Southeast Asia Disaster Risk Insurance Facility

PROTECT THE GREATEST HOME OF ALL:
OUR COUNTRIES

SEADRIF is a regional platform to provide ASEAN countries with financial solutions and technical advice to increase their financial resilience to climate and disaster risks.
Public asset management and the role of data

Facilitator: Benedikt Signer

Speakers:
Chil Soriano, Philippines | Steven Eglinton, UK | Julie De la Cruz, Philippines
Objectives of the factsheets and webinar

- **Why** should governments develop a financial protection strategy for public assets?
- **When** can insurance be a good option for the financial protection of public assets?
- **Who** are the key stakeholders (both external and internal) that play roles in each stage of the insurance development process?
- **What** are the most important step-by-step considerations involved in the development of a strategy for public asset insurance?

**INTENDED OUTCOME:**
Government officials to develop strong understanding of the steps required to design, develop, deliver and operate effective financial protection of public assets, particularly through risk transfer and insurance.
Structure of Webinars

- 90-minute webinar for each factsheet
- Different guest speakers
- Poll results will be included in final outputs
- Live polls: Please participate
- Please share questions via Q&A function
Overview of the Knowledge Series

FACTSHEETS 7 and 8
- Roles and responsibilities for the government officials within an internal insurance program, the associated stakeholders, including auditing, compliance and governance, supervisory.
- Multi year aspects such as renewals and re-assessment of exposures.
- Review of procurement considerations
- Dealing with claims management
- Incorporating innovations and technologies

FACTSHEETS 5 and 6
- Roles and options available to construction of cost-effective insurance, including common insurance structures and case studies, their pros and cons against considerations of budgets, risk appetites, and government priorities.
- Introduction of pooling and mutualization of large scale public assets insurance programs.
- Insurance/reinsurance concepts of retention, deductible and exclusion.

FACTSHEETS 1 and 2
- Development of an implementation roadmap for a public asset financial protection program.
- How governments can agree objectives and build consensus around priorities.
- How to develop internal governance and oversight functions, and ownership at each level of the insurance program.
- How risks are allocated across asset owners and operators.

FACTSHEETS 3 and 4
- The importance and development of Public Assets Registries, and associated Enterprise Asset Management systems.
- How to assess and quantify asset exposure, sources of data, requirements for insurance transactions.
- Introductions to the use of catastrophe analytics, burning cost / technical and market rates, tariff structures, risk based pricing methods, and underwriting.
Plans for July - September

Experience sharing webinar: Week of 27th July

Fact sheets 5 – 8: Recomence in September
Improved customer service

Benefits of improving public asset management

- More effective and forward-looking decisions
- Improved governance and accountability
- Improved financial efficiency
- Improved customer service
- More effective risk management
A public asset registry (PAR) is a digital database which assists effective whole-of-government business planning by providing a single source of information on all non-financial government assets with their geo locations along with physical characteristics, asset value, and asset life.

**A PAR CAN BE USED TO:**

- Maintain a central repository of information on government assets across the asset lifecycle.
- Conduct an annual physical inventory of all assets.
- Maximize the value of public assets by optimizing the way the assets are allocated, used, leased, and/or sold.
- Conduct risk assessments of assets, recording historical data on disaster events and post-disaster assessment, or utilizing advanced tools to assess assets’ exposure to different types of risks.
- Prioritize assets for operational and financial protection, including for risk transfer and insurance based on varied parameters such as asset value, location, condition, strategic importance, risk.
Which of these are important benefits to you in your consideration to develop a public asset registry? (select all that apply)

- Maintain a central repository of information
- Able to conduct annual physical inventory checks
- Optimize the use and values of assets
- Identify and manage risks to assets
- Prioritize risk management actions on assets
Perspectives from Philippines: National Asset Registry System (NARS)

Chil Soriano
Former Undersecretary, Department of Finance
Philippines
Inter-agency committee on government property insurance

