Workshop IPMS* euREAL** ILMS***

CLGE General Assembly

25-26 September 2015

Moscow, Russian Federation

*IPMS : International Property Measurement Standards

** : European Real Estate Aera Label

*** : International Land Measurement Standard

euREAL IPMS compliant

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Starting point

First step

- Identification of differences between
  - IPMS:Office Buildings (Nov 2014) and euREAL v1.0
  - Draft IPMS:Residential Buildings (Jun 2015) and euREAL v1.0
  - IPMS:Office Buildings and Draft IPMS:Residential Buildings

Results of identification process

- Differences in:
  - Approach
  - Document structure
  - Definitions, concepts, diagrams
  - Component areas

euREAL v2.0

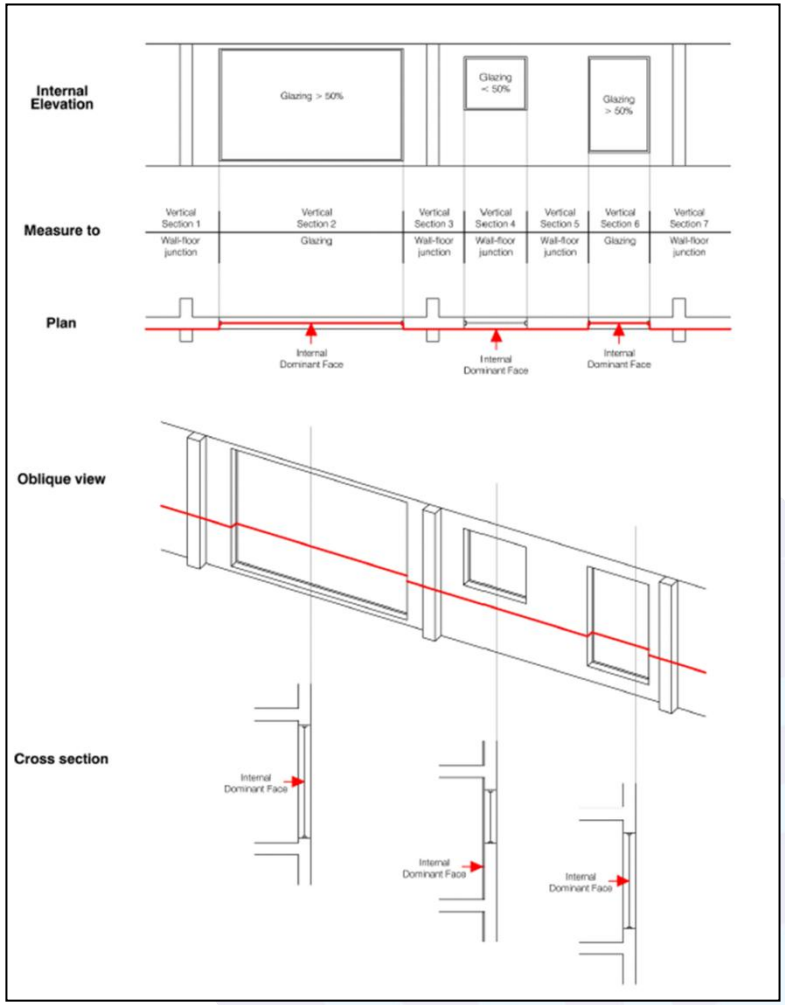
- Keep the good things and take advantage of innovative ideas
  - Approach
    - euREAL: 1 standard for all kind of buildings
  - Document structure
    - Table of contents and lay-out follow euREAL
    - Introduction of new IPMS concepts
  - Definitions, diagrams, component areas
    - euREAL and IPMS

Reference areas

- IPMS 1 = SEM
- IPMS 2 compares closely to SIM
  - SIM = IPMS 2 – Component Area B2 – [diff]
  - New concepts: IDF, LUA
- IPMS 3: not defined in euREAL v1.0
- SDC still exist in the new euREAL document

Internal Dominant Face (IDF)

- Wall divided into vertical sections
- If majority of the section is
  - glass: measure to the glass
  - wall: measure to the wall
- IDF – [diff] = wall-floor junction
- IDF for consistency reasons



Limited Use Area (LUA)

- Defined in IPMS as

  "Service providers need to be aware that in certain markets there may be areas in Buildings that are incapable of occupation in the light of government regulation or labour legislation. Such areas and their limitations are to be identified, measured and stated separately within IPMS reported areas."

