

Real Estate – Master Data

FI-RE-001

September 23-25, 2008



LaGOV

Version Draft 1.0

Updated: July 25, 2008

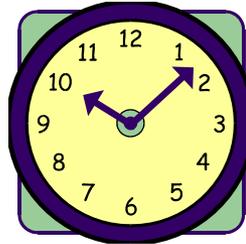


Agenda

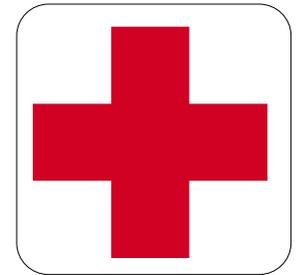
- Logistics, Ground Rules & Introduction
- Project Timeline
- Workshop Objectives
- Business Process Review
 - Process overview
 - AS-IS process flow
 - Current system alignment
 - Process improvement opportunities
 - SAP terms glossary
 - SAP concepts & functionality
 - Business process flow
 - Leading practices
 - Enterprise readiness challenges
- Next Steps – Action items
- Questions



Logistics



Before we get started ...





Ground Rules

- Has everybody signed in?
- Everybody participates – blueprint is not a spectator sport
- Silence means agreement
- Focus is key – please turn off cell phones and close laptops
- Challenge existing processes and mindsets
- Offer suggestions and ideas
- Think Enterprise
- Ask questions at any time
- One person at a time please
- Timeliness – returning from break
- Creativity, cooperation, and compromise





Introduction

■ Roles

- **Process Analyst and Functional Consultant** – lead and facilitate the discussions and drive design decisions
- **Documenter** – take detailed notes to support the formal meeting minutes to be sent by the Process Analyst to all participants for review and feedback
- **Team Members** – provide additional support for process discussions, address key integration touch points
- **Subject Matter Experts** – advise team members on the detailed business process and participate in the decisions required to design the future state business process

Round the Room Introductions

Name

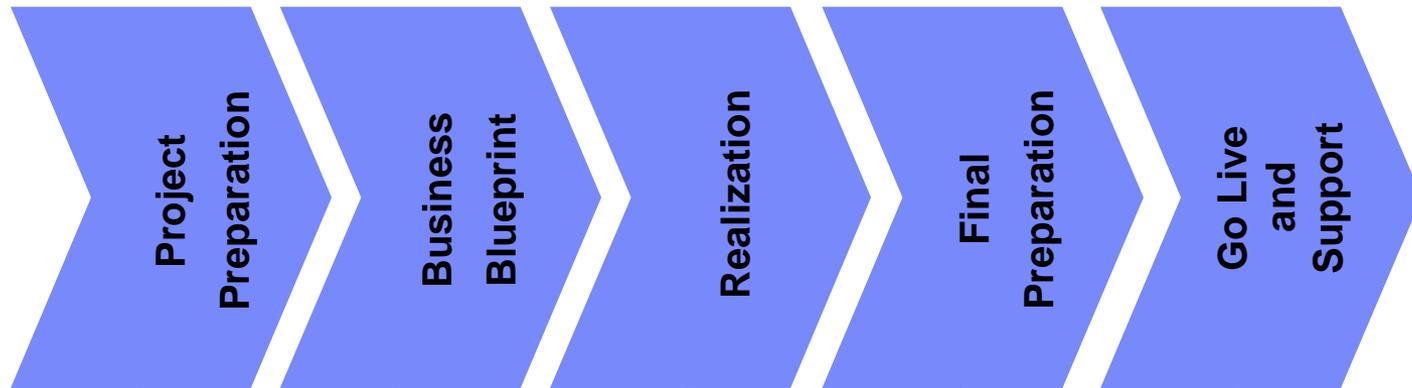
Position

Agency



Project Phases

■ Five Key Phases



- Strategy & Approach Defined
- Project Team Training

- Business Process Definition
- Development Requirements

- Development & Unit Testing
- Integration Testing
- End-User Training Materials

- User Acceptance
- Technical Testing
- End-User Training
- Conversion

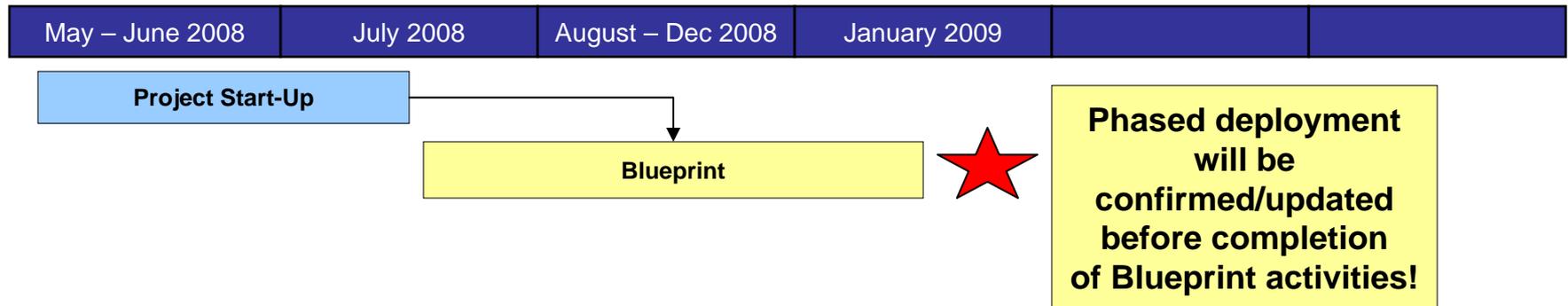
- Go-Live Support
- Performance Tuning



Tentative Project Timeline

- Tentative implementation dates are planned as follows:

Functionality	Tentative Implementation Date
Budget Prep	October 2009
DOTD	February 2010
Core Modules All Agencies	July 2010
Additional Modules	January 2011





Project Organization - Functional Teams

Finance Leads

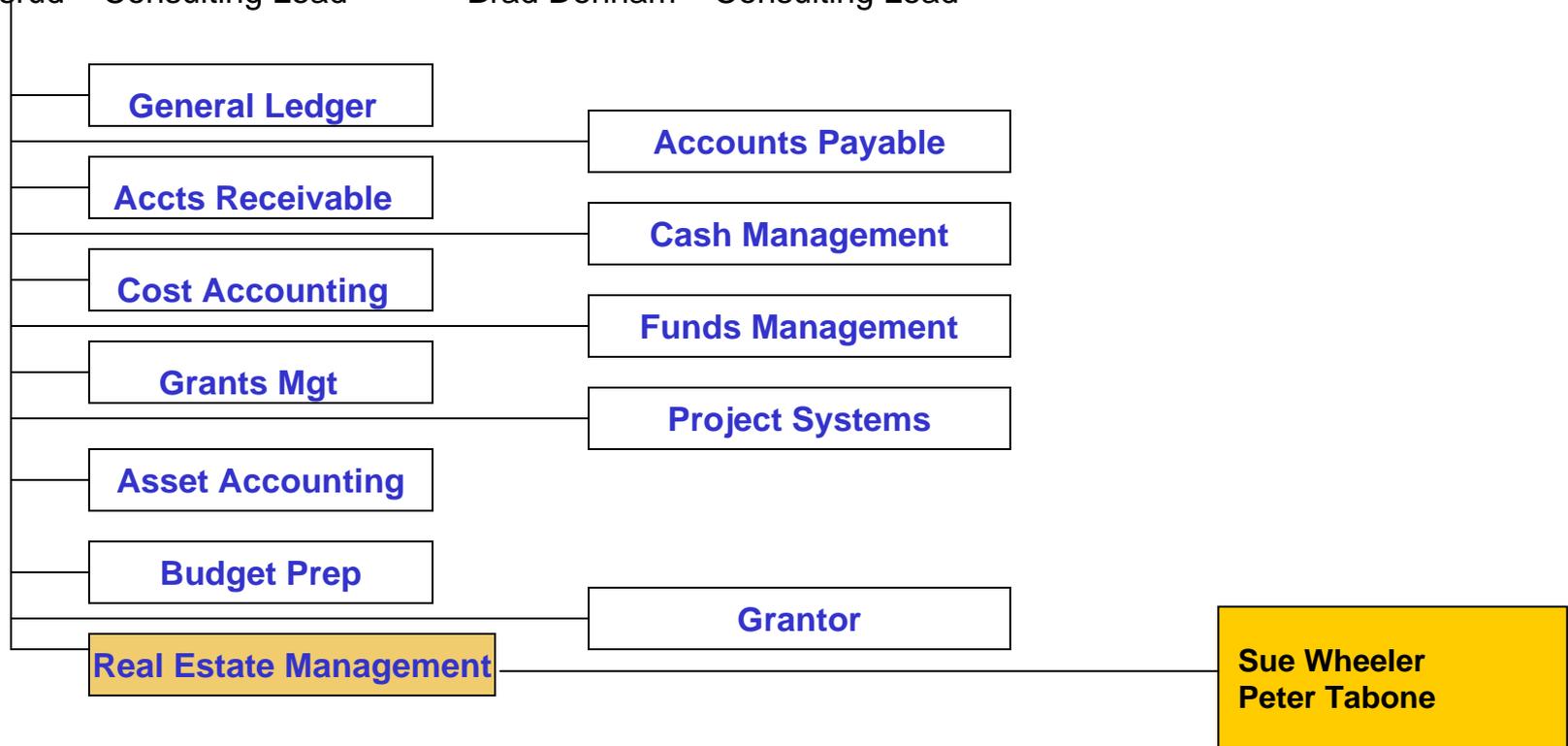
Beverly Hodges – Finance Lead
Drew Thigpen – Finance Lead
Mary Ramsrud – Consulting Lead

