as R&D company, spin off company, etc which lease space in some agreed arrangement from the University and be classified as Uni space leased out for the purpose of Research or a Teaching function. This space is usually associated with the Research (or Teaching) function of the Institute, and therefore is assigned a Research or Teaching function as well.

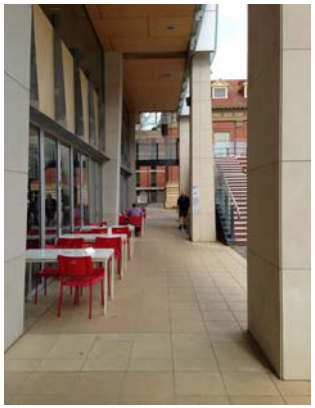
- Investment properties that are leased out as investments by Universities are also considered to be commercial space if they are leased to a third party, and not used for any associated core academic activity of the University. These spaces are coded as Non-Reportable for TEFMA purposes.

The best approach to categorise the commercial type of activities on campus: is to use a pragmatic approach and assign the Room Type and Function, that takes into account the intended activity for that space. For reporting, the retail or commercial space is treated separately to teaching, research, central admin (and residential) space types.

(a)
Cafe seating and dining area (Room Type 611) within a large foyer of a building. Cafe interior (not shown) and seating area would be under a lease agreement.

(b)
Cafe seating and dining area but since it is uncovered external space it is not mapped or coded, but the seating area would be included in a lease agreemet.

(c)
As for (b).



(d)
As for (b). Cafe has seating inside the building on ground level, and has provided some seating outside, in the UCA space of this building.

5.2 Leased-in / Leased-out

The Institution may lease in space or lease out campus space, and it is a useful measure to know how much leased space is being used to undertake the University's core activities or what Institutional space is being made available for non-core activities. Space or buildings can therefore be categorised as:

- Owned and used for Uni purposes (and owned but not used at all)
- Owned and leased to a second party = Leased Out
- Leased from a second party for Uni purposes = Leased In

The Institution can enter into various lease agreements or other arrangements such as an MOU, service agreement, handshake, etc, the specificdetails of which can differ, for each space. Also the relationship between the entities party to the arrangements can be quite convoluted especially if a longstanding historical arrangement. For example,

- a typical lease – where the University or the other party is the tenant
- the University is a co-partner to a lease
- the University is a party in it's own lease eg the University owns a space which is leased to CSIRO, who sub-leases some of the space to a separate Institute (of which the University is one of the partners)
- the lease is to a University affiliation eg CRC, Student Association, Student Union, Uni Gym

The best approach for reporting on leased space in surveys is to

- TEFMA survey - if the Uni has leased-in space for its core activities, include the space in the TEFMA reported GFA m^2. The m^2 measure usually follows the NLA (net lettable area) method of measurement. If space is maintained by the Uni and occupied/leased to another party, it is also included in the GFA. Leased-out space is treated as Non-Reportable.
- Go8 Survey - reports separately on leased-in and leased-out space m^2, include leased-in space in Go8 GFA m^2, but treat leased-out space as Non-Reportable. Refer to schematic below.

(a)
Cafe occupies internal rooms (kitchen, counter) and seating under cover (UCA) and seating in uncovered area. A lease arrangement would include all these areas.

(b)
The UCA space - pointy shaded area above - is included in building GFA, but the uncovered cafe seating area sits outside the UCA space, and is not included in GFA, even though it is used by the cafe /patrons.

5.3 Residential

Residential accommodation is predominantly available for the use of students attending the Uni, but some accommodation may also be used by specific staff or visitors. The accommodation can be privately (externally) managed or managed by the Uni and may comprise of units/apartments, houses, and colleges.

The best approach for reporting on accommodation, are the following:

- **Type of residential accommodation**: refer to the table below on the various accommodation types. Reporting of GFA is a useful measure for Uni managed accommodation (but is not always known for the other types of accommodation). And the total number of beds available to students is an important measure, hence surveys will capture the beds total from all types of student accommodation (Uni managed and other). For GFA calculations, the residential usable space is assigned the 700 series Room Type codes and the non-usable space is assigned the 800 series Room Type codes (circulation, lifts, service risers, verandah, waste, cleaners, storage). The Room Function code is Residential.