Limited Use Area (LUA)

- Used in euREAL v2.0
  - To define the difference between IDF and wall-floor junction
  - To make a distinction between private and common areas
  - To make a difference between areas with a headroom ≥ 2,10m or <2,10m

Component Areas

euREAL v1.0
Primary Areas
Residual Areas
Other Areas
Service Areas

euREAL v1.0
Private Areas
Common Areas

euREAL v1.0
Areas Above Ground
Areas Below Ground

IPMS
A. Vertical Penetrations
B1. Exterior Wall
B2. Internal Structural Elements
B3. Internal Non-Structural Elements
C. Technical Services
D. Hygiene Areas
E. Circulation Areas
F. Amenities
G. Living Space / Workspace
H. Other Areas

IPMS
Limited Use Areas

Component Areas

- euREAL v2.0
  - Subdivision for common areas (similar to private areas)
  - Need to create subcategories for Primary Areas and Residual Areas: Hygiene Areas, Circulation Areas, Amenities, Living Space / Workspace
  - Subdivision of construction features and fixed partitions

Spreadsheet euREAL v2.0

Table of the results of surveying

Address of the property:
Date of surveying:

Floor		-2	-1	0	1	2	3	4	Total
Component Area A - Vertical Penetrations									
LUA 1 (Private)	Lift shafts	0	0	0	0	0	0	0	0
	Stairwells, access ramps	0	0	0	0	0	0	0	0
LUA 2 (Common areas)		0	0	0	0	0	0	0	0
IPMS total		0	0	0	0	0	0	0	0
Component Area B1 - Exterior Walls									
External closure of a building		0	0	0	0	0	0	0	0
LUA 7 (Difference IDF - WF junction)		0	0	0	0	0	0	0	0
IPMS total		0	0	0	0	0	0	0	0
Component Area B2 - Internal Structural Elements									
Internal structural walls and columns		0	0	0	0	0	0	0	0
LUA 7 (Difference IDF - WF junction)		0	0	0	0	0	0	0	0
IPMS total		0	0	0	0	0	0	0	0
Component Area B3 - Internal Non-Structural Elements									
LUA 3 (> 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 4 (> 2,10m AND Common areas)		0	0	0	0	0	0	0	0
LUA 5 (< 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 6 (< 2,10m AND Common areas)		0	0	0	0	0	0	0	0
IPMS total		0	0	0	0	0	0	0	0
Component Area C - Technical Services									
LUA 1 (Private)	Service areas	0	0	0	0	0	0	0	0
LUA 2 (Common areas)		0	0	0	0	0	0	0	0
IPMS total		0	0	0	0	0	0	0	0
Component Area D - Hygiene Areas									
LUA 3 (> 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 4 (> 2,10m AND Common areas)		0	0	0	0	0	0	0	0
LUA 5 (< 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 6 (< 2,10m AND Common areas)		0	0	0	0	0	0	0	0
IPMS total		0	0	0	0	0	0	0	0
Component Area E - Circulation Areas									
LUA 3 (> 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 4 (> 2,10m AND Common areas)		0	0	0	0	0	0	0	0
LUA 5 (< 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 6 (< 2,10m AND Common areas)		0	0	0	0	0	0	0	0
IPMS total		0	0	0	0	0	0	0	0
Component Area F - Amenities									
LUA 3 (> 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 4 (> 2,10m AND Common areas)		0	0	0	0	0	0	0	0
LUA 5 (< 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 6 (< 2,10m AND Common areas)		0	0	0	0	0	0	0	0
IPMS total		0	0	0	0	0	0	0	0
Component Area G - Workspace / Living Space									
LUA 3 (> 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 4 (> 2,10m AND Common areas)		0	0	0	0	0	0	0	0
LUA 5 (< 2,10m AND Private)		0	0	0	0	0	0	0	0
LUA 6 (< 2,10m AND Common areas)		0	0	0	0	0	0	0	0
IPMS total		0	0	0	0	0	0	0	0
Component Area H - Other Areas									
LUA 1 (Private)	Archive, storage	0	0	0	0	0	0	0	0
	Cellars	0	0	0	0	0	0	0	0
	Parking, garages	0	0	0	0	0	0	0	0
	Unconverted usable roofspace	0	0	0	0	0	0	0	0
	Balconies, loggias, upper floor terraces	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0	0
LUA 2 (Common areas)		0	0	0	0	0	0	0	0
Total IPMS 1 / SEM		0	0	0	0	0	0	0	0