Logistics Leads

Belinda Rogers – Logistics Lead
Jack Ladhur – Logistics Lead
Brad Denham – Consulting Lead

Linear Assets Leads

Mark Suarez – Agile Assets Lead
Charles Pilson – Consulting Lead





Blueprint Schedule - Tentative

Workshop ID	Process Area	Date
FI-RE-001	Real Estate: Master Data	Sept 23 (Tue) Sept 24 (Wed) Sept 25 (Thu)
FI-RE-002	Real Estate: Transactions	Oct 7 (Tue) Oct 8 (Wed)
FI-RE-003	Real Estate: Right-of-Way Parcels	Oct 30 (Thu)
FI-RE-004	Real Estate: Leasing	Nov 12 (Wed) Nov 13 (Thu)
FI-RE-005	Real Estate: Validation Session	Dec 3 (Wed) Dec 4 (Thu)



Blueprint Objectives

- **Review and discuss the current or As-Is business processes**
 - Which helps to drive out the *Business requirements*
 - As well as the *integration points* with other processes
- **Define Master Data**
 - Address key integration points
 - Support organizational requirements
 - Consistent and appropriate use of data fields
- **Define Future or To-Be business processes based on:**
 - Best Practices inherent in SAP
 - Intellectual capital from other SAP implementations
 - State business requirements
- **Identify development requirements**
 - Which could result in the need for a form, report, interface, conversion, enhancement, or workflow (FRICE-W)
- Understand and communicate any organizational impacts / Enterprise Readiness challenges
- Gather system security authorizations and district-wide training requirements



Work Session Objectives

Our Goal

- To develop a clear and common picture of the capabilities required (of your solution) for managing real estate**
- Focus on the 'WHAT' (requirements) and not on the 'HOW' (process realization)**
- Focus on business process design and true business requirements**
- Utilize standard SAP functionality wherever possible**
- Reduce the cost of business by shaping business processes that are enabled by SAP**

Our Approach

- 1. Identify, review, evaluate and prioritize your core “to-be” business processes (within the entire value chain)**
- 2. Determine the functionalities required to support your “to-be” business processes**
 - **Identify most critical core functionalities**
 - **Identify integration related functionalities**
 - **Identify useability expectations**
 - **Identify “nice-to-have” functionalities**
- 3. Do a Fit-Gap-Analysis related to required functionalities, what’s in standard, what needs to be enhanced etc.**

Legacy System / Functionalities

Existing processes are often based and designed on legacy applications and their capabilities – and are not aligned to the overall corporate strategy

It's essential to avoid a 1:1 transfer of legacy functionalities and processes without having a strategy and without reviewing your business processes



“AS IS”



As-Is Process Flow

Process

DOTD Real Estate

Sub-Process

-  Abandonment, Rem., Excess ROW
-  RoW Stage Relocation Plan
-  Mineral Lease Application
-  Mineral Lease Award
-  Expropriation
-  Title Work
-  Relocation, Residential
-  Relocation, Non Residential
-  Cost Estimation
-  Public Sale

Process

Facility Planning – Real Estate

Sub-Process

-  Lease - 5K+ Sq Ft
-  Lease - Term Options
-  Lease - Under 5K Sq Ft

Process

Right of Way

Sub-Process

-  Acquire Property
-  Consultant Contracts
-  Joint Plan and Review
-  Appraisal



Current Systems Alignment

Agency Name	Application Name	Truncated Description	ERP Related Functions
Division of Administration	SLABS - State Land & Buildings System	Tracks State lands, buildings, leased space and building contents.	Asset Management, Facility Management



Process Improvement Opportunities (Pain Points)

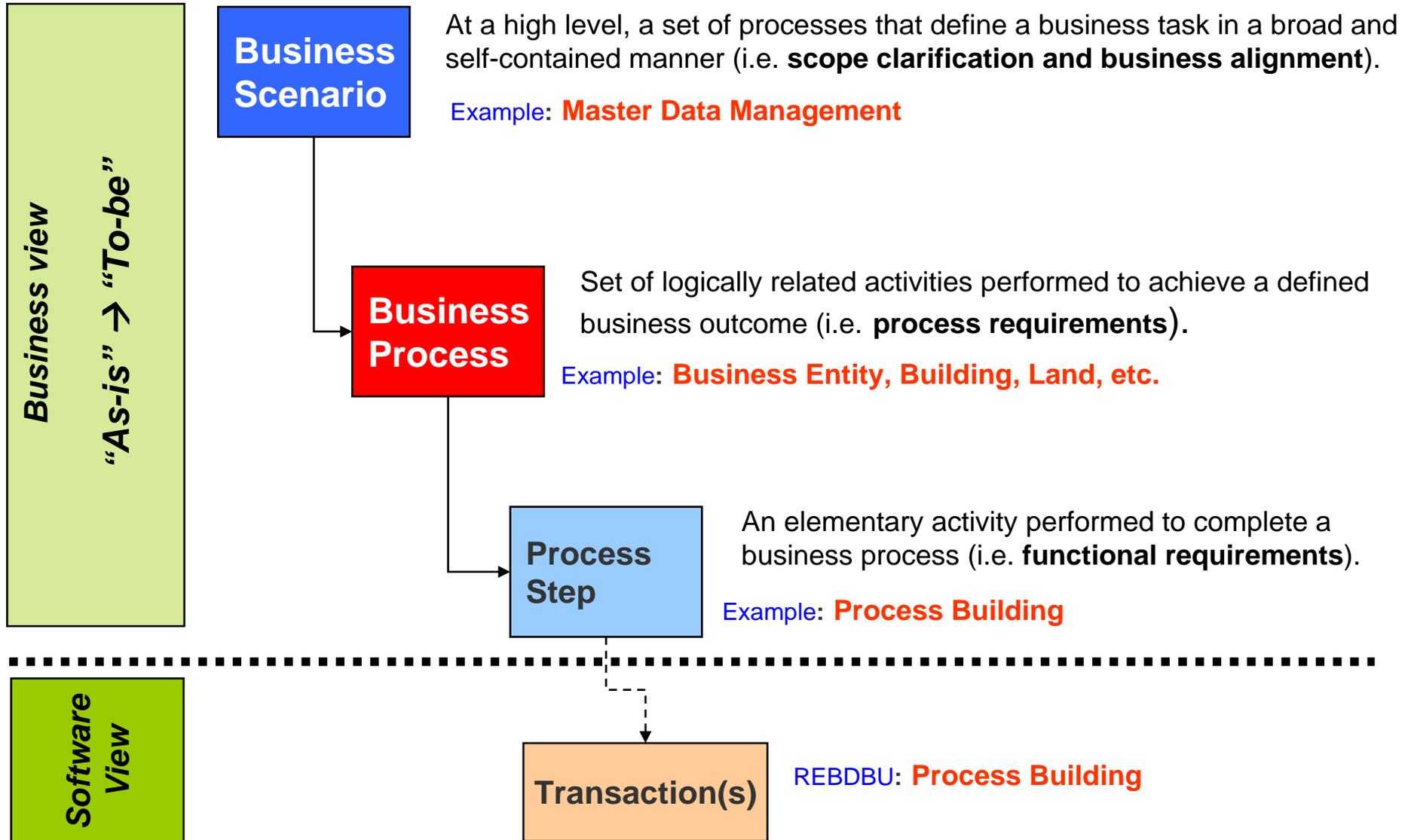
- The aim?
 - To improve the flow of data across the agencies.
- The means?
 - An end-to-end SAP software-based solution.
- The result?
 - Increased visibility, greater productivity, and lower maintenance costs.