- **Leased out space:** if the Uni owns a residential building or space and it is leased out, irrespective of whether it either manages the space or not, and it is leased out, it is treated as Non-Reportable for the TEFMA survey (ie it is treated more like an investment than a retail/service). For the Go8 Survey, the residential leased out space may be reported in the Go8 leased-out m2 total category, but when reporting Go8 GFA it is not included, and as for TEFMA, it is treated as Non-Reportable. However, if reporting on a total Institutional GFA m^2 is required, then using the Room Type codes above, it is included in the m^2 total because it's part of the Institutional property portfolio.

- **Institutional building count**: if the Uni owns the residential building or space (and either manages the space or not), provided all floor plans are on the space data system, they are treated as broadly serving a 'university purpose', and included in the building total of the academic estate. In contrast, if a residential space or building is leased out as investment property and is not soley for student/staff accommodation, then it is treated differently, and included only in the total Institutional property portfolio (which includes all academic estate pus all other buildings).

Student Residential Accommodation		**Metric**		
Type of accommodation	**Definition**	**GFA m^2**	**# of Beds**	**GFA m^2/bed**
University managed accommodation	All student accommodation managed by the University on university owned or leased land. May be on-campus or near-by. Defined by ongoing management by the university, whether by Facilities Management or other university adminis-tration.			
Affiliated Colleges	Other affiliated/private colleges, either on campus grounds or adjacent/nearby to campus, set up specifically to provide accommodation for university students. Day to day management and maintenance of facilities generally by the affiliated group.	N/A		
Other commercial arrangement	Other student accommodation where the university has entered into a formal commercial arrangement. May be on university owned land leased to a commercial operator. Defined by a contractual arrangement providing accommoda-tion for university students.	N/A		
	Total number of beds			
Include: For university accommodation GFA, include all common use areas, such as communal dining, lounge, cooking and recreational facilities as well as circula-tion space. Exclude any retail component if it is attached to the building. **Exclude:** Other private college or commercial residential accommodation not directly affiliated with, or contracted to, the university. **Note:** It is recognised that information on GFA may not be available for the second and third categories and has been excluded on that basis. For those categories, if reasonable estimates of bed numbers are all that can be provided they may be included with a note to that.			

6. Other Space Items and Benchmarking
6.1 Miscellaneous Space Items

Space standards

Space standards can be used to judge whether departmental/unit/faculty space is sufficient. This informs decisions about refurbishment, new builds, space alteration and users' requests for change. Space standards should be transparent and their perceived fairness helps resolve disputes over space allocation. Space allocations based on standards can be time and resource intensive to assemble and agree upon, and the space management team should consider whether their benefits justify the resource commitment.

Space standards should encourage progress towards efficiency but are only one of several space management tools, and are not a prerequisite for efficient and effective space use. Space standards should remain under regular review, comparing the existing estate size and its strategic target size, and choosing appropriate space standards guided and informed by:

- best practice within the institution
- research into current working practices in the higher education sector
- existing international standards such as the TEFMA, APPA, AUDE norms.

In 2015, the Go8 Facilities Directors recommended to TEFMA that current building statistics and information would be a more useful guide for Institutions in planning space and building planningthan the outdated and prescriptive space standards in the TEFMA Space Planning Guidelines (Edition 3, 2009). The Go8 Repository holds a series of Go8 building information sheets as reference examples to current buildings and space allocation at each University.

Space charging

Space charging should create an incentive for users to employ space efficiently, by clearly showing the cost of their space and charging for it. Users will have no efficiency incentive if someone else is unknowingly paying for their space. For example, consideration should be given to the cost of non-academic departments' space. Space use and charging should therefore be transparent to all users.
The charge should be reviewed annually in line with departments/faculties budget planning. There should be clear rules about relinquishing space, including any minimum amount which will be accepted and requirements for its accessibility to other users.

The Institution should consider the disadvantages of space charging before adopting a system, including:

- resource and data intensive
- may have little effect on the space use of 'wealthy' cost centres
- cost centres without access to high value research and consultancy income may be in deficit and be subsidised, undermining the system's rationale
- difficult to use space charging to drive efficiency in departments without academic income; this may mean a substantial part of the estate is untouched by the efficiency motive
- its effects may diminish over time
- space relinquished may be difficult to redeploy effectively

TEFMA and Go8 Survey Reporting

Dates: TEFMA Survey is based on census date typically March 31 of the year of data collection. Go8 Survey is December 31 of previous calendar year prior to the year of data collection. University calendar year is the same as the Financial year, ie January 1 to December 31.