TOTAL IPMS 2									
Limited use areas	LUA 1 (Private)	0	0	0	0	0	0	0	0
	LUA 2 (Common areas)	0	0	0	0	0	0	0	0
	LUA 3 (> 2,10m AND Private)	0	0	0	0	0	0	0	0
	LUA 4 (> 2,10m AND Common areas)	0	0	0	0	0	0	0	0
	LUA 5 (< 2,10m AND Private)	0	0	0	0	0	0	0	0
	LUA 6 (< 2,10m AND Common areas)	0	0	0	0	0	0	0	0
Total IPMS 2		0	0	0	0	0	0	0	0

TOTAL SIM									
Aggregate non-limited use Component Areas	Component Areas B1 and B2	0	0	0	0	0	0	0	0
Limited use areas	LUA 7 (Difference IDF - WF junction)	0	0	0	0	0	0	0	0
Total IPMS 1 / SEM	All Component Areas	0	0	0	0	0	0	0	0
Total SIM		0	0	0	0	0	0	0	0

TOTAL SDC									
Total IPMS 1 / SEM	All Component Areas	0	0	0	0	0	0	0	0
Total SIM	All Component Areas minus B1 and B2	0	0	0	0	0	0	0	0
Total SDC		0	0	0	0	0	0	0	0

Next steps

- Update of euREAL v2.0
  - New intro
  - Revise definitions and table of comparison
  - Add / change diagrams
  - Compare with new IPMS standards (industrial, retail, mixed use)
  - Check changes if adapted IPMS standards

IPMS

INTERNATIONAL
PROPERTY
MEASUREMENT
STANDARDS

www.ipmsc.org

Consultation about IPMS : Residential Standards

- Consultation Document send in June 2015
- CLGE Working group meeting in Brussels (31st august 2015)
- Consultation Document Response Form

Consultation Document

International Property Measurement Standards: **Residential Buildings**

Consultation Document

International Property Measurement Standards Coalition

[month 2015/2016]

Published by the International Property Measurement Standards Coalition (IPMSC).

ISBN [TBC]

Introduction

The International Property Measurement Standards Coalition (**IPMSC**) was formed on 30 May 2013 after meeting at the World Bank in Washington DC. The **Coalition**, comprising (at the date of publication) the 65 organisations listed below, aims to bring about the harmonisation of national property measurement standards through the creation and adoption of agreed international standards for the measurement of **Buildings**.

This document for the measurement of Residential **Buildings** is the second prepared by the **Coalition**'s Standards Setting Committee (**SSC**). The **Coalition** members at the date of publication include:

American Society of Farm Managers and Rural Appraisers (ASFMRA)
Appraisal Institute (AI)
Asia Pacific Real Estate Association (APREA)
Asian Association for Investors in Non-listed Real Estate Vehicles (ANREV)
Asociación de Promotores Constructores de España (APCE)
Asociación Española de Análisis de Valor (AEV)
Asociación Española Geómetras Expertos (AEGEX)
Asociación Professional de Sociedades de Valoración (ATASA)
ASTM International
Australian Property Institute (API)
British Property Federation (BPF)
Building Owners and Managers Association of Canada (BOMA Canada)
Building Owners and Managers Association of China (BOMA China)
Building Owners and Managers Association International (BOMA International)
Bundesverband der Immobilieninvestment-Sachverständigen e. V. (BIIS)
China Institute of Real Estate Appraisers and Agents (CIREA)
Chongqing Real Estate Association
Commonwealth Association of Surveying and Land Economy (CASLE)
Consiglio Nazionale Geometri e Geometri Laureati (CNGeGL)
CoreNet Global
Council of European Geodetic Surveyors (CLGE)
Counselors of Real Estate (CRE)
Cyprus Architects Association (CAA)
Cyprus Association of Civil Engineers (CYACE)
Cyprus Association of Quantity Surveyors and Construction Economists (SEEOKK)
European Association for Investors in Non-Listed Real Estate Vehicles (INREV)
European Association of Real Estate Professions (CEPI)
European Mortgage Federation (EMF)
Federation of Associations of Building Contractors Cyprus (OSFOK)
Gesellschaft für Immobilienwirtschaftliche Forschung e. V. (GIF)
Ghana Institution of Surveyors (GhIS)
Hungarian Real Estate Developers Association (IFK)
HypZert GmbH
Institute of Phillipine Real Estate Appraisers (IPREA)
Institute of Real Estate Management (IREM)
International Association of Assessing Officers (IAAO)
International Consortium of Real Estate Associations (ICREA)
International Facility Management Association (IFMA)
International Federation of Surveyors (FIG)
International Monetary Fund (IMF)
International Real Estate Federation (FIABCI)
International Right of Way Association (IRWA)
International Union of Property Owners (UIPI)
International Union of Tenants (IUT)
Italian Real Estate Industry Association (ASSOIMMOBILIARE)
Japan Association of Real Estate Appraisers (JAREA)
Japan Association of Real Estate Counselors (JAREC)
Japan Building Owners and Managers Association (BOMA Japan)
National Society of Professional Surveyors (NSPS)
Nigerian Institution of Estate Surveyors and Valuers (NIESV)
NP "Cadastral Engineers"
Open Standards Consortium for Real Estate (OSCRE)
Ordre des Géomètres-Experts (OGE)
Property Council of Australia (PCA)
Property Council New Zealand (PCNZ)
Real Estate Institute of Zimbabwe (REIZ)
Real Estate Syndicate of Lebanon (REAL)
Real Property Association of Canada (REALpac)
Royal Institution of Chartered Surveyors (RICS)
Seocovi-SP (SECOVI)
Society of Chartered Surveyors Ireland (SCSI)
South African Property Owners Association (SAPOA)
Technical Chamber of Cyprus (ETEK)
The Appraisal Foundation (TAF)
Union Nationale des Economistes de la Construction (UNTEC)

Consultation Document

Part 2 Principles of Measurement

2.1 General Principles of Measurement and Calculation

The **SSC** has adopted the following fundamental principles of measurement and calculation, which apply to all **Buildings**:

1. The item must be capable of being measured.
2. The measurement must be objectively verifiable.
3. The measurements and calculations must be clearly documented and the following stated:
   - The **IPMS** standard used, for example, **IPMS 1, IPMS 2 – Residential** or **IPMS - 3A Residential, 3B – Residential or 3C – Residential**
   - The method of measurement
   - The unit of measurement
   - The measurement tolerance
   - The date of the measurement.
4. Where an interface is adopted, the reconciliation between **IPMS** and the standard referred to must be detailed.

Inevitably there will be situations not directly covered by **IPMS**. In these circumstances the principles of **IPMS** should be extrapolated using a common-sense approach.

IPMS is a factual measurement and must not include inflated or exaggerated **Floor Areas**.

2.2 Best Measurement Practice

2.2.1 General

The **SSC** recommends that all **IPMS** measurement is supported by CAD (computer-aided design) drawings or BIM (building information modelling) data, but where other drawings are used as a basis for measurement annotated dimensions on drawings should be used in preference to a reliance on scaling alone.

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

Buildings are to be measured individually and reported on a floor-by-floor basis.

2.2.2 Unit of Measurement

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

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

2.2.3 Tolerance

The measurement tolerance is to be specified in the scope of work and report. The **Service Provider** should provide an appropriate degree of tolerance having regard to the nature of the instruction, the equipment available and conditions at the time of measurement.