OVERVIEW
- Legal Framework: Administrative Order no. 4 (until November 2019)
- Mandate: Formulate necessary policies, rules, and regulations to ensure that key government properties/assets/insurable interests are comprehensively and adequately insured
- Chair: Department of Finance, through the Bureau of the Treasury
- Members: Department of Budget and Management, Office of the President, Insurance Commission, and the Government Service Insurance System

IDENTIFIED STRATEGICALLY IMPORTANT ASSETS
- Roads, Bridges, Schools, Hospitals, Health Centers, Dams, Irrigation Facilities, Welfare Centers

MAIN RECOMMENDATION
- Indemnity Insurance program for Strategically Important Assets
- Development of a National Asset Registry to be housed in the Bureau of the Treasury

ISSUES AND CHALLENGES
- Data constraints
- Initial lack of expertise

CONTINUATION: DBCC TECHNICAL WORKING GROUP ON ASSET MANAGEMENT
Whole of Government approach on Asset Management
“What gets measured, Gets managed”

Peter Drucker, “The Practice of Management”

- For government to know its assets
- For government to better manage its assets
- For government to track ownership of its assets
- For government to improve its decision making

Why build a registry?

National Asset Registry System
National Asset Registry System

Initial Assets
- Schools
- Roads
- Bridges
- Hospitals
- Dams
- Irrigation facilities
- Welfare centers

Other planned Assets
- Airports
- Seaports
- Trains
- Power plants, transmission lines
- Equipment of Science and Technology agencies

Current Asset Information included
- Geographical, Financial, Legal, Insurance
- Asset-Specific information

Envisioned Analytics/Output
- Asset Insurance/Prioritization
- Risk Modeling
- Asset Maximization/Performance Management

Onboarding
Training courses and workshops conducted with Central and Regional Offices

Our approach
Excel Template
Online Inventory System (under development)
National Asset Registry System with modules on Asset Lifecycle, Risk Modeling, Insurance Prioritization
National Asset Registry System

Overall Conceptual Design

Application layer
Asset Registry Module
- Asset Lifecycle management
- Asset Lease
- Asset Collateralization
- Acid Count
- Asset Insurance and Prioritization
- Asset performance Management

Financial and budget support
- Generating information for estimating budget related to assets
- Generating information and reports per GAM

System administration
- Cross cutting functional requirements
- Work flow configuration
- User configuration
- Security management

Risk and disaster assessments module
- Risk profiling of assets
- Disaster preparation facility
- Post disaster assessment

Presentation Layer
- Web portal
- Mobile app

Users
- BTR
- Other oversight organizations
- Executing agencies

Other Govt. Systems
Data Collection Tools
Satellites
Web portal
Drones
Mobile app

DATA BASE LAYER

INTERFACE

WEB PORTAL

MOBILE APP

OTHER GOVT. SYSTEMS

DATA COLLECTION TOOLS

SATELLITES

WEB PORTAL

MOBILE APP

OTHER GOVT. SYSTEMS

DATA COLLECTION TOOLS

SATELLITES

WEB PORTAL

MOBILE APP
Anticipated benefits

Prioritize assets for insurance coverage

**INSURANCE PRIORITIZATION:** Parameters

1. Strategic importance
2. Risk rating
3. Condition
4. Location
5. Asset value

**BUSINESS INTELLIGENCE TOOL FOR ASSET PRIORITIZATION:**

- Automated report and list of assets to be insured with required data
- Record information on third-party evaluation of assets
- Facility to store insurance policy claim
- Notification on insurance policy expiration
- Automated notification for raising insurance claim for damaged assets

**COPE Data fields (Sample):**
- Fire protection
- Ceiling type
- Exterior walls
- Flooring type
- Roofing type
- Roof pitch
- Partitions
- Foundation type
- Average story height
# National Asset Registry System