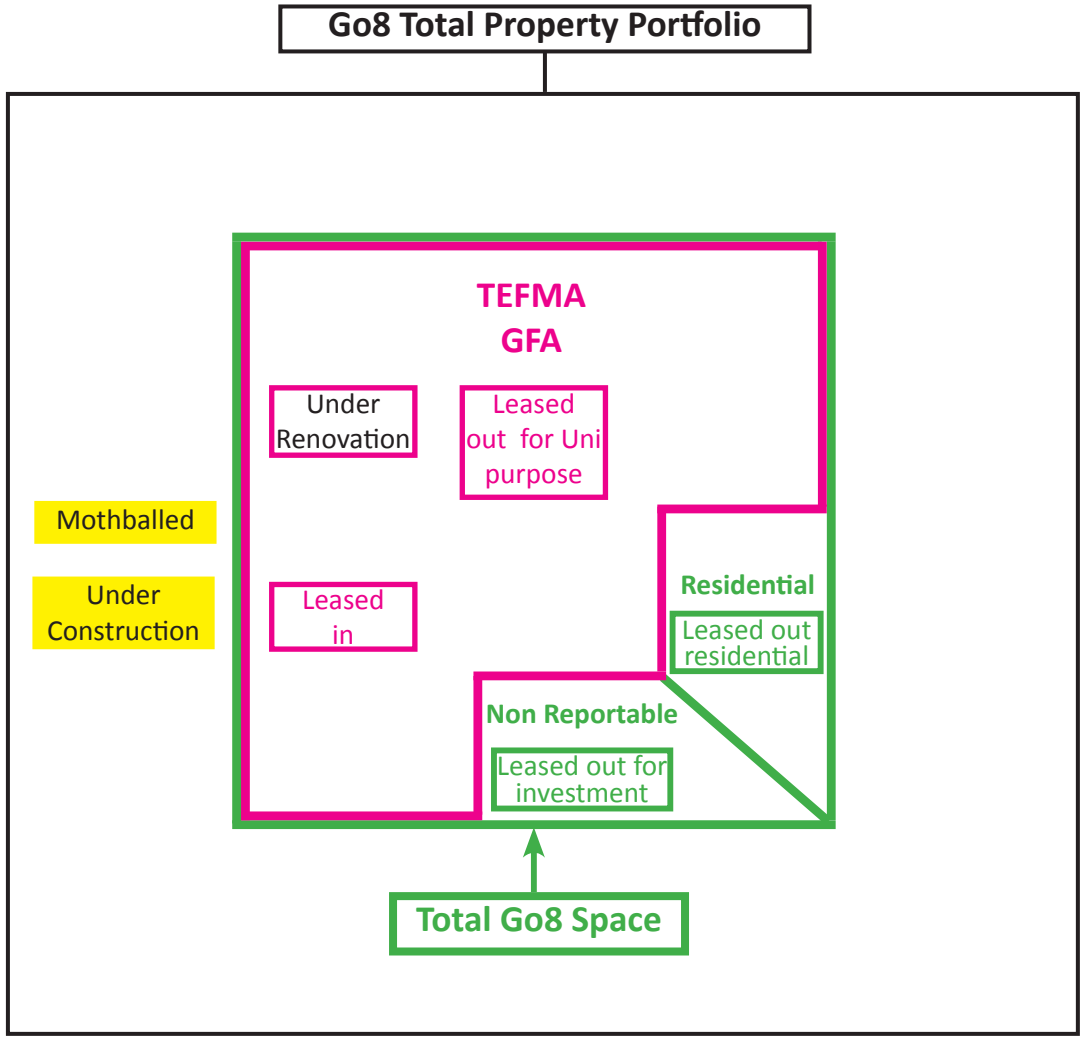
Reporting on student numbers:

Onshore	Exclude all off-shore students. Include all onshore (internal and external) students. "External on-shore EFTSL" are typically distance education students who are not normally expected to be on campus but may spend a few weeks on campus per year. Remote students are typically onshore, but not attending the main campuses on a day to day basis.
Offshore	Offshore students are in overseas locations, and are counted separately to onshore students (those attending the main campuses on a day to day basis) because only the onshore students numbers are used to inform other metrics, such as space performance eg m^2 per EFTSL. Including the offshore student numbers will skew measures used in space planning and may skew space performance reporting and benchmarking.
Survey Date	Student figures for TEFMA survey are as at 31 March (Census date). For Go8 survey, student figures are as at 31 December of previous year, therefore slight variance, but unlikely to have a huge effect unless a huge drop-out rate is realised post census date. The reason is that student numbers are reported to the Federal Government at the end of a calendar year, as these are readly available through Institutions MIS (Management Information System).

