

Asset Management Methodologies and Good Practices

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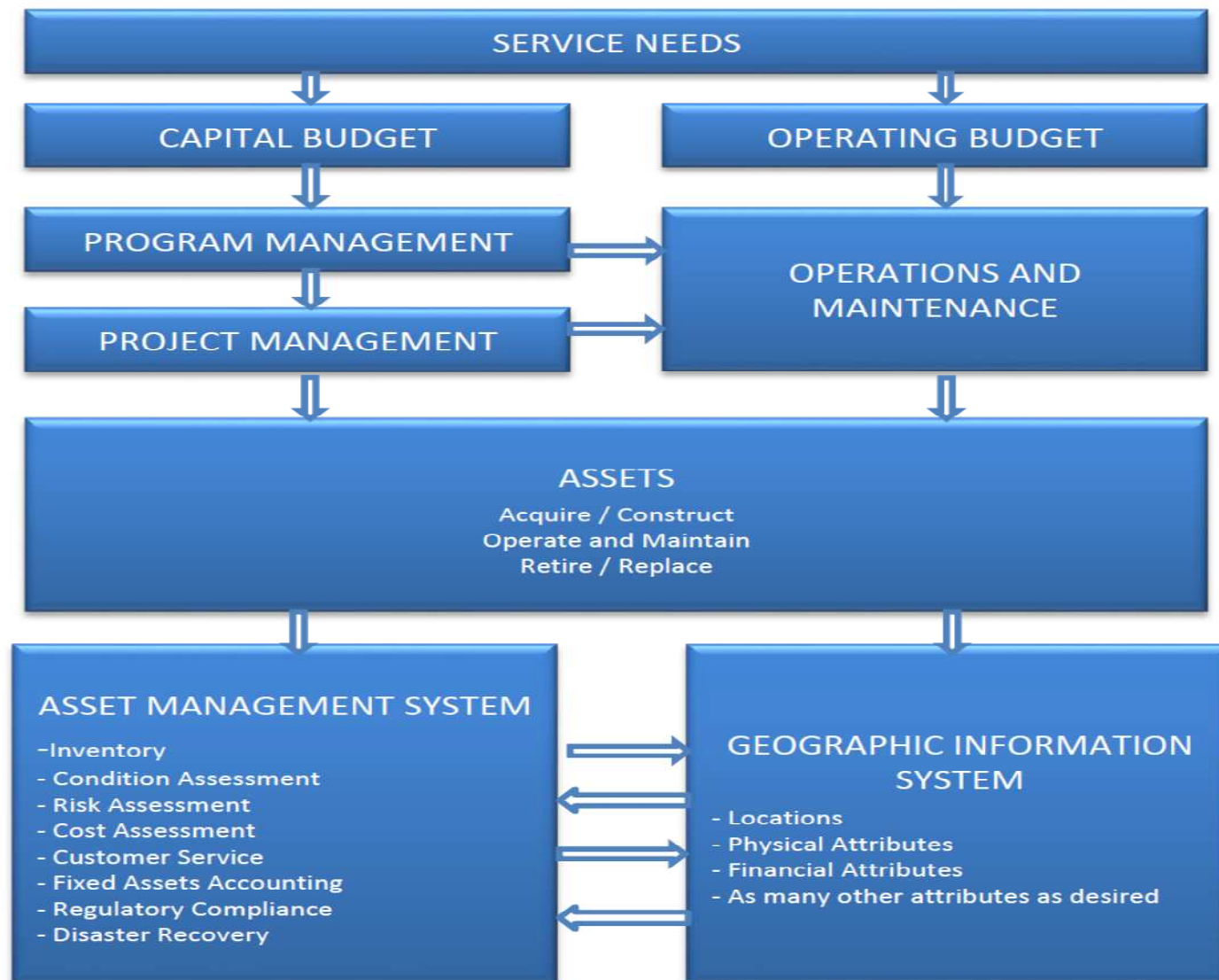
Agenda

- Why asset management?
- Approaches to Asset Management
- Case Studies
 - New Zealand
 - USA
 - Australia
 - South Africa
 - Croatia
- Kenyan Experience

Why is asset management important?