## Data Fields:

### Common Data Specifications

<table>
<thead>
<tr>
<th>General Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>National Asset Number</td>
<td></td>
</tr>
<tr>
<td>Organization/Agency Code</td>
<td></td>
</tr>
<tr>
<td>Asset Name/ Type</td>
<td></td>
</tr>
<tr>
<td>Property Number</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Region, Municipality, City</td>
<td></td>
</tr>
<tr>
<td>PSGC Code</td>
<td></td>
</tr>
<tr>
<td>Latitude</td>
<td></td>
</tr>
<tr>
<td>Longitude</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Legal / Ownership Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership</td>
<td></td>
</tr>
<tr>
<td>Mode of Acquisition/ Conveyance</td>
<td></td>
</tr>
<tr>
<td>Conveyance Information</td>
<td></td>
</tr>
<tr>
<td>Acquisition/ Conveyance Date</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Book Value, Accumulated Depreciation</td>
<td></td>
</tr>
<tr>
<td>Asset Life, Number of years used</td>
<td></td>
</tr>
<tr>
<td>Sound Value/ Assessed Value/ Appraised Value</td>
<td></td>
</tr>
<tr>
<td>Mode of Disposal/ Disposal Date</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insurance Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum Insurable (if not insured)</td>
<td></td>
</tr>
<tr>
<td>Insurance Details (Amount insured, Coverage, Type of Policy, Amount Insured, Premium, and Deductible)</td>
<td></td>
</tr>
</tbody>
</table>
### Data Fields: Asset Specific

#### ROAD Technical Specifications: General technical specifications

<table>
<thead>
<tr>
<th>Functional Classification</th>
<th>Total Road length</th>
<th>Length per Surface Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Concrete</td>
</tr>
<tr>
<td>Directional Flow of traffic</td>
<td>Number of Lanes</td>
<td>Year of Construction</td>
</tr>
<tr>
<td>Hazard Risk</td>
<td>Hazard Threat</td>
<td>Condition</td>
</tr>
</tbody>
</table>

#### BRIDGE Technical Specifications: General technical specifications

<table>
<thead>
<tr>
<th>General Bridge Type</th>
<th>Bridge type of construction</th>
<th>Year of Construction</th>
<th>Condition</th>
<th>Load Limit</th>
<th>No. of Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carriageway Width (meters)</td>
<td>Terrain Crossed</td>
<td>Overall Width (meters)</td>
<td>Overall Length (meters)</td>
<td>Maximum Bridge Height (meters)</td>
<td>Length of Span (meters)</td>
</tr>
<tr>
<td>Hazard Risk</td>
<td>Hazard Threat</td>
<td>Deck Materials</td>
<td>Deck Wearing Surface</td>
<td>Deck Drainage</td>
<td>Pier Type</td>
</tr>
<tr>
<td>Pier Material</td>
<td>Pier Foundation Type</td>
<td>Main Member Material</td>
<td>Slope protection</td>
<td>Abutment Type</td>
<td>Abutment Foundation Type</td>
</tr>
<tr>
<td>Abutment Material</td>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SCHOOL Technical Specifications

<table>
<thead>
<tr>
<th>General technical specifications:</th>
<th>Technical Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School Classification</strong></td>
<td><strong>Occupancy</strong></td>
</tr>
<tr>
<td><strong>Total Floor Area (m²)</strong></td>
<td><strong>Building footprint Area</strong></td>
</tr>
<tr>
<td><strong>Materials:</strong></td>
<td><strong>Walls</strong></td>
</tr>
<tr>
<td><strong>Mitigation Measures:</strong></td>
<td><strong>Number of fire extinguishers</strong></td>
</tr>
<tr>
<td><strong>Status of use: (area in m²)</strong></td>
<td><strong>Administrative office</strong></td>
</tr>
<tr>
<td><strong>Laboratories</strong></td>
<td><strong>Library</strong></td>
</tr>
</tbody>
</table>

### HOSPITAL Technical Specifications

<table>
<thead>
<tr>
<th>General technical specifications</th>
<th>Technical Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospital Classification</strong></td>
<td><strong>Building type</strong></td>
</tr>
<tr>
<td><strong>Building Floor Area (m²)</strong></td>
<td><strong>Number of basements</strong></td>
</tr>
<tr>
<td><strong>Materials:</strong></td>
<td><strong>Walls</strong></td>
</tr>
<tr>
<td><strong>Mitigation measures:</strong></td>
<td><strong>Number of fire extinguishers</strong></td>
</tr>
<tr>
<td><strong>Status of use: (area in m²)</strong></td>
<td><strong>Administrative office</strong></td>
</tr>
<tr>
<td><strong>Mortuary service</strong></td>
<td><strong>Doctor's clinic</strong></td>
</tr>
<tr>
<td><strong>Isolation facilities</strong></td>
<td><strong>Delivery room</strong></td>
</tr>
</tbody>
</table>
Asset Performance Management