TEFMA Space Types: Often there is a different interpretation on what spaces are reported against the TEFMA Space Types in annual TEFMA Benchmarking Survey. To enable consistent space type reporting across the Go8, the table below provides guidance for certain spaces and which Space Types they should be reported under.

TEFMA REPORTING - SPACE TYPES	Academic	Central Admin	Centrally timetabled Teaching	Library	Staff and Students Services	Commercial	Other
	HR Academic	HR Central		Informal Learning	Student Union	Leased out space	Car Parking
					Retail	Investment	
	Spaces for School/Faculty HR activities and functions are included under TEFMA Academic space type. **Hospital and Rural Teaching Spaces -** Universities lease specialist Teaching and Research space in hospitals but year in year out this may change. Exclude especially if m^2 or other information is not available.	All non-Academic HR activities and functions are included under TEFMA Central Admin space type.		Informal Learning space whether in a library or elsewhere should be included under TEFMA Library space type. (Incidental Learning would be included under the TEFMA Central Admin space type).	Even if University leases space to the Student Union and to retail entities, the spaces are included under the TEFMA Staff & Student Services space types, as this is the primary function of these spaces.	Note: Not all leased out space is included automatically in TEFMA Commercial space type - refer to Staff & Students Services.	Car parking is provided for staff & students but is not a bona fide service at all Institutions. And including car parking under any other TEFMA space type may skew the benchmarking. **Hospital and Rural Accomodation** Hospital and rural areas exclude all residential where it is not connected with a remote research facility. So accommodation for staff and students at remote off main campus (but not overseas) is included but staff residential spaces are excluded.

University Owned and Used space: Reporting of University space often requires filtering of space data because not all space (eg rural properties, fields, bequeathed land and buildings, etc) are reportable. For instance, the TEFMA Survey stipulates reporting of space that is maintained by the University only, not all other buildings and spaces. Sometimes residential and investments properties are excluded. The schematic below attempts to show the differences in what spaces are included for both TEFMA and Go8 reporting, and what constitutes the whole University estate (or property portfolio).



6.2 Benchmarking

"When you can measure it and express it in numbers, you know something about it" and "**You cannot manage what you cannot measure**".

Benchmarking is more than just measurement, it involves a continuous, systematic process of comparing current practice with some perceived higher level of performance for the purpose of organisational improvement. Benchmarks that measure functional effectiveness, rather than simple countables, will best test progress and improvement. Functional outcomes can be rates of change and identifiable stages of qualitative improvement, as much as numerical scores. And benchmarks that adjust for inequalities by reducing the effects of size, age, geography, superior funding, and other defining features of universities, are preferable. These benchmarks are often described in proportions, times, and ratios which are comparable. For instance, the total research funding attracted by a large institution is less telling than its funding in proportion to its total staff.

Example Benchmark:
A capacity to measure space utilisation is a quantitative benchmark. Central teaching space usage and efficiency is an important (space management) benchmark for universities to see how well they are using their teaching space. Initially the benchmark may be limited to measuring space utilisation using as measures, hours booked against hours available and the number of seats booked against room capacity. Space should include all centrally controlled teaching spaces (perhaps with a specified seating capacity cutoff) and, where appropriate, include laboratory space. Further benchmark enhancements could include:

- the inclusion of faculty controlled teaching spaces
- the inclusion of other spaces (eg libraries, computer laboratories, offices, research areas and the like); and additional efficiency measures including
- hours booked against hours used; for both seats or rooms
- measures to achieve economical use of space, such as charging out.

A potential issue is in multi-campus institutions, because such institutions may have campuses at different stages of development and maturity, and differentiated functions may be planned, such as a research intensive campus and the other, as a teaching-only campus. The interpretation of benchmarking data should be mindful of whether a single campus or the whole university is being benchmarked and should be made clear for comparative purposes. Consistency of use is the main requirement when submitting benchmarking information for wider publication.