- Asset management is important for a number of reasons
 - First, many public services rely on assets to support their delivery
 - Secondly, assets represent a significant investment that needs to be protected
 - Thirdly, assets are often taken for granted until they fail.
- A failed asset can have negative consequences for an organization including loss of reputation/image and financial losses
- A failed asset can have both social and economic effects on the county or the country
- The primary objective of asset management is to assist organizations in meeting a required level of service in the most cost effective way, and to ensure long term sustainability of the organization

AM Models- Generic Approach



*Report on International Asset
management practices-GIZ*

AM Models-PAS 55

- **PAS 55** : Publicly Available Specification(PAS) for the optimal management of physical assets published in 2008 by the Institute of Asset Management(IAM)in UK
- PAS 55 comprises:
 - Definition of terms in asset management.
 - Requirements specification for good practice.
 - Guidance for the implementation of such good practice.
- PAS 55 provides objectivity across various aspects of good asset management, from lifecycle strategy to everyday maintenance (cost/risk/performance)
- PAS 55 is focused primarily on physical assets, but takes into account other assets as well like human assets, information assets, intangible assets and financial assets
- The PAS 55 was a basis for development of the ISO 55000 standard which was published in January 2014.
- All aspects of asset management are integrated in the overall asset management

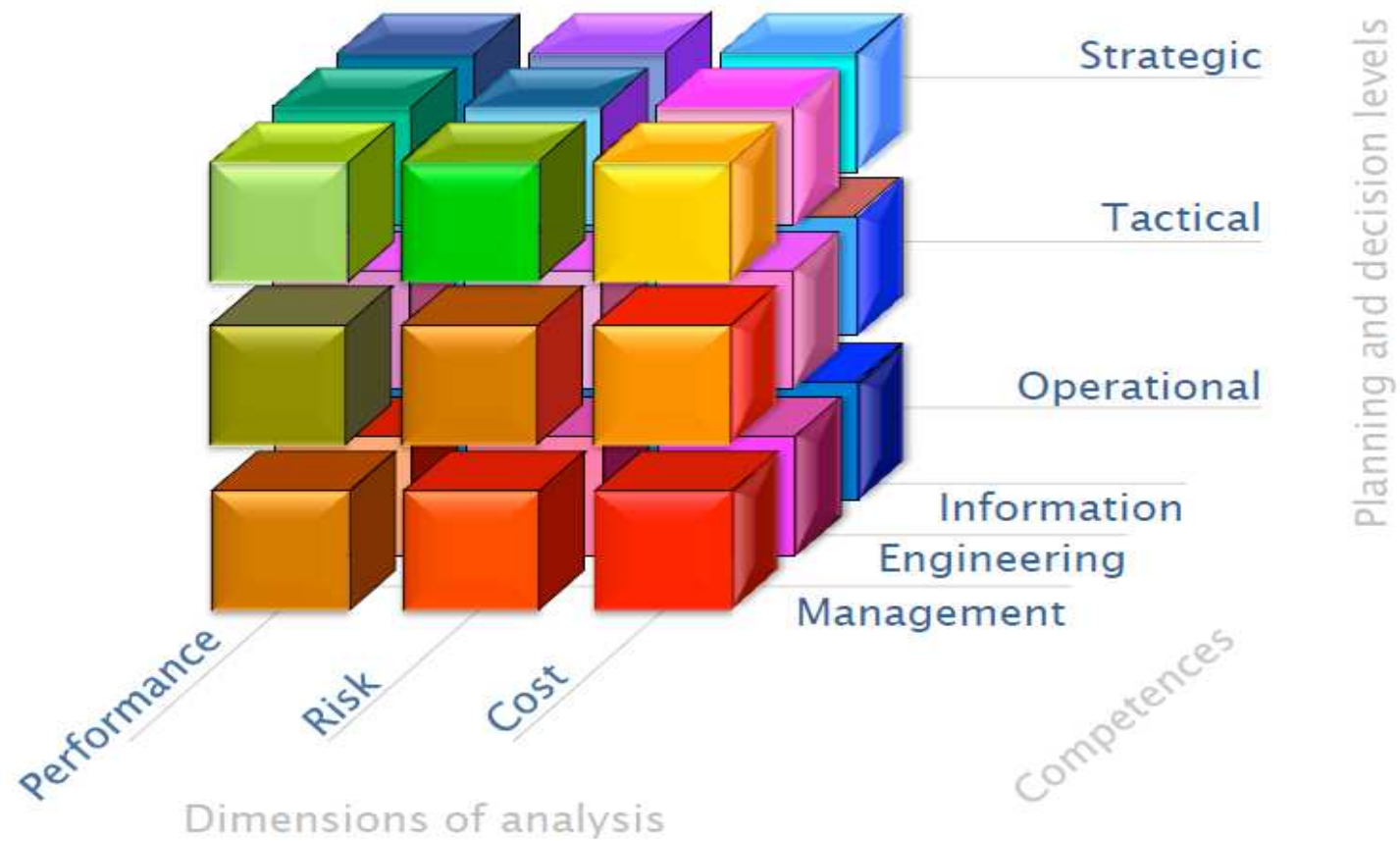
PAS 55



AM Models- AWARE- P

- Aware-P: developed by a team from Portugal and Norway with support from the Portuguese water services regulator ERSAR
- AWARE-P is considered to be the **innovative methodology** for planning infrastructure asset management as it is supported with technical manuals, plan templates, case studies, publications and open-source software tools(water utilities)
- The methods and tools developed under the AWARE-P project are based around an approach which implies three planning decisional levels:
 - **a strategic level**, driven by corporate and long-term views and aimed at establishing and communicating strategic priorities to staff and citizens;
 - **a tactical level**, where the intermediate managers in charge of the infrastructures need to select what the best medium-term intervention solutions are; and
 - **an operational level**, where the short-term actions are planned and implemented

General IAM Approach by AWARE-P



The Common Framework for Capital Maintenance Planning In UK Water Utilities

- UK Water Industry Research Ltd (UKWIR) has developed a framework for capital maintenance planning for UK water utilities.
- Based on the **analysis of risk of asset failure**
- Key concepts for the basis of the framework:
 - Service is assessed using serviceability
 - Capital maintenance should be justified on the basis of current and forecast probability and consequence of asset failure
 - For every capital maintenance option, least-cost approach to Opex versus Capex should be demonstrated
 - Proactive versus reactive
- Consists of three stages:
 - **Historical analysis**, which identifies historical levels of maintenance expenditure and serviceability indicator trends
 - **Forward-looking analysis**, which identifies future maintenance expenditure
 - **Conclusions**, which compares and explains results of historical and forward-looking analysis and makes the case for the required level of future maintenance

The Integrated Strategic Asset Management (ISAM) Approach

- ISAM framework focuses on the public sector, it is equally applicable to any organization or sector. Australian Asset Management Collaborative Group with support from CPA Australia
- The framework reflects the increasingly complex and interconnected processes which government and its agencies need to take into account when delivering services. The framework demonstrates that ISAM is cumulative and each component is interdependent. A logical progression through each component is required for maximum service delivery outcomes.
- ISAM framework focuses on an integrated approach to managing built assets and considers human and ecological elements. It also highlights that organizations can work together to deliver maximum outcomes.