Anticipated benefits

1. Capture data on vacancy & occupancy
2. Facilities & Space Management Planning
3. List vacant Assets for sale/rent
4. Raise capital receipts meeting budget deficit
5. Share assets (heavy machinery) b/w orgs
6. Receive automated alerts for required space

Search feature for vacant properties for sale/rent

Achievement of UK e-PIMS
- Raised £1.8 billion via capital receipt
- Accredited savings of about £54 million pa with cost of less than £2 million pa
Post Disaster Damage Assessment

Anticipated benefits

1. Capture damaged assets
2. Automated notification for raising insurance claim
3. Online service requests 7 work orders
4. Plan inspections and update damage details
5. Plan Fund disbursement & track utilization
6. Build Loss Database
7. Mark emergency facilities pre-disaster
8. Release notifications in public domain
9. Support in interface with Catastrophic Risk Modelling Solution

Data collection tools

A. Raise online service request & Work Orders

B. Bar chart on damaged assets by sector/org.
Collaboration with the Department of Science and Technology (DOST), Philippine Institute of Volcanology and Seismology (PHIVOLCS) and other risk management agencies for better disaster/hazard mapping

VISION: To be the Philippines’ central source of information for accurate and efficient hazards and risk assessment, to help the government increase the nation’s resilience to natural hazards

- **Governance Platform** where different stakeholders (Government, Citizens, Business, can collaborate for the sharing, standardization and optimum use of information necessary for risk valuations, and consequently for good governance

- **Physical Platform** where tools are developed for data integration, management and analysis of information (**HazardHunterPH**, **GeoMapperPH**, **Geo AnalyticsPH**)
Future Plans

- Linkages with national government agencies and corporations as well as local government units that have their own asset registry to develop a common metadata set across the whole of government and to facilitate the sharing of information.

- Adoption/adaption of international standards for data inputs and quality to allow for regional collaboration.

- Easy Reference Dashboard with quick access to geospatial and asset information.

- Risk Modeling capabilities to estimate damages of events and forecast potential losses of incoming events.
National Asset Registry System

Major Challenges and Possible Solutions

Gathering data from the regional/field offices
- Use of technology (smart phones/tablets/i-pads, drones, satellites)
- Incentives and explanation of benefits of having more/better information

Improving and assuring data quality
- Rating system for data quality
- Training of staff in central, regional and field offices on data gathering and reporting standards

Linking physical assets to accounting treatment and legal ownership documents
- Application of Asset Management principles and practices to accounting concepts such as depreciable/useful life and derecognition of assets
- Setting up of Asset Management Units/TWGs in each agency with representatives from different offices and disciplines

Processing and analyzing the data
- Reporting templates for data gathered and electronic processing and presentation of data, where possible (tables, graphs, charts)
- Training of staff in central, regional and field offices on data analytics and policy recommendations
- Development of civil service cadre of AM experts
<table>
<thead>
<tr>
<th>Keys to Success</th>
<th>National Asset Registry System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication</strong></td>
<td>Clear communication channels – listening to the agencies regarding their needs and relaying to them what needs to be done.</td>
</tr>
<tr>
<td><strong>Consideration</strong></td>
<td>Consideration in dealing with agencies. This new initiative is taxing and complex, requiring the patience and understanding of all concerned.</td>
</tr>
<tr>
<td><strong>Collaboration</strong></td>
<td>Making this a partnership. Agencies must see the value of this initiative and be appreciated as well as key partners in this program, and not just as a source of data.</td>
</tr>
<tr>
<td><strong>Chapterization</strong></td>
<td>Taking it “chapter by chapter”. The program need not be implemented government-wide right away. It can start with selected pilot agencies and then expand incrementally.</td>
</tr>
</tbody>
</table>
# Keys to Success