.... ***“TO BE”***



Business Process Hierarchy - Overview





Real Estate Solution Map

Business Scenario Group

Business Scenario



Workshop 1 – Master Data
Workshop 3 – Right of Way



Workshop 2 – Transactions



Portfolio Management	Real Estate Analytics	Master Data Management	Partner Management	Transaction Management
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Workshop 4 – Leasing



Commercial Real Estate Management	Real Estate Search	Lease Management	Condition Adjustment	Percentage Rent	Cost Recovery	Third Party Management	Legal Compliance
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Corporate Real Estate Management	Space Management	Room Reservation	Move Management
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Integration to Project Systems & Plant Maintenance

Facilities Management	Construction	Modernization & Refurbishment	Maintenance & Repair	Service Management
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Integration to Financials & Controlling

Support Processes	Accounting	Controlling	Tools	Integration to SAP Industry Solutions
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Process Overview

Business Scenario Group

Business Scenario



Portfolio Management

Real Estate Analytics

Master Data Management

Partner Management

Transaction Management

Business Processes

- Business Entity
- Land
- Building
- Architectural Structure
- Rental Objects
- Functional Location
- Equipment
- Fixed Asset
- CAD/CAFM Support





SAP Glossary



Public Web

<http://www.sap.com/realestate>



SAP Service Marketplace (log-on required)

<http://service.sap.com/re>



Documentation and Release Notes

<http://help.sap.com> → SAP ERP → ERP Central Component → Financials → Flexible Real Estate Management (RE-FX)



Training courses: RE010 / RE200

RE010 Business Processes in SAP Real Estate Management

RE200 Flexible Real Estate Management (see <http://www.sap.com/education>)



ASUG: Real Estate Special Interest Groups

<http://www.asug.com>



Real Estate Processes in SAP Solutions

Real Estate

- Property Portfolio
- Contact Management
- Lease Management
- Long term seating
- Move Management
- Room Reservation
- Key Date Reminders
- Reporting

Maintenance

- Preventative/Breakdown
- Building Service Requests

NetWeaver

- BW Reporting
- Portals
- Workflow
- Optical/Data Archiving
- Records Management
- Interactive Adobe

Controlling

- Portfolio Controlling
- Profit/Cost Center
- Cost Distribution

General Ledger/AP/AR

- Payables
- Receivables

Asset Accounting

Investment Management

Project Management

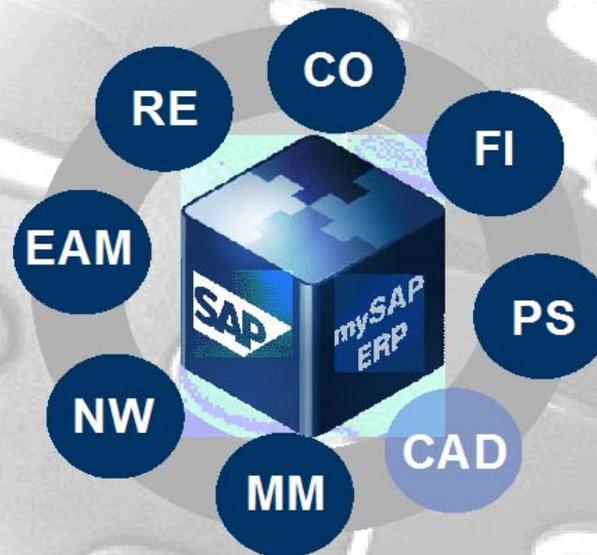
- Acquisition, Disposal
- Construction, Renovation
- cProjects

CAD/CAFM/GIS

- Graphical representations
- Standard integration

Purchase Orders

- Projects
- Equipment/Materials





Integration

■ Integration to SAP ERP

- ◆ SAP Business Information Warehouse
- ◆ SAP Accounting
- ◆ SAP Controlling
- ◆ SAP Business Partner
- ◆ SAP Plant Maintenance/Customer Service
- ◆ SAP Project System
- ◆ SAP SmartForms/Adobe
- ◆ SAP Document Management System/Records Management
- ◆ SAP Workflow

■ Integration to CAD, CAFM and GIS systems





Designing your Real Estate Lifecycle in SAP

Real Estate Lifecycle





New Investment

Plan



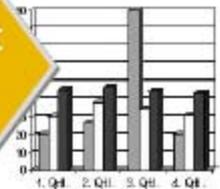
Investment Identified

Investment Request

Investment Approval

Acquisition Process: New Property Purchase

Investment Analysis



1. New investment is identified
2. Appropriation request is created
3. Investment and budget are approved
4. Acquisition process for new property purchase is triggered
5. Investment costs can be reported vs. investment plan or budget

Requirements?

Workshop 2 - Transactions



Acquisition: New Property Purchased

Acquire

Investment Planning

Negotiate & Sign Contract

Capture Asset

Const./Refurbishment

Admin/Optimize

1. Investment is approved
2. **New property (land, building, structure etc.) is purchased**
3. Purchase and asset information is captured in system
4. If required construction / refurbishment takes place
5. Detailed property information is captured and spaces are ready to be leased

Requirements?

Workshop 2 - Transactions

SAP Business Processes:

[Portfolio Management > Master Data Management](#) & [Portfolio Management > Business Partner Management](#)

You use these business processes to map master data structures and business partners. It consists of the following steps:

- Create master data for architectural view (optional)
- Create master data for usage view
- Create business partner



Acquisition: New Property Leased

Acquire



1. Decision made to lease new land, structure, and/or space(s)
2. Lease is negotiated and signed with the landlord
3. Landlord lease and related property is captured in the system
4. Property is refurbished / constructed to meet business leasing needs
5. Space is ready to be leased to tenants

Requirements?

Workshop 2 - Transactions

SAP Business Processes:

[Portfolio Management > Master Data Management](#)

[Portfolio Management > Business Partner Management](#)

[Commercial Real Estate Management > Lease Management](#)



Acquisitions: Events and SAP Solutions



Negotiations for lease, construction work, or purchase activities

Real Estate (RE), Project Systems (PS), Procurement (MM)

Portfolio is updated
Real Estate (RE), Asset Management (AA)

Business stakeholder or Real Estate: We need space / we want to invest / Expansion is necessary
Investment plans (IM)

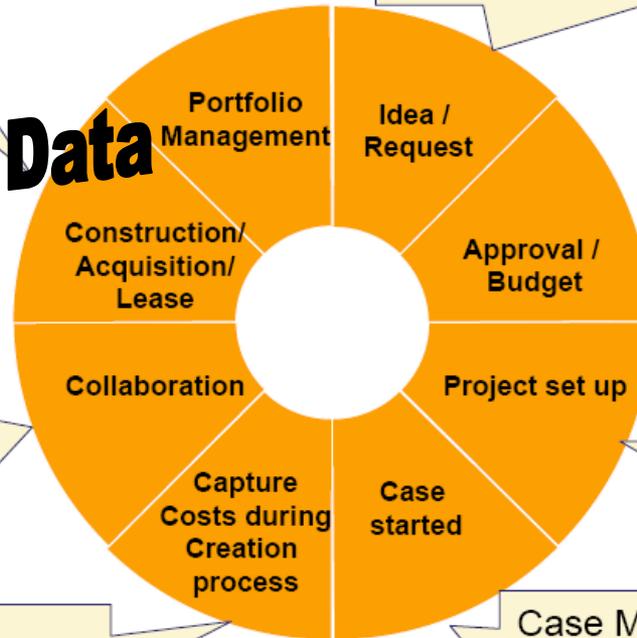
Appropriation Request Submitted and approved
investment approval process (IM)

New Project
Project with WBS hierarchy Created (PS)

Case Management is necessary to track all steps and ensure due diligence
Store all documents centrally (Records management)

Capture all costs during creation process – in case of construction
Create AuC (AA)

Collaboration with internal and/or external stakeholders is required
(Workflow, Interactive Forms, cFolders/cProjects)



Workshop 1 - RE Master Data



Portfolio Management

Portfolio Management

Real Estate Analytics

Master Data Management

Partner Management

Transaction Management

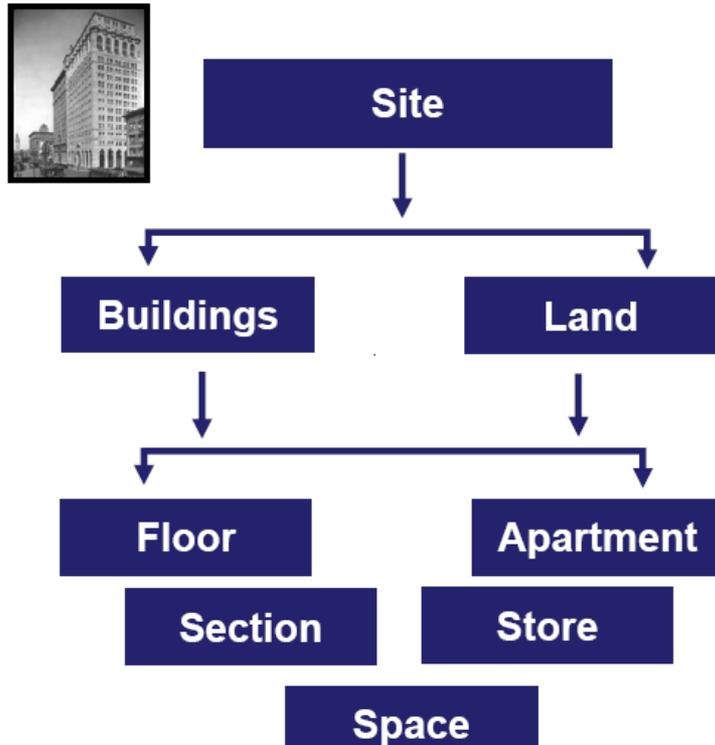
Workshop 1 - RE Master Data

1. Architectural and usage view within SAP Real Estate
2. Central point of entry for all processes related to real estate and facility management
3. Integration to PM, AA and PS allows drilldown to other processes, such as notification of breakdowns or creation of a fixed asset record
4. Master data will also be used for the real estate contract, where space is assigned to occupants and users and financial processes are triggered.
5. SAP Business Partner tracks all contacts, vendor, and customer records