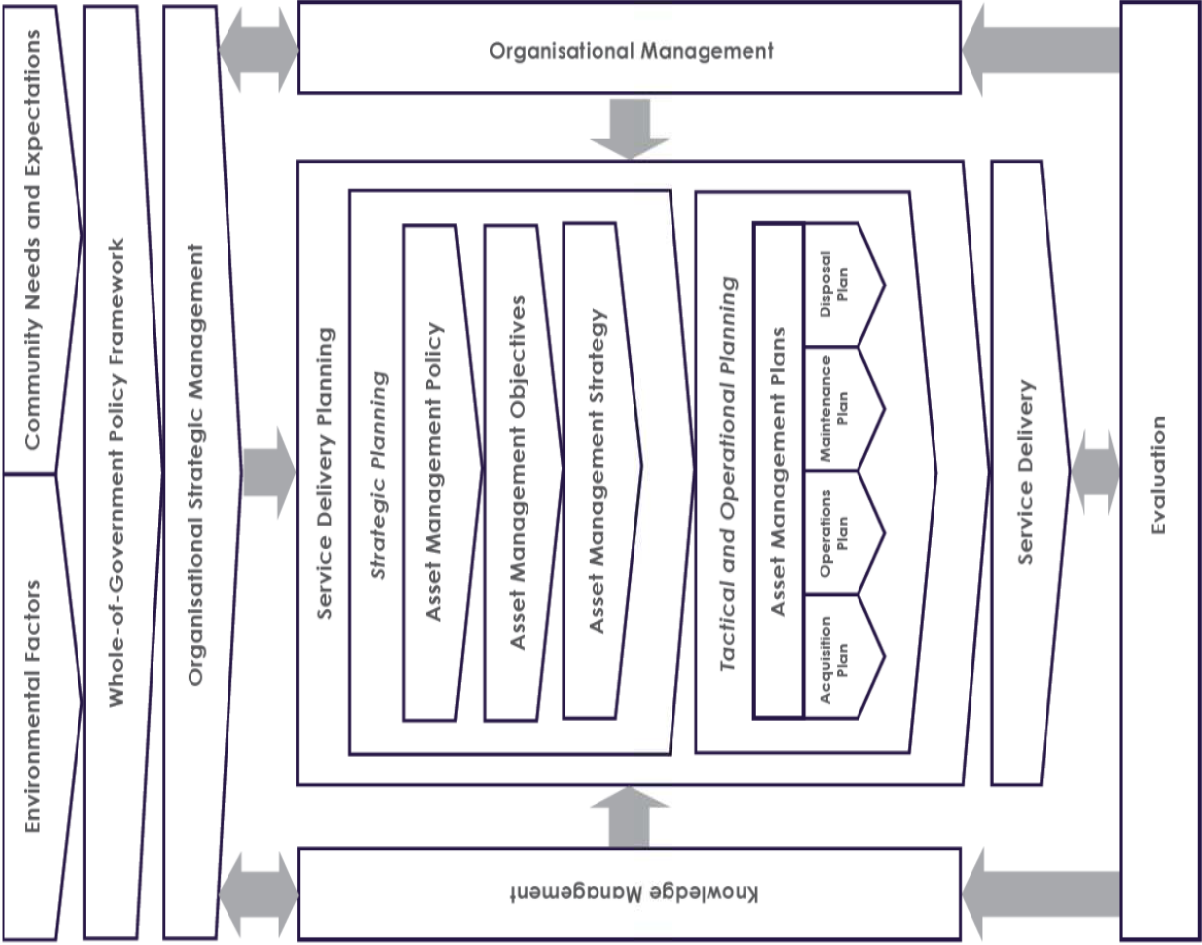
The Integrated Strategic Asset Management (ISAM) Approach

ISAM takes into account the following elements;

- **Environmental:** Greater appreciation of the interaction between built assets and the natural environment
- **Sustainability:** Ensures that the social, economic and environmental needs of a community are met and kept healthy for future generations
- **Resilience:** Increased emphasis on the asset, environment and the community to respond to and recover from external impacts
- **Whole of life asset management:** Requires that decisions and actions across the entire lifecycle of the asset from design to disposal be considered.

The Integrated Strategic Asset Management (ISAM) Approach

- **Increased community demands:** information and communication technology (ICT) advances have led to higher citizen expectations for immediate and localized services. Closer alignment of policies, resources and projects will deliver better quality, more efficient and timely built assets
- **Information management:** Information needs and capabilities are more demanding and complex
- **Expanded governance arrangements:** Assets are now owned, governed and operated by an expanded set of decision-makers.
- There is now an array of hybrid models such as public-private partnerships, alliance and relational contracts. This creates unique risks and opportunities and requires innovative and variable governance approaches to manage