## National Asset Registry System

<table>
<thead>
<tr>
<th>Linkages with ongoing Initiatives</th>
<th>Institutionalization</th>
<th>Penalties</th>
<th>Clear Guidelines from the Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Environment and Natural Resources Data Management Tool (ENRDMT) for Local Government Units (LGUs) facilitated Philippine compliance with the global Extractive Industries Transparency Initiative.</td>
<td>Issuance of a Department Order making the ENRDMT part of the electronic system for submitting LGU financial statements to the Bureau of Local Government Finance of the Department of Finance.</td>
<td>Revised Department Order that specified penalties for the first, second and third offenses by the local treasurer helps to ensure compliance.</td>
<td>Coordination among the oversight agencies resulting in non-conflicting guidelines will facilitate compliance by agencies and LGUs.</td>
</tr>
</tbody>
</table>
Asset management concepts and good practices

Steven Eglinton
Director, BimEnable & GeoEnable
UK
What I will cover

1) Asset management: first principles, rationale, terminologies and introduction to ISO standards and recommended approaches

2) PAR: components and maturity levels

3) UK experience: early developments to current evolution
What I will cover

1) Asset management: first principles, rationale, terminologies and introduction to ISO standards and recommended approaches

2) PAR: components and maturity levels

3) UK experience: early developments to current evolution
We need to consider *Whole Life Cost* or Total Expenditure (TotEx)
Asset Management – an overview

- Asset management refers to a systematic approach to the governance and realisation of value from assets over their whole life cycles.
- It may apply both to tangible assets and to intangible assets.
- Continual improvement is key.
- ISO 55000 series.
- From UK PAS 55 standard.
Understanding Asset Management

Asset Management and ISO 55000 series

- ‘Asset Management’ is not the same as managing assets!
- It is a long-term, strategic approach to asset management.
- ISO 55000 series sets out the standards.
- We need this same approach to managing our data – a ‘whole-life’ approach.

Coordinated activity of an organization to realize value from assets.

Set if interrelated or interacting elements to establish asset management policy, asset management objectives and processes to achieve these objectives.

Assets that are within the scope of the asset management system.

Managing the organization.

Asset management system.

Asset portfolio.
Key Elements of Asset Management Systems

STAKEHOLDER AND ORGANIZATIONAL CONTEXT

- Determining the scope of the asset management system
  - Asset management objectives

- Planning to achieve asset management objectives
  - Outsourcing (scope)

- Operational planning and control
  - Management of change
  - Outsourcing control

Organizational organizational plans and organizational objectives

- Strategic asset management plan (SAMP)
  - Asset management objectives

- Asset management plans

Implementation of asset management plans

Asset portfolio

Performance evaluation and improvement

Asset management policy

Plans for developing asset management system and relevant support

Asset management system and relevant and support elements

Management of change

- Monitoring, measurement, analysis and evaluation
- Internal audit
- Management review
- Improvement

- Understanding the organization and its context
- Understanding the needs and expectations for stakeholders
- Leadership and commitment
- Organizational roles, responsibilities and authorities

- Asset management system
- Actions to address risks and opportunities for the asset management system

- Resources
- Competence
- Awareness
- Communication
- Information requirements
- Documented information
What I will cover

1) Asset management: first principles, rationale, terminologies and introduction to ISO standards and recommended approaches

2) PAR: components and maturity levels

3) UK experience: early developments to current evolution
Better information help us plan to reduce risk
A PAR provides us with trusted information

- Procuring **quality information** and metadata to enable...