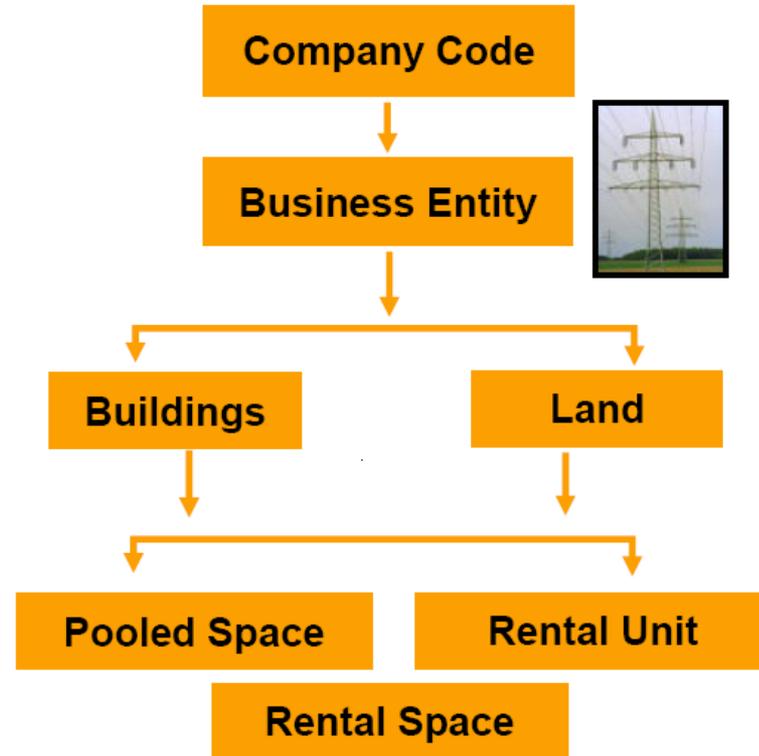


What can the structure look like?

Architectural View (EXAMPLE)



Usage View



- ✓ Hierarchical representation of an organization's RE objects (structural and physical attributes)
- ✓ RE objects differentiated by user-defined object type names.

- ✓ Basis for managing the rental and use of available space
- ✓ Hierarchical structure representing RE objects that can be rented
- ✓ Uses system defined RE objects.

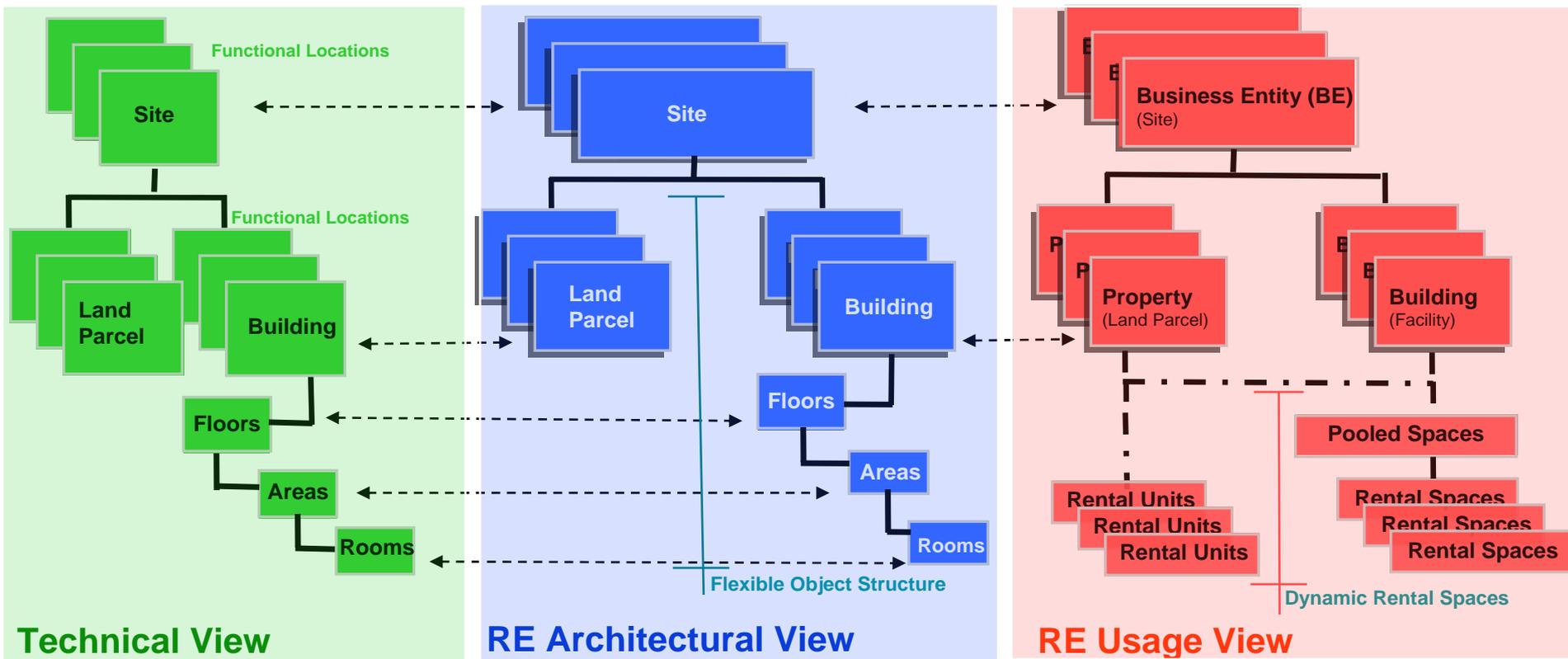


Supporting Facility Management Processes

The architectural view controls the PM integration with RE (automatic / manual generation of FL's).

Requirements:

At what level will FL's be required (to support facility management? At site and building levels?
Is there a business requirement to drive FL's to lower levels such as part of building or room?





Architectural Object Types (AO)

What is it?

User-defined architectural object types that will be arranged in a hierarchy to represent the physical attributes of your RE portfolio (i.e. land, buildings, etc.)

Action Item:

Define the different architectural object types and distinct architectural levels you wish to have in the system and their relationship to each other.

Recommendation:

Only use a small number of object types, ones that you really need. i.e. Avoid creating different architectural object types for different types of rooms. Rather make that distinction at the "Functions" per Architectural Object Type.

Example:

Object Types of Architecture	
ArchObjTyp	Name of AO Type
01AR	Locality
02CM	Building Complex
03BU	Building
03PR	Property
04EC	Encroachment
04FL	Floor
04PB	Part of Building
04PP	Part of Property
05AP	Apartment
05PA	Parking Garage Lots
05PL	Parking Lots
05RM	Open area
05RO	Closed area
06CA	Hospitality Area
07LO	Lobby



Architectural Hierarchy

What is it?

Hierarchical representation of your RE objects (i.e. buildings) using a user-defined naming convention.

Action Item:

Define which architectural object types can be assigned as higher-level object types (parent object types) within the hierarchy, per architectural object type .

Example:

AO Type	Name of AO Type	AO=BE	AO=BU	AO=PR	Top Lvl	Hi Level Obj Type
01PD	Site	X			X	
03LD	Land			X		01PD (Site)
04PL	Land Parcel					03LD (Land)
03BU	Building		X			01PD (Site)
04FL	Floor					03BU (Building)
06RM	Room					04FL (Floor)



Architectural Object ID Code

Rules will need to be established for generating system wide, unique architectural hierarchies. These rules specify the maximum length of the architectural object type, if the object is used in the automatic numbering sequence and what the separator will be to easily identify a segment of the number.

Rules Example:

Name of AO Type	Max	Default	Use	Separator	From AONR
Site	7	X		-	X
Property	3	X		-	X
Empl. Housing	3	X		-	X
Building	5	X		.	X
Floor	2	X		.	X
Part of Floor	2	X			X
Room	5	X			X
Land	5	X		.	X
Parcel	3	X		.	X
Portion	3	X		.	X
EH Unit	4	X		-	X

Generated AOID:

AO Number	AOID Code	Generated AOID	
Site	H001124 4	H001124 (automatic)	H001124
Property	1	001 (automatic)	H001124-001
Building	2	02 (automatic)	H001124-001-02
Floor	4	04 (automatic)	H001124-001-02.04
Part of Building	NW	NW	H001124-001-02.04NW
Room	56	56	H001124-001-02.04NW56

Action Item:

Specify: The maximum length of the AOID code

The default length (this length is used as the default when the AOID code is derived from the number of the architectural object)

If the architectural object ID of objects that have this object type is used for assigning the architectural object ID of subordinate objects

If a separator is used to separate the AOID of the object from the code of the subordinate object

If the AOID code should be generated from the number of the architectural object



Functions (per Architectural Object Type)

What is it?

Functions are assigned to an architectural object to help further classify the object type. It's informational only. Can be used as a selection in reports. The functional assignment made to an architectural object can be changed at any time.

Action Item:

Specify the function (for architectural object types) per architectural object type.

Example

Arch Ob Type	Arch Object Name	Function	Long Function Name
05RM	Room	1	Office
05RM	Room	2	Common Area
05RM	Room	3	Service Area
05RM	Room	4	Conference Room
05RM	Room	5	Other Space



Measurement Types

What is it?

Measurement types represent all quantifiable attributes, such as space (ft2, m2, acres, hectares), dimensions (height, linear feet / length), volume (m3 or ft3), number of desks or internet connections, etc.