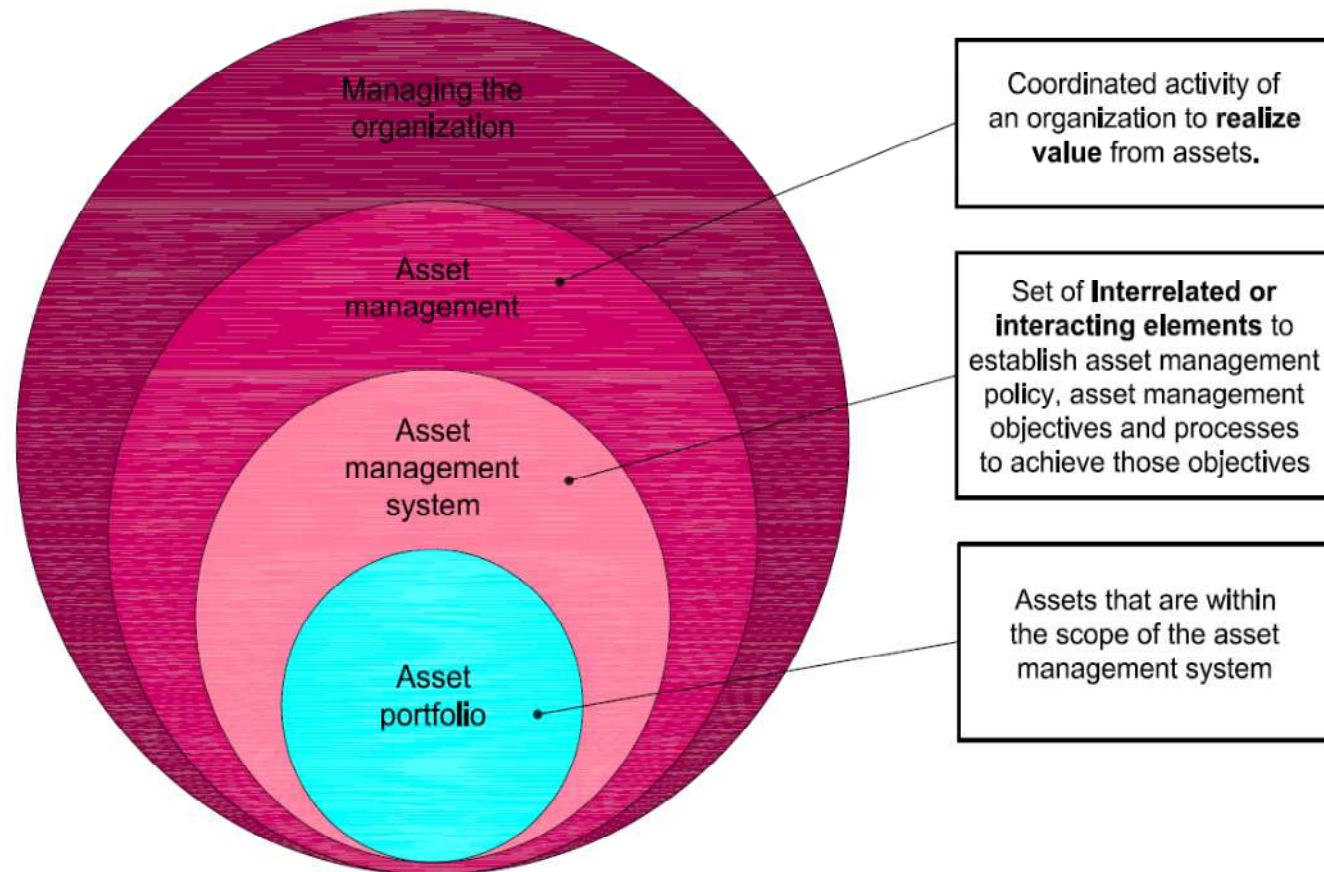
ISO 55000:2014 – AM Standard

- ISO 55000:2014 released by ISO (*British Standards Institution(BSI) working with the Institute of Asset Management(IAM) in 2014*)
 - Provides an overview of asset management, its principles and terminology, and the expected benefits from adopting asset management.
 - Expands from physical assets to include all types of assets (except HR and Financial)
 - Applicable to all types and sizes of organization
 - Forces organizations to define the ‘value’ assets provide, not the cost
 - Brings finance into the equation
 - Breaks down silos

ISO 55000:2014 – AM Standard

- It's not really about managing assets; it's more about actually delivering the business objectives by extracting value from assets in particular by integrating asset management and process safety principles
- The ISO 5500x family comprises three documents
 - **ISO 55000** provides an overview of asset management and the standard items and definitions to be used
 - **ISO 55001** outlines the requirements specification for an integrated, effective system for assets
 - **ISO 55002** provides guidance on how to implement a compliant system

Relationship Between Asset Management and Strategic Management of an Organization