2.2.4 Measurement Reporting

Any **IPMS** area reported to a **User**, where practical, should be

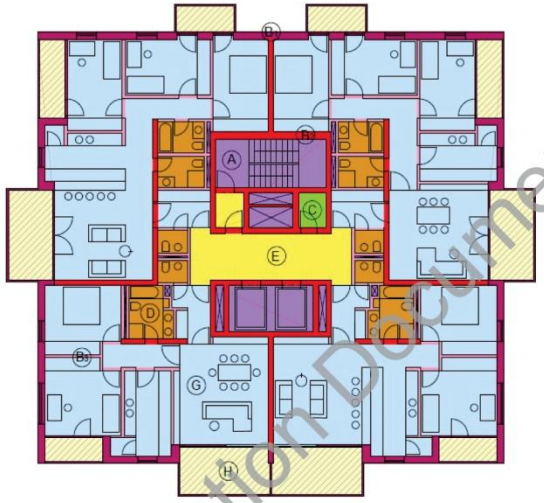


Diagram 1: IPMS – Residential Apartments – Component Areas

Consultation Document

Part 4 IPMS Standards

The **IPMS** standards (and their principal uses) are:

- **IPMS 1 (External)**
- **IPMS 2 – Residential (Internal)**
- **IPMS 3 – Residential (Occupier)**

4.1 IPMS 1 (External)

4.1.1 Use

IPMS 1 is used for measuring the area of a **Building** including exterr walls. In some markets it can be used by parties for planning purpos or the summary costing of development proposals.

4.1.2 Definition

IPMS 1: The sum of the areas of each floor level of a **Building** measured to the outer perimeter of external construction features. The definition for **IPMS 1** is the same for all classes of **Building**.

In many markets, but not universally, this is known as Gross Externa Area.

Measurement Practice:

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

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

Inclusions:

The external area of basement levels is calculated by extending the exterior plane of the perimeter walls at ground floor level downwards, or by estimation of the wall thickness if the extent of the basement differs from the footprint of the **Building**.

Measurements included but stated separately:

Balconies, covered galleries and generally accessible rooftop terrac are included. They are to be measured to their outer face and their areas are to be stated separately.

Exclusions:

Measurement for **IPMS 1** is not to include the area of:

- Open light wells or the upper level voids of an atrium
- Open external stairways that are not an integral part of the structure, for example, an open framework fire escape
- Patios and decks at ground level, external car parking, equipment yards, cooling equipment and refuse areas, anc other ground level areas that are not enclosed are not to b included within **IPMS 1**, but may be measured and stated separately.

4.2 IPMS 2 – Residential (Internal)

4.2.1 Use

IPMS 2 – Residential is for measuring the interior boundary area in a residential **Building**. It can be used to provide data on the use of space, for benchmarking and marketing.

IPMS 2 – Residential enables **Users** and **Service Providers** to make direct floor space comparisons between data from different market practices.

4.2.2 Definition

IPMS 2 – Residential: The sum of the areas of each floor level of a residential **Building** measured to the **Internal Dominant Face.**

In many markets, but not universally, this is similar to Gross Internal Area.

Measurement Practice:

Measurements for **IPMS 2 – Residential** are to be taken to the **Internal Dominant Face** for external construction features and otherwise to the **Finished Surface**.

If required this can be reported on a **Component**-by-**Component** basis for each floor of a **Building**. The aggregate of the **Component Areas** minus **Component Area** B1 must equal **IPMS 2 – Residential**.

Inclusions:

IPMS 2 – Residential includes all areas, including internal walls, columns, and enclosed walkways or passages between separate **Buildings**, available for direct or indirect use. Covered void areas such as atria are only included at their lowest floor level.

Measurements included but stated separately:

Balconies, covered galleries and generally accessible rooftop terraces are included. They are to be measured to their **Finished Surface** and their areas are to be stated separately.

Exclusions:

Measurement for **IPMS 2 – Residential** is not to include the area of:

- Open light wells or the upper level voids of an atrium
- Patios and decks at ground level, external car parking, equipment yards, cooling equipment and refuse areas, and other ground level areas that are not enclosed are not to be included within **IPMS 2 – Residential**, but may be measured and stated separately.