- Data-Driven **Decision-making** about our Assets

Validated Data \[\rightarrow\] Decisions \[\rightarrow\] Actions / Activities

People and Machines (or take no action)
Designing Public asset registries for the whole-life of assets

We need a long term approach with a blend of skills
## Basic components of a public asset registry systems

### Conceptual design of a public asset registry system

<table>
<thead>
<tr>
<th>Asset management modules</th>
<th>Risk and disaster assessment module</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asset registry module</strong></td>
<td><strong>Risk assessment of assets</strong></td>
</tr>
<tr>
<td>- Asset lifecycle management</td>
<td>- Record of disaster events</td>
</tr>
<tr>
<td>- Asset lease</td>
<td>- Post-disaster damage assessment</td>
</tr>
<tr>
<td>- Asset collateralization</td>
<td></td>
</tr>
<tr>
<td>- Asset count</td>
<td></td>
</tr>
<tr>
<td>- Asset Insurance and Prioritization</td>
<td></td>
</tr>
<tr>
<td>- Asset Utilization Management</td>
<td></td>
</tr>
</tbody>
</table>

### Functionalities
- Business Intelligence and Analytics
- Reporting
- Geographical Information Systems (GIS) visualization

### Interfaces
- Financial management or accounting system
- Public infrastructure management system
- Public procurement system

### System administration
- General requirements
- Workflow management
- User administration
- Security management

### Data collection
- Web portal
- Mobile applications
PAR Maturity

**PAR maturity**

**Level 0**
No Integrated Reporting
- Location
- Inconsistent
- Paper or simple database
- PAPER DRAWINGS, MS EXCEL, MS ACCESS

**Level 1**
Inconsistent Reporting
No Analytics
- Standalone or networked
- Manual data input or upload
- Mapping not fully integrated
- No standard input method

**Level 2**
Consistent Reporting
Basic Analytics
- Cadastre
- Land
- Buildings
- Infrastructure
- Utilities
- Networks
- GIS Integrated
- 2D and 3D
- DATABASE, GIS, MDM

**Level 3**
Reporting and Mature Analytics
- Whole Life asset management
- Web-Enabled PAR
- Web Service
- OGC Web Services
- 2D, 3D, 4D, 5D, IoT
- 2D, 3D, 4D, 5D + IoT
- REPORTING, MATURE ANALYTICS, MACHINE LEARNING, BIG DATA
- NATIONAL DIGITAL TWIN
- GEOGRAPHICAL INTEGRATION
- WEB SERVICES
- SENSOR WEB ENABLING
- OBJECT-BASED MODELING

**Level 4**
Big Data and AI
- Integration with Operations
- Integration with Projects
- ISO Standards
- GEOGRAPHICAL OBJECTS, COLLABORATION INTEGRATED, WEB-ENABLED
- INTEROPERABLE DATA
Developing a PAR

Stage 0: Pre-implementation current state and feasibility assessments

Stage 1: Preparatory activities for a comprehensive PAR

Stage 2: Customization, development and implementation of procured IT system

Stage 3: Implement advanced functions of PAR

Continual improvement
What I will cover

1) Asset management: first principles, rationale, terminologies and introduction to ISO standards and recommended approaches

2) PAR: components and maturity levels

3) UK experience: early developments to current evolution
Government Property Data
Existing (Legacy) Technology

Why move from Electronic Property Information Mapping Service (e-PIMS)?
Digital National Asset Register (d-NAR)
Modernising the Government Estate – a transformation strategy

- Backed by Policies and an information management improvement programme
- Stakeholder needs fully understood
- The d-NAR is data and analytics focused
The importance of consistent standards

Julie Christie Dela Cruz
Technical Director, Arcadis GEC
Philippines
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you incorporate government policy into a compatible property strategy and plan which is up-to-date (i.e. reviewed at least annually)?</td>
<td></td>
</tr>
<tr>
<td>Do you have adequate and accurate information about your overall property portfolio?</td>
<td></td>
</tr>
<tr>
<td>Do you have one or more managers solely responsible for property?</td>
<td></td>
</tr>
<tr>
<td>Does the Senior Management team receive regular reports about property and its performance against pre-agreed overall KPIs?</td>
<td></td>
</tr>
<tr>
<td>Does your property help to deliver your services in the way you would like it to?</td>
<td></td>
</tr>
<tr>
<td>Do your customers have a good experience when visiting your properties?</td>
<td></td>
</tr>
<tr>
<td>Do you know how much your property is costing you?</td>
<td></td>
</tr>
<tr>
<td>Do you have a plan to improve service levels, improve occupational efficiency, release capital and reduce recurring expenditure?</td>
<td></td>
</tr>
<tr>
<td>Do you know the extent of your maintenance backlog and what you are doing about it?</td>
<td></td>
</tr>
</tbody>
</table>
Public sector property assets need the right data for the right measures