AM Council Models

- AMBOK-Australia: Framework for Asset Management
- Defines a set of four Principles of AM which should directly influence an organization's asset management systems and plans.
- These principles of asset management are:
 - Output Focus
 - Capabilities
 - Level Assurance
 - Learning Organization

AM Council Models

- **Asset Management Concept Model:** Conceptually presents the basis of successful asset management.
- **Asset Management System Model:** Illustrates the key components of an asset management system and how they inter-relate.
- **Organizational System Model:** Depicts the typical components of an organisation's management system and how they integrate.
- **Capability Delivery Model:** Schematically presents processes, within a number of disciplines, that may be used in part or entirety, to deliver successful asset management.
- **Maturity Model:** conveys the extent to which leadership, culture, human performance and the asset management system are integrated into the whole organisation, while contributing to its success.

Case Studies-New Zealand

- **Audit New Zealand/Office of the Auditor-General Report:** *Asset management for public entities: Learning from local government audit of the asset management planning for 72 local authorities*
- **Conclusions**
 - asset management needs a planned approach, with those involved well organized and clear about what is expected of them
 - asset management needs to be integrated with other planning, considering funding sources and available finance
 - good planning relies on good quality data but data systems can only be as good as the way in which they are operated
 - levels of service need to be clear, explicit, and make sense to asset managers and service users
 - lifecycle asset management strategies need to be comprehensive and clearly set out
- The best organizations make the most of the people they have available
- Updating an asset management plan can be a huge task if left too long – the best keep their planning fresh
- The best at managing assets recognize that levels of service are the absolute heart of good asset management.

New Zealand

- **Learning to avoid the pitfalls**
- You should avoid some of the pitfalls observed;
 - being seen to be doing “something”, exemplified by long plans, incomplete templates, and generic content that says nothing about local issues
 - “running before you can walk”, exemplified by initiatives such as optimized decision making that does not result in an optimum solution
 - insufficient interest by senior management
 - failure to use scarce resources effectively or share experience with other organizations
 - unclear “levels of service” with poor distinction made between technical and customer-facing levels of service; and
 - confusion between levels of service, levels of provision, customer satisfaction surveys, performance measures, performance indicators, and performance targets
 - lack of external scrutiny to expose planning to fresh perspectives

New Zealand : Effective improvements

- **Make it matter:** make asset management part of your organization's culture. This requires leadership.
- **Make it fit:** asset management is an integrated process that needs to be carried out in a coordinated way. It is a multidisciplinary process that involves engineers, financial and corporate planners, and policy makers who need to work together and respect each other's contribution.
- **Support it:** have a champion, someone who can co-ordinate your asset management. Someone with good project management skills
- **Make it easy:** managing assets can be complex, but you can use templates, clear standards, and concise plans to make the task of writing a plan manageable
- **Keep on top of your asset information:** continually maintain the information you need to manage your assets to build up its accuracy and reliability

New Zealand : Effective improvements

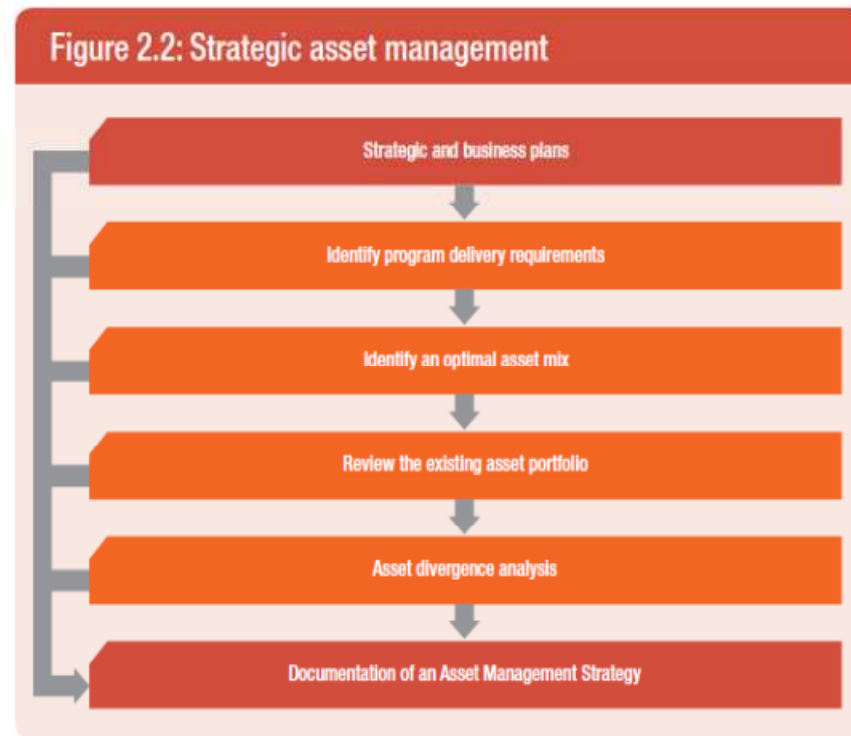
- **Manage risk**, but do not over-complicate
- **Talk to your community:** they use your services now, and are likely to have a strong interest on behalf of future customers (who will include their children and grandchildren).
- You also need to consider “inter-generational” fairness – you should not be incurring unsustainable debts or creating other problems for future taxpayers
- Your community can help you determine priorities and levels of service. Local people can give you an informed view about priorities and how assets work in their community.