4.3 IPMS 3 – Residential (Occupier)

4.3.1 Use

IPMS 3 – Residential is for measuring the occupation of **Floor Areas** in exclusive use.

4.3.2 Definition

IPMS 3 – Residential: The **Floor Area** available on an exclusive basis to an occupier.

Measurement Practice:

Depending on the variation used, the measurements for **IPMS 3 – Residential** may be taken to the external face or the **Internal Dominant Face** for the exterior wall, while interior walls would be measured to the **Finished Surface** or the centre-line, as more fully described in the definitions below. Note that internal walls or columns are to be ignored in all variants except for **IPMS 3C – Residential**.

IPMS 3 – Residential is not directly related to **IPMS 1** or **IPMS 2 – Residential**, neither is it a **Component Area**. There could be a single **IPMS 3 – Residential** area or there would be numerous separate **IPMS 3 – Residential** areas within a multi-occupied **Building**.

The **SSC** has researched global residential markets and identified different measurement bases that need to be accommodated. Some markets require only one of these measurement bases, but others may use two or more for different purposes.

Service Providers must always specify to **Users** which **IPMS 3 – Residential** basis is reported.

IPMS 3A: The area in exclusive occupation measured to:

- the external face of the exterior wall
- the centre-line of shared walls between occupants and
- the **Finished Surface** of walls shared with **Common Facilities**.

Measurements included but stated separately:

Attics, cellars, balconies, covered galleries, parking, remote storage and terraces in exclusive use and the perimeter of the ground floor area functioning similar to balconies on an upper floors, are to be measured to their outer face and their areas stated separately including identifying any elements, which are limited use areas.

This measurement may be most appropriate for measuring freestanding dwellings in single occupation.

IPMS 3B: The area in exclusive occupation measured to:

- the **Internal Dominant Face**,
- the centre-line of shared walls between occupants, and
- the **Finished Surface** of walls shared with **Common Facilities**.

Measurements included but stated separately:

Attics, cellars, balconies, covered galleries, parking, remote storage and terraces in exclusive use and the perimeter of the ground floor area functioning similar to balconies on the upper floors, are to be measured to their **Finished Surface** and their areas stated separately including identifying any elements, which are limited use areas.

IPMS 3C: The area in exclusive occupation, excluding the floor area occupied by full height internal walls and columns, measured to:

- the **Internal Dominant Face** and
- the **Finished Surface** of all full height internal perimeter walls.

Measurements included but stated separately:

Attics, cellars, balconies, covered galleries, parking, remote storage and terraces in exclusive use and the perimeter of the ground floor area functioning similar to balconies on an upper floors, are to be measured to their **Finished Surface** and their areas stated separately.

Working Group meeting in Brussels on the 31st of august 2015

Consultation Document Response Form

History of this new project

- In may 2015 (Kuala Lumpur) : Third physical meeting of IPMS coalition: they did not want to be in charge of this Standard about Land Measurement

- RICS decided to create a new coalition which will deal with this subject. They asked « Land Surveyors Associations worlwide » to be involved with them

Associations already involved

- RICS (James Kavanagh)
- FIG (Maurice Barbieri and Rudolf Steiger)
- CLGE (Clemens Kiepke for IG-Parls and Nicolas Smith for CLGE working group)
- NSPS* (Curtis Sumner)

- * National Society of Profesional Surveyors - USA

What will we talk about ?

- we will follow the IPMS model and set up a Community site ;
- we will start to invite other organisations to join the Coalition ;
- ILMS would focus on land reporting structures and information - not spatial measurement although we could include examples of practice ;
- Look at how land information is reported in several countries (CLGE) and find commonality ;
- ?

Resume of the IMPS – euReal Work shop :

- Approval of the answer prepared by the working group, about IPMS consultation for Residential Buildings
- Talking about the euREAL to be IPMS compliant
- Thinking about ideas that could be discussed by ILMS Coalition
- Who would like to be involved ?