Action Item:

Define measurement types.

Recommendation:

Reflect what is available in CAD, and / or which conforms with common data standards, such as ANSI/BOMA etc.

MeasTp	Med. Meas. Type	Total	Ar.Ms.	ForApp	Defa...
A001	Total Area	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	M2
A002	Floor Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M2
A003	Usable Space	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M2
A004	Living Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M2
A005	Secondary Space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M2
A100	Retail Space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M2
A101	Office Space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M2
A102	Parking Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	M2
A103	Advertising space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M2
A200	Residential/Usable Space	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	M2
A501	Total Area	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FT2
A502	Floor Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FT2
A503	CommercialSpace	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FT2
A504	Residential Space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FT2
A505	Secondary Space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FT2
A600	Retail Space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FT2
A601	Office Space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FT2
A602	Parking Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FT2
A603	Advertising space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FT2
A700	Residential/Usable Space	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FT2
G001	Equal apportionment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PC
M001	Room Capacity in Persons	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PC
M005	Number of Parking Spaces	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PC
M006	No. of Parking Garage Spaces	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PC
M007	No. of Enclosed Parking Spaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PC
M010	Cubic Volume	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M3
M020	Share of Garden	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	%
M030	No. of Rooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PC
M050	No. of Persons for Apportmt	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PC
M090	Co-Ownership Share	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	TS
U001	Water Consumption	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M3
U002	Green Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	M2



Total Measurements

What is it?

The function makes it possible to derive “total” measurements from other measurements.

Use

They are useful for differentiating between measurement types for reporting purposes.

Action Item:

Specify the “sub-totals / grouping” of your earlier defined measurement types.

Example

MeasTp	Med. Meas. Type	Amount	Unit	MeasFrom	MeasTo	Total
A001	Total Area	1,251.00	M2			Σ
A003	Usable Space	1,251.00	M2			Σ
A100	Retail Space	45.00	M2			
A101	Office Space	1,178.00	M2			
A103	Advertising space	28.00	M2			

Info on Total Measurement

Total Measurement A001 (Total Area)

Composition

Total	Weighted Addends
A001 =	A002 [Floor Area] +A004 [Living Area] +A005 [Secondary Space] +A100 [Retail Space] +A101 [Office space] +A102 [Parking Area] +A103 [Adv. space] +U002 [Green Area]

Info on Total Measurement

Total Measurement A003 (Usable Space)

Composition

Total	Weighted Addends
A003 =	A100 [Retail Space] +A101 [Office space] +A103 [Adv. space]



Usage Objects (UO)

What is it?

Business Entity

Logical grouping of individual real estate objects, depending on their purpose and/or geographical location.

It typically consists of one campus or one location and is comprised of one or more buildings and one or more land records.

It is uniquely assigned to one company code and cannot be reassigned to another company code at a later point in time.

Land

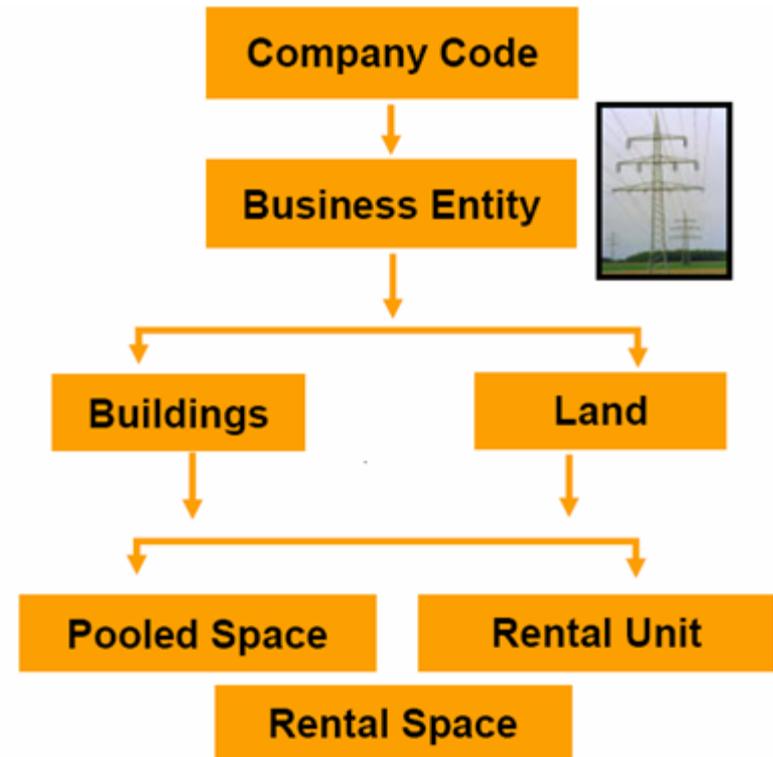
Land refers only to the land itself. It does not include the buildings on it. The basis for renting land or parts thereof.

Buildings

Any structure that is built upon as an improvement of the land, and typically has depreciable value (even if leased). Buildings or their parts are the basis for the rental of spatial units.

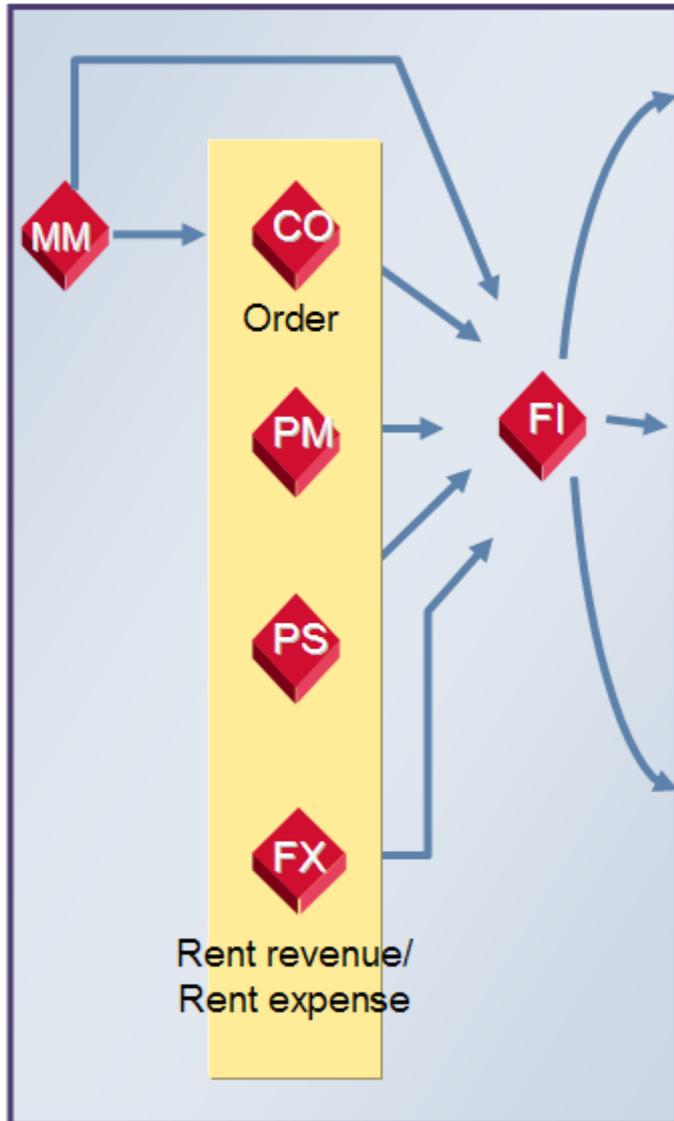
Recommendation

Structure the business entity in such a way so that there will be no need to restructure in the future due to changes in organizational, business units or portfolio responsibility. Consider using “Sets” to group different real estate objects with the same object type and according to a particular criteria.





CO Objects in Real Estate Management



RE-FX Object

(Cost and Revenue Recipient)

- Business entity
- Building
- Properties
- Rental unit
- Pooled space
- Rental space
- Real Estate contract
- Cost collector SU

Classic CO Objects

- Cost Center
(cost recipient only)
- Order
- WBS element



BE, BU, PR Number Ranges (UO)

What is it?

The system requires that you specify how number assignment is handled for usage objects (for the company code).

For **internal** number assignment, the system counts upward sequentially starting from a pre-defined (configured) number.

For **external** number assignment, you can specify the number range that is available when you create the usage object.