**METRICS**

- **OPERATIONS**
  - Revenue
  - Expenses
  - Income

- **STAFFING**
  - Business Line
  - Function
  - Count

- **FACILITIES**
  - Location
  - Space Type
  - Square Feet

- **OCCUPANCY COST**
  - Rent
  - Operating Cost
  - Depreciation

- **REAL ESTATE MARKET**
  - Rent, Take-up, Vacancy

**DATA**

- **£500 Million Revenue**
- **5,000 Employees**
- **750,000 Square Feet**
- **£20 Million Occupancy Cost**
- **£20 / SF Class “A” Office**

**MEASURES**

- **OCCUPANCY / REVENUE**
  - 4%

- **SQUARE FEET / PERSON**
  - 150 SF

- **OCCUPANCY COST / SQUARE FOOT**
  - £26.70 / SF

- **OCCUPANCY COST / PERSON**
  - £4,000

- **OCCUPANCY COST / MARKET**
  - 134%

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Completed assets are measured differently, everywhere, resulting in confusion.

- In Spain, residential property measurements often include **swimming pools**.
- In India, floor measurements can include off-site **car parks** as well as common areas.
- In parts of the Middle East, floor measurements can include **hypothetical areas**.
- In the U.S. sometimes the **air-conditioned space** is used instead.
Variations of up to 24% globally can have a **material impact** on asset owners.
International standards now exist to address these issues

International Land Measurement Standards create a globally consistent, fit for purpose, basis of recording and reporting information relevant to land and property transactions. The standards help reduce risk by ensuring consistency, and supporting land governance, robust conveyancing, secured lending and land registration.

International Construction Measurement Standards establish a single, globally agreed approach for presenting construction costs. Standardising the presentation of costs on projects allows:
• More effective global cost comparisons
• Better investment and funding decisions
• Improved cost prediction and management
• Consistent accounting

International Property Measurement Standards establish a single, globally agreed approach to measuring buildings. The standards are incorporated in the RICS Property Measurement Professional Statement, which professionals are required to follow and are regulated against.

International Valuation Standards, adopted in full into the RICS Red Book, establish a single, globally agreed approach to conducting valuations across all asset classes including real property, businesses and financial instruments. RICS reinforce these standards through an active regulation regime for all professionals providing opinions of value.

International Ethics Standards establish high-level, global ethics principles for professionals operating in the land, property, construction and infrastructure sectors. These principles ensure professionalism is delivered consistently and transparently throughout the world.
International standards cover the asset life-cycle
ICMS presents a unique opportunity to improve asset life-cycle performance

- **International Construction Measurement Standards (ICMS)** establish a global standard for assessing project costs.
- ICMS defines what should be included in the calculation of a project’s costs and how the data should be reported, enabling global consistency.
- **Project life cycle costs** play a pivotal role in the financial management of construction projects around the world. They allow critical decisions to be made regarding the relative importance of capital and longer-term costs, which ultimately impact asset performance, longevity, disaster resilience and sustainability.
- **ICMS2** is being released in Sep 2019 and covers project life cycle costs – as well as pure construction costing.
ICMS provides a global project life-cycle cost classification …
ICMS enables consistent reporting for **property and infrastructure** assets
BIM is a data-driven holistic modelling system that is based on 3D CAD
Which of these do you think are the major barriers in your country in the development of a public asset registry (PAR)? (select all that apply)

- Lack of existing data and the need to collect from scratch
- Lack of understanding on IT and implementation solutions
- Difficulty in changing behaviors on how to use the data
- Difficulty in integrating existing data from different sources
- Lack of knowledge on how to implement a PAR
Thank you