United States

- Government Accountability Office(GAO) report :*Comprehensive Asset Management has Potential to Help Utilities Better Identify Needs and Plan Future Investments*
- **Findings:**
- U.S. drinking water and wastewater utilities reported benefiting from applying the concepts of asset management to their operations
- Utilities are seeing **benefits** from;
 - improved decision making because they have more accurate and integrated information about their capital assets and
 - more productive relationships with governing authorities, ratepayers, and other stakeholders because they can provide better information in a more transparent way.
- Utilities reported that collecting accurate data about their assets provides a better understanding of their maintenance, rehabilitation, and replacement needs, which helps utility managers make better investment decisions
- **Challenges** associated with implementing asset management included;
 - collecting and managing needed data and
 - making cultural changes necessary to integrate information and decision making across departments.
 - Utilities also reported that the shorter-term focus of their governing bodies can hamper long-term planning efforts

Australia

- Australian National Audit Office issued a better practice guide on asset management: *Delivering agreed outcomes through an efficient and optimal asset base*
- In order to achieve the primary objective of strategic asset management, better practice entities have a sound understanding of their asset portfolio and how these assets are used in producing and sustaining program delivery at an optimal level.



South Africa

- National Treasury has issued comprehensive asset management guidelines
- Guide lines address;
 - Coordination between departments
 - Effective asset management
 - Governance and internal controls
 - Asset registers
 - Accounting for capital assets

Croatia

- Asset Management Model For Local Government- *USAID and Urban Institute of Croatia (LOCAL Government Reform Project 2000-2007)*
- Developed and implemented in the City of Varaždin
- The Asset Management Model consists of ten major recommendations, as follows:
 1. Introduce a new system of data maintenance for each real property unit
 2. Transitional issues
 3. Property classification
 4. Real estate and business appraisal
 5. Operating statements for income generating properties
 6. Intensive financial analysis of projects, properties and portfolios
 7. Deregulation of business rentals
 8. Reporting on property
 9. Management consolidation
 10. Strategic planning

Kenyan Experience

- Constitutional and legal requirement for AM
- **ICPAK:** *Public Finance Building Blocks for Devolution(Devolution Baseline Survey 2014)*
 - Counties started implementing devolution through the weak local government framework
 - Poor infrastructure and inadequate facilities at the local level
 - County Public finance systems and infrastructure should be strengthened
 - Lack of assets inventory compromises the quality of financial reporting
- ICPAK-first seminar in Kenya on asset management
- **PWC** - Ministry of Land, Housing and Urban Development report: *Development of policies and procedures for the transfer of assets and liabilities and debt resolution systems(15 KMP beneficiary local authorities(July 2014)*

Kenyan Experience

- **Auditor-General:** frequent qualifications on AM (governance and accountability)
- **TA-JTT report:** *Unaudited report on the inventory of assets and liabilities for all defunct local authorities in Kenya*
 - Legal mandate: TA and gazetted TCTAL
 - Inter-agency approach
 - Stakeholder engagement
 - Public participation
- **Observations:** Numerous issues involving governance and accountability of assets;
 - incomplete records
 - Unreconciled balances
 - Lack of ownership documents

Conclusion