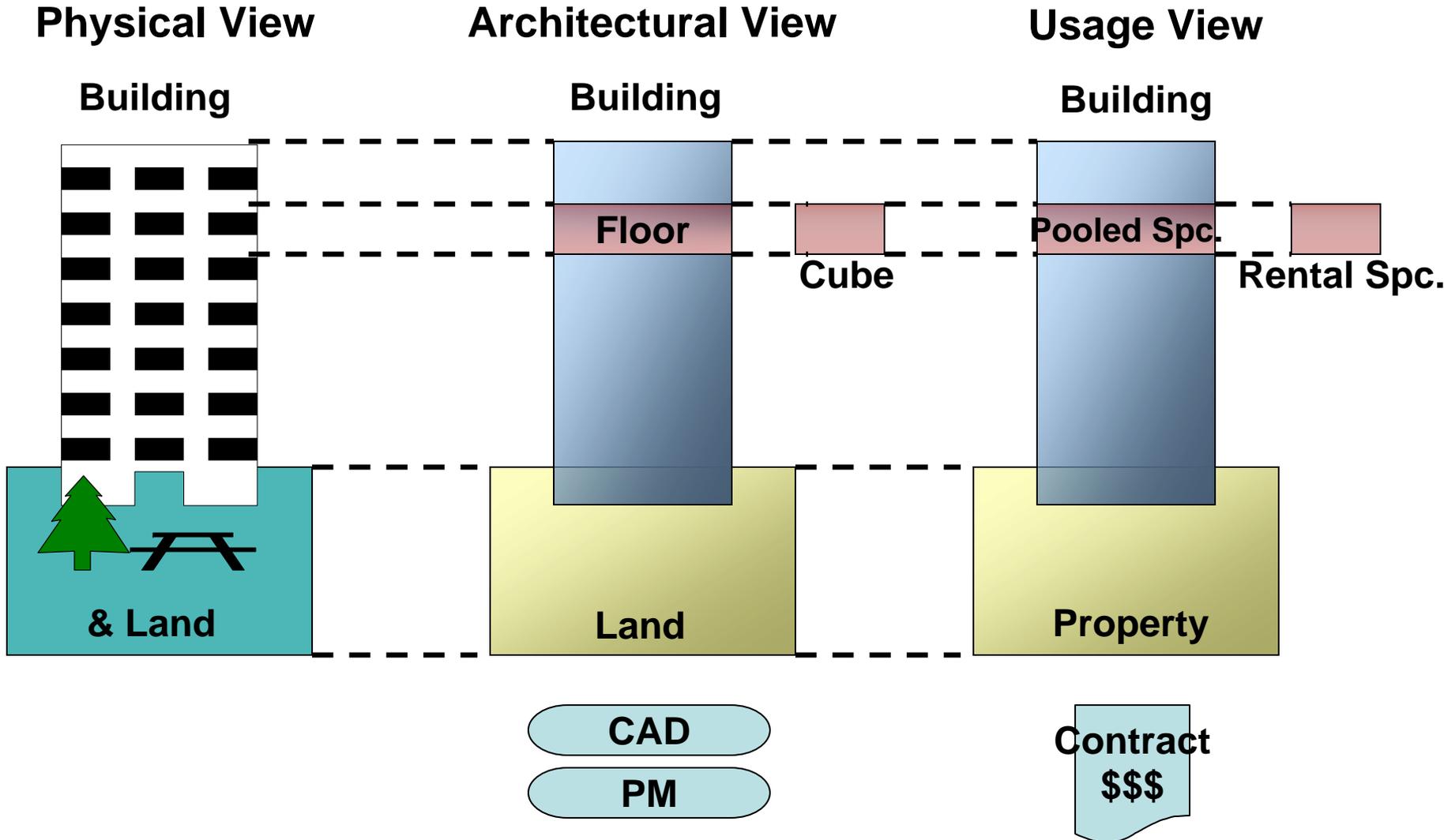
A BE can have any number of buildings and/or properties assigned. For buildings, properties and rental objects, the system assigns the number per business entity when internal number assignment is used. This number is unique within the business entity.

Action Item:

Discuss any specific numbering requirements.



Linking the AO and UO views





BE – Regional Locations

What is it?

Field to enter the regional locations you need with the required amount of detail.

Regional locations are used to help classify the site (BE) into a general geographic area.

Action Item:

Discuss / determine requirements for regional location description for your sites (BE's).

Location	
Regional location	<input type="text"/>
Transprt Connections	<input type="text"/> 
Location	<input type="text" value="0"/>
District Location	<input type="text" value="0"/> 
Maintenance distr.	<input type="text" value="0"/> US Maintenance
Neighborhood	<input type="text"/>
Neighborhood	<input type="text"/>
Neighborhood	<input type="text"/>



BE - Location

What is it?

A field that identifies the location or town within a specific geographic region.

Action Item:

Discuss / determine requirements for the location description for your sites (BE's).

Location	
Regional location	<input type="text"/>
Transprt Connections	<input type="text"/>
Location	<input type="text" value="0"/>
District Location	<input type="text" value="0"/>
Maintenance distr.	<input type="text" value="0"/> US Maintenance
Neighborhood	<input type="text"/>
Neighborhood	<input type="text"/>
Neighborhood	<input type="text"/>



BE – District Locations

What is it?

Field to further classify a site into districts.

Action Item:

Discuss / determine requirements for a further breakdown of your sites (BE's) into districts.

Location	
Regional location	<input type="text"/>
Transprt Connections	<input type="text"/> 
Location	<input type="text" value="0"/>
District Location	<input type="text" value="0"/> 
Maintenance distr.	<input type="text" value="0"/> US Maintenance
Neighborhood	<input type="text"/>
Neighborhood	<input type="text"/>
Neighborhood	<input type="text"/>



BE – Transport Connections

What is it?

Transportation connections are useful to help Property Managers identify sites where specific transportation connections are available.

Example

TCo	Transportation Connection
0	None (Car only)
1	Rail Spur
2	City Railroad / Subway
3	Bus / Streetcar
4	Interstate / Major Highway
5	Shipping Dock

Action Item:

Discuss / determine requirements for creating transport connections for BE's (sites)..

Location	
Regional location	<input type="text"/>
Transprt Connections	<input type="text"/>
Location	<input type="text" value="0"/>
District Location	<input type="text" value="0"/>
Maintenance distr.	<input type="text" value="0"/> US Maintenance
Neighborhood	<input type="text"/>
Neighborhood	<input type="text"/>
Neighborhood	<input type="text"/>



BE – Infrastructure Characteristics

What is it?

Field that allows you to specify how far the real estate object (i.e. site) is from user-defined geographical points.

These specifications are optional.

Example

The screenshot shows a software interface for a real estate system. At the top, there is a 'Site' field with the value '3000/10' and a description 'Office building with garage'. Below this are several tabs: 'General Data', 'Reference Factors', 'Infrastructure' (which is selected), 'Measurements', 'Option Rate Methods', 'Posting Parameters', 'Partners', and 'A'. Under the 'Infrastructure' tab, there is a toolbar with various icons. Below the toolbar is a table with the following columns: 'Infrastructure Char. - Text', 'Distance', 'Measurement unit text', 'Distance as Time', 'Measurement unit text', 'Time Basis', 'From Hi-Lv', and 'Data Object'. The table contains one row with the following data: 'Gas station', '1 Mile', '10 Minutes', 'By car', and an empty 'Data Object' cell.

Infrastructure Char. - Text	Distance	Measurement unit text	Distance as Time	Measurement unit text	Time Basis	From Hi-Lv	Data Object
Gas station	1	Mile	10	Minutes	By car	<input type="checkbox"/>	

Example: Kindergarten, Elementary School, Supermarket, Train Station, Airport, Bus Stop, Recreation Area, Park, etc.

Action Item:

Discuss / determine requirements for creating infrastructure characteristics for BE's (sites)...



Buildings (UO)

What is it?

The building represents any structure that is built upon as an improvement of the land, and typically has depreciable value (even if leased).

These are typically facilities of all kinds and purposes, such as, corporate offices, manufacturing facilities, laboratories, maintenance structures, hotels and employee apartment buildings.

They can also include towers, pipelines, major fencing or gate facilities.

Action Item

Every facility that is owned or leased by the State will need to be created as a building in SAP.

Define the types of buildings that will be created.

Review building naming convention.



Building Number Ranges

What is it?

Building numbers are company code and business entity dependent.

Recommendation

Do not employ any “intelligent” numbering sequence. Have the system assign building numbers internally.



Building Condition

What is it?

Building condition identifies the state or disrepair of the building, such as excellent, good, fair, poor, impaired, tear down, or functionally obsolete.

This characteristic is for informational purposes only.

It is, however, an important indicator for disposal planning.

Action Item:

Define building conditions.



Building Types

What is it?

Building type is used to describe the type of construction of the building.

This information is especially important to the Risk Management group to provide to insurance providers

This characteristic is for informational purposes only.

Action Item:

Define building types..

Example

ObjT	Building Type	Building Type Long Name
1	Wood	Wood
2	Steel	Steel
3	Cement Block	Cement Block



Building - Main Usage Types

What is it?

The main usage type describes the primary purpose of a building. This characteristic is for informational purposes only.

It is a changeable attribute, whereas the usage type on the Rental Objects may not be changed. This means that if a building is repurposed or undergoes major changes, the main usage type can be adjusted.

Action Item:

Define main usage types..



Fixtures & Fittings

What is it?

It is often important for support organizations to meet risk management requirements to track information around a facilities fixtures and fittings. This also assists real estate managers in maximizing facility space.