Development of benchmarks involves making judgements about what are the important areas in assessing the functioning of a university and how it is to be measured. Therefore, developing benchmarks should include a convincing rationale for the benchmark; and a required objectivity of the ratings or scores that allows managers to evaluate performance.

Many studies on what are the best metrics to measure facilities performance are often related to the floor area occupied, level of staffing or the total revenue received. Not surprisingly, the majority of facilities' space performance measures are cost-centred (maintenance, cleaning, refurbishment and replacement) and are determined on either a m2 basis or per person. Although quality rating systems exist such as the ratio of gross floor area to usable floor area. To compare across different facilities, then these financial measures of performance must relate back to the property in terms of a rate per metre or rate per staff member. So in order to effectively benchmark facilities management activities, it is necessary to have a common measure upon which to base the comparison, and from studies undertaken, a significant proportion of these measures relate to the area of the building occupied.

More and more as institutoins become more globally and corporate foucssed there is a growing need to compare facilities performance beyond a single country (or sector) and to do this on a common basis. The commonality of methods and definitions are yet to be fully established. One simple area of disparity that affects real estate across a broad spectrum is the lack of any international standard method of measuring the space within offices. This lack of a common method will distort property valuations and investment returns as much as it will serve to distort the benchmarks used in comparing property performance. The variance from one country to another can be quite significant. So long as all facilities within a benchmarking exercise are measured in a consistent way then there is true comparability.

Sector and Peer group Benchmarking: The TEFMA Benchmarking Survey enables a level of space and infrastructure comaparison across the Australian and NZ tertiary education sector. However, the Go8 are significantly different to most Universities in the Australian sector and benchmarking against a select group of peer Universities is a worthwhile exercise for more relevant comparisons. In particular for research space and related activities. Benchmarking at an international level can help Go8 Universities understand how they perform against another sector, although issues arise in the differences between Australian and international space definitions and metrics. The Russell Group, russellgroup.ac.uk, a UK group of 24 research intensive Universities, is the most relevant international peer group for the Go8 Group (although even within the Russell group there is some obvious/expected stratification of Universities).

As no single metric is adequate, a "dashboard" of key metrics gives a more rounded understanding of an estate and helps inform institutions how they can improve on their performance. Some examples of measures of space performance, efficiency and possible KPIs are shown below, but are not limited to these.

Performance Measure	KPI	Metric
EFFICIENCY	Total property costs	$ per non-residential GFA m^2
	Area per student and staff	Non-residential GFA m^2 per (Teaching student FTE + Research student FTE + total staff FTE)
	Area per student	Non-residential UFA m^2 per (Teaching student FTE + Research student FTE)
	Office space per staff	Research offices UFA m^2 + Teaching offices UFA m^2 per (Total Research and Teaching staff FTE); Support offices UFA m^2 per support offices staff FTE
	Office space by staff type	Research office UFA m^2 + Teaching office UFA m^2 + Support offices UFA m^2
	Research space per research student	Research not offices UFA m^2 per Research student FTE
	Teaching space per taught student	Teaching not offices UFA m^2 per Teaching student FTE
QUALITY	Percentage of GFA in condition A and B	% of non-residential GFA in condition A, B, C and D
	Percentage of GFA in functional suitability 1 and 2	% of non-residential GFA in grade 1, 2 ,3 and 4
	Estate age	Non-residential construction date ranges since 2000, 1980-1999, 1960-1979, 1940-1959, 1915-1939, 1840-1914, before 1840
VALUE	Income per total space, Income per relevant academic space	Total academic income = Teaching + Research Income per non-residential UFA total m^2 $ academic income per m^2 UFA; $ Research income per Research not offices UFA m^2; $ Teaching income per Teaching not offices UFA m^2
	IRV as a % of income	Insurance Replacement Value as a percentage of Research Income + Teaching Income
SUSTAINABILITY	Capex and Maintenance as a % of IRV	Non-residential capital expenditure building + Non-residential repairs and maintenance costs total as a % of non-residential Insurance Replacement Value
	Capex and Maintenance as a % of income	Non-residential capital expenditure building + Non-residential repairs and maintenance costs total as a % of Teaching Income + Research Income
	Carbon emission scope 1 and 2 per m^2	Non-residential scope 1 and 2 carbon emissions total (kg CO2e) per non-residential GFA m^2
	Energy consumption per m^2	Non-residential energy consumption total (kWh) per non-residential GFA m^2