Example

Type	Obj Type	DifCrt	Char	Fixture Characteristic	Differentiation Cat
10	Architectural	02BU	1000	Overhead Sprinklers	Building
10	Architectural	02BU	1100	Smoke Detectors	Building
10	Architectural	02BU	1200	Alarms	Building
10	Architectural	02BU	2000	Overhead Cranes	Building
10	Architectural	04AP	3000	Furniture and Appliances	Apartment

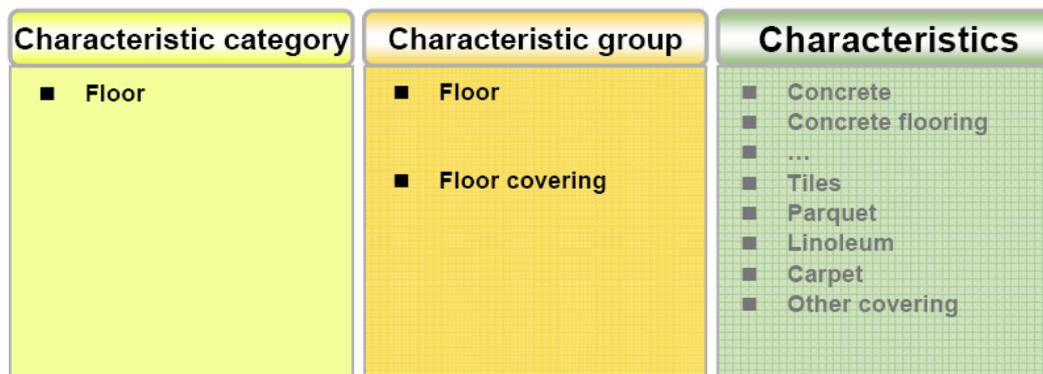
Action Item:

Define all required fixtures and fittings characteristics .

Define for each fixture and fittings characteristic the objects on which it is visible: rental object, building.

Define the fixtures and fittings characteristics needed on architectural objects.

Example:





Land (UO)

What is it?

Land or Property only refers to the ground or land and does not include any improvement or structures that may have been built on the land.

If there are multiple buildings on one land record, or multiple land records with one building on top of it, the architectural view or a geographic information system (GIS) file is used to map this relationship.

The validity date of the property will be the date the land was acquired. As there could be multiple land parcels assigned to a site, the dates for each individual parcel should be maintained in the system.

Action Item

Land that is owned or leased by the State will need to be created as a land real estate object in SAP.

Define the land / parcels that will need to be created.

Review your land naming convention.



Land – Number Ranges

What is it?

Land numbers are company code and business entity dependent.

Recommendation

Do not employ any “intelligent” numbering sequence.

Have the system assign land numbers internally.



Land – Property Type

What is it?

A described property characteristic (informational).

Land Quality	
Property type	<input type="text"/>
Loc. quality	<input type="text"/>
Ground type	<input type="text"/>
Overall condition	<input type="text"/>



Land - Location Qualities

What is it?

A description of the location quality of properties. The characteristic is informational only.

Action Item:

Define locations.

Example

1. Outskirts,
2. Prime location

Land Quality	
Property type	<input type="text"/>
Loc. quality	<input type="text"/>
Ground type	<input type="text"/>
Overall condition	<input type="text"/>



Land – Ground Type

What is it?

A field to specify the possible ground types for properties.

The characteristic is informational only.

Land Quality	
Property type	<input type="text"/>
Loc. quality	<input type="text"/>
Ground type	<input type="text"/>
Overall condition	<input type="text"/>

Action Item

Discuss possible use for this field.



Land – Overall Condition

What is it?

A field to specify the overall condition of ground types for properties.

The characteristic is informational only.

Land Quality	
Property type	<input type="text"/>
Loc. quality	<input type="text"/>
Ground type	<input type="text"/>
Overall condition	<input type="text"/>

Action Item

Discuss possible use for this field.



Land – Productive Holdings

What is it?

A number of fields that describe the municipality and topographical location of land.

Available fields

Municipality	
Municipality key	<input type="text"/>
Municipality	<input type="text"/>
District	<input type="text"/>
State	<input type="text"/>

Topographical Location	
Local Subdistrict	<input type="text"/>
Tract of Land	<input type="text"/>
Parcel of Land	<input type="text"/>
Fractional Parcel	<input type="text"/>



Land – Infrastructure Characteristics

What is it?

Field that allows you to specify how far the land real estate object is from user-defined geographical points.

These specifications are optional.

Example

The screenshot shows a software interface for managing site data. At the top, there is a 'Site' field with the value '3000/10' and a description 'Office building with garage'. Below this are several tabs: 'General Data', 'Reference Factors', 'Infrastructure' (which is selected), 'Measurements', 'Option Rate Methods', 'Posting Parameters', 'Partners', and 'A'. A toolbar with various icons is visible below the tabs. The main area contains a table with the following data:

Infrastructure Char. - Text	Distance	Measurement unit text	Distance as Time	Measurement unit text	Time Basis	From Hi-Lv	Data Object
Gas station	1	Mile	10	Minutes	By car	<input type="checkbox"/>	

Action Item:

Discuss / determine requirements for creating infrastructure characteristics for land.



Land – Building Law and Usage

What is it?

A number of fields that describe the building law and usage characteristics of land.

Usage type in the development plan can be used to identify what the land record is zoned for.

Heritable building right can be used to indicate if the right to develop the land in a certain way can take place, or is inherited, or associated with this land.

Action Item:

Discuss / determine requirements for capturing data in these fields.

Main Usage Type	
Main usage type	<input type="text"/>
Building Law	
Heritab. build.right	<input type="text"/>
Usage land use map	<input type="text"/>
UsageDevelPlan	<input type="text"/>
Current usage	<input type="text"/>
Development plan	<input type="text"/>
Plan dated	<input type="text"/>
Dates	
Trans. usage/charges	<input type="text"/>
Planned sale	<input type="text"/>
Sale	<input type="text"/>
Permitted Usage	
Site Occupancy Index	<input type="text"/>
Floor Area Ratio	<input type="text"/>
ConstDimensNo	<input type="text"/>
Permitted Bldg Ht	<input type="text"/> FT
Actual Usage	
Floor area ratio	<input type="text"/>
Floor Area Ratio	<input type="text"/>
ConstDimensNo	<input type="text"/>



Rental Objects (UO)

What is it?

Rental Objects represent properties that may be **leased**. Rental Objects are uniquely assigned either to a Building or Land record, and their number range is unique within the Business Entity (BE). It is a spatial entity that is subject to occupancy.

There are **three types** of rental objects:

Pooled Space (PS)

This is the overall **available** space within a given **usage type**, within a Building or Land. It is used for space that is 'dynamically' occupied, where changes in assignment often take place, and it does not require major structural changes, such as open floor office space, or parking space, etc.

Rental Space (RS)

This is space that is extracted from the Pooled Space (i.e. available space) to be occupied and assigned to a real estate contract for a specified period.

Rental Unit (RU)

This is a spatial entity within a building or land that can also be occupied, but it would require major structural changes in order to change its dimensions, such as apartments, housing units, one car garages, and storage units



Rental Objects – Usage Types (UO)

Continued ...

The main attribute of rental objects is the **Usage Type** which must be selected when creating the RO.

Usage Type is a configurable classification that **once selected, cannot be changed.**

Usage types may also be used to further sub-classify an objects usage.

The usage type has impact on the following:

- Available rental object type (PS, RS, RU)
- Available dependent usage type (usage type of PS can drive availability of usage types for the RS)
- Screen sequence (BDT screen design and available fields) and field status
- Available and required measurement types
- Available conditions
- Service charge settlement participation



Rental Objects – Usage Types (UO)

Continued ...

Example

UT	RU Usage Type	Usage Type of Rental Unit
0001	Hotel	Hotel
0002	House	Employee – House
0003	Apartment	Employee – Apartment
0004	Office	Office
0005	Cafeteria	Cafeteria – Dining Hall
0006	Other/Mixed	Other/Mixed Use

Action Item

Determine usage types of space.



Usage Types per Rental Object Type

What is it?

In order to prevent the inappropriate assignment of usage types to rental objects, usage types are specifically assigned to each rental object type. If a usage type is not assigned to a rental object, it cannot be selected.

Example

RO	Usage Type	Usage Type Text
RU	0001	Hotel
RU	0002	House
RU	0003	Apartment
PS	0004	Office
RS	0004	Office
RU	0004	Office
PS	0005	Cafeteria
RS	0005	Cafeteria
RU	0005	Cafeteria
PS	0006	Other/Mixed
RS	0006	Other/Mixed
RU	0006	Other/Mixed

Action Item

Determine usage types of space per RO type.



Usage Types Allowed for Rental Spaces per Pooled Space

What is it?

You might have a need to extract multiple rental spaces from a pooled space that has a given usage type, and you want the rental spaces to have different usage types, or more specific settings for the usage type.

In this case, you can assign these usage types to the usage type of the **pooled space**

Example

Assign Usage Types to Rental Object Types		
RO	Us	Usage Type Text
PS	40	Terminal
RS	41	Terminal - Check-in
RS	42	Terminal - Departure lounge
RS	43	Terminal - Retail point

Usage Types Allowed for Rental Spaces per Pooled Space			
PoolSpace Usag...	Pool.Space Text	RntSpace Usage ...	Rent.Space Text
40	Terminal	41	Terminal - Check-in
40	Terminal	42	Terminal - Departure lounge
40	Terminal	43	Terminal - Retail point

Action Item

Determine usage types and sub-usage types (if any).



Pooled and Rental Space (UO)

Continued ...

All occupiable and rentable spaces (rentable w.r.t. sub-leasing) are mapped through rental objects.

As the physical structure of floors (especially for office space) is very often mapped in CAD drawings, these drawings can be integrated into SAP, and create the architectural view. Individual architectural objects can be group together (such as desks, cubicles, or rooms) into a single rental object for each occupant.

Pooled spaces and rental spaces are typically more flexible and dynamically assigned, whereas the rental units can be used for more static occupiable units, such as a restaurant, store, or housing.

In some contexts, an office can also be a rental unit (RU). Typically this is when there is a structural setup that limits the potential expansion of the office space (only one room or area, possibly adjacent to the warehouse or restaurant), or the office cannot be subdivided for multiple occupants.

Example ...

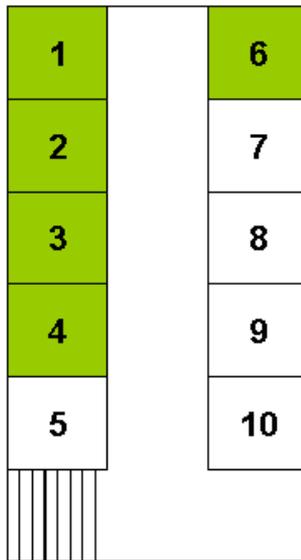
In the following example (next slide), multiple rooms are grouped together into one Rental Space (RS1) which will be assigned to an external tenant via a Real Estate Contract.



Pooled and Rental Space

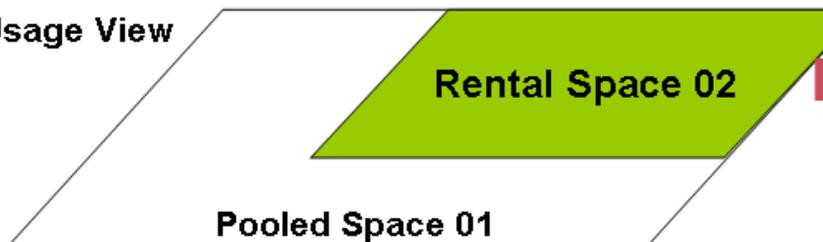
Renting-out on an individual basis

Architectural View



Architectural view	New Rental Space	Measurement
Room 01	02	12 ft ²
Room 02	02	17 ft ²
Room 03	02	16 ft ²
Room 04	02	15 ft ²
Room 05		19 ft ²
Room 06	02	18 ft ²
Room 07		21 ft ²
Room 08		17 ft ²
Room 09		16 ft ²
Room 10		17 ft ²

Usage View



contract with assigned

rental space 2

- office 1 12 ft²
- office 2 17 ft²
- office 3 16 ft²
- office 4 15 ft²
- office 6 18 ft²



Use of Rental Objects

Recommendation

Use the Rental Units (RU) for the subletting process around employee housing, if any

Use the Pooled Space and Rental Space for subletting of space to external tenants and, possibly, to internal agencies (via and internal real estate contract).

Investigate the Permanent Occupancy functionality that is delivered in Enhancement Pack 2 for all corporate space assignments and allocations.

Questions?



Allowed Measurement Types per RO Type

What is it?

In previous slides (i.e. configuration steps), measurements have been defined and permitted for general real estate objects.

In this step, measurements need to be defined for each rental object type.

Example

RO Type	Meas.Tp	Meas. Type - Use
Rental unit	No. of Persons	Criterion is default for object
Rental Space	No. of Persons	Criterion is default for object
Pooled space	No. of Persons	Criterion not permitted for object

Measurements for Rental Objects - per Rental Obj. Type			
RO Type	MeasTp	Short Meas Type	MeasType
Pooled Space	A001	Total Area	Property Is Allowed for Object
Pooled Space	A003	Usable Space	Property Is Allowed for Object
Pooled Space	A100	Retail Space	Property Is Allowed for Object
Pooled Space	A200	Res./Use.Space	Property Is Allowed for Object
Rental Space	A001	Total Area	Property Is Allowed for Object
Rental Space	A003	Usable Space	Property Is Allowed for Object
Rental Space	A100	Retail Space	Property Is Allowed for Object
Rental Space	A200	Res./Use.Space	Property Is Allowed for Object

Action Item

Determine required measurement types for rental objects.



RO's: Measurement Types per Usage Type

What is it?

For individual usage types, we need to specify which measurement types apply for rental objects.

Example

Usage type	Meas.Tp	Meas. Type - Use
Priv. Fin.accomm.	Resident.Space	Criterion is default for object
Office	Resident.Space	Criterion not permitted for object

Measurements for Rental Objects							
MeasTp	Short Meas Type	Usage T...	Usage Type	MainMeas.	Measurement Type Use	DefUnit	
A004	Living Area	1	Priv.fin.accomm	<input checked="" type="checkbox"/>	Property Is Default for Object (on Screen)	M2	
A100	Retail Space	4	Store	<input checked="" type="checkbox"/>	Property Is Default for Object (on Screen)	M2	
A101	Office space	5	Office	<input checked="" type="checkbox"/>	Property Is Allowed for Object	M2	
A601	Office space	5	Office	<input type="checkbox"/>	Property Is Allowed for Object	FT2	
M005	No.ParkingSpace	10	Parking Lots	<input checked="" type="checkbox"/>	Property Is Allowed for Object	PC	
M020	Share of Garden	1	Priv.fin.accomm	<input type="checkbox"/>	Property Is Allowed for Object	%	

Action Item

Determine measurement types per usage type requirements.



Business Partners

What is it?

Most real estate processes require maintaining data regarding business partners (or contacts). They can be in the form of **persons**, **organizations** or **groups**.

BP's are linked to a RE data record via **business partner roles**. These roles identify the relationship of the BP to the RE object and its processes.

The two most important roles within RE-FX are: **Tenant with customer account** (for third party subleases) and **Landlord with vendor account** (for leased in property). These are considered financial business partners and are linked to the customer and vendor accounts.

Customer and vendor records can be automatically created in SAP Financials when creating these two specific roles in RE-FX.

BP can have an unlimited number of roles, and can have roles in association with an unlimited number of real estate objects.



Business Partners - Roles

Continued ...

Example:

Business Entity	Building and Land	Rental Object	Contract (lease-in)
Master Data <u>RE Advisor</u> <u>RE Portfolio Mngr</u> <hr/> <u>Data Admin</u> <u>Legal Owner (Shell Co)</u> <u>Property Manager (Int)</u> <u>RE Manager (Int)</u> <u>Asset Manager</u> <u>Site Manager FM</u> <u>Property Manager (Ext)</u>	<u>RE Advisor</u> <u>RE Portfolio Mngr</u> <hr/> <u>Data Admin</u> <u>HSSE Advisor/Engr (Int)</u> <u>Legal Council (Internal)</u> <u>Legal Owner (Shell Co)</u> <u>Project Manager(Internal)</u> <u>Property Manager (Int)</u> <u>RE Manager (Int)</u> <u>Asset Manager</u> <u>Site Manager FM</u> <u>Facility Manager</u> <u>Appraiser</u> <u>Architect (Ext)</u> <u>Broker</u> <u>Consultancy 3rd Party</u> <u>Grantee</u> <u>Grantor</u> <u>HSSE Advisor/Engr (Ext)</u> <u>Leasing Agent</u> <u>Legal Council (External)</u> <u>Notary</u> <u>Owner</u> <u>Project Manager (Ext)</u> <u>Property Manager (Ext)</u> <u>Title Company</u>	Master Data <u>RE Advisor</u> <u>RE Portfolio Mngr</u> <hr/> <u>Data Admin</u> <u>Project Manager(Internal)</u> <u>Property Manager (Int)</u> <u>RE Manager (Int)</u> <u>Asset Manager</u> <u>Site Manager FM</u> <u>Facility Manager</u> <u>Consultancy 3rd Party</u> <u>Leasing Agent</u>	Master Data <u>RE Advisor</u> <u>RE Portfolio Mngr</u> <hr/> <u>Data Admin</u> <u>Finance Rep (Int)</u> <u>Guarantor (Int)</u> <u>Legal Council (Internal)</u> <u>Legal Owner (Shell Co)</u> <u>Property Manager (Int)</u> <u>RE Manager (Int)</u> <u>Site Manager FM</u> <u>Broker</u> <u>Grantee</u> <u>Grantor</u> <u>Guarantor (Ext)</u> <u>Landlord with Vendor Acct</u> <u>Landlrd w.out Vendor Acct</u> <u>Leasing Agent</u> <u>Legal Council (External)</u> <u>Notary</u> <u>Owner</u> <u>Partner with Vendor Acct</u> <u>Property Manager (Ext)</u> <u>Title Company</u>

Action Item

Review SAP delivered BP roles

Determine State required BP roles.

Assign BP roles to RE objects



Enterprise Readiness Challenges

- Add potential organizational impacts and training impacts



Next Steps

- Prepare and send out meeting minutes to invitees.
- Draft Design Document is prepared.
- Follow up on action items identified during the workshop.
- Schedule off-line meeting (s) to discuss areas of special concern
- Plan follow on workshops, as required.
- Plan validation workshop.
- Ensure all to-do's are appropriately documented



Questions?

