Assets and the City

Strategies for infrastructure productivity in the urban environment

Global Infrastructure Hub
Shanghai
February 25th 2016
Urban infrastructure is in growing need for productivity

Owners and operators of urban infrastructure are struggling to balance current and future needs, whilst living within constrained means...

- By 2030, most urban infrastructure (utilities, public transport) will need some replacement/upgrade.
- Citizens have higher expectations, and access to mass media to influence decision makers.
- By 2050, 50% more people will live in cities, some doubling in size in 15 years.
- Most cities do not have the resources to meet the demands on them, now.

...We need to become more productive, to create substantially more output from less resources
Public asset infrastructure value is created and sustained by managing the trade-offs between service, risk and expenditures over an asset’s lifecycle. Understanding these factors, and their contributors, help us to...

- Align assets and service delivery with current and future objectives
- Manage the asset risks associated with meeting these requirements
- Optimize asset lifecycle Totex and minimize total cost of ownership

The push for better asset management for public infrastructure is being supported at many levels: Federal, Regional and Local.
Asset Management continues to evolve…

From small steps to **International Standard**…

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### Asset Management Evolution

- **Pre 1990s**
  - Vague practices of asset management

- **1990s Early years**
  - Concept emergence, introduction of International Infrastructure Management Manual

- **1990s**
  - Asset replacement and investment decisions based on costs alone

- **2000-05**
  - Reliability-Centred Maintenance (RCM)
  - Large investments in systems and data technology

- **2005-10**
  - Customer Outcomes and Whole Life Efficiency drive Risk Based Investment decisions

- **2010-15**
  - 2014 – ISO55000 series published

- **2015-20**
  - Where to, next?
Asset Management proven results in delivering value

Case studies – Benefits of adopting Asset Management practices…

Leading Electricity Transmission Operator in Europe

- 10-20% reduction in total Opex within four years
- 5-15% saving in major projects whole life costs
- 25% sustainable savings in spares held
- 28-50% reduction in planned downtime
- 60% reduction in safety incidents
- 10-30% increase in customer satisfaction

One of the largest Oil and Gas Companies in the world

- 40-50% reduction in total Opex within four years (over USD 220 million)
- Production up time raised by 17% over four years
- Production cost reduced from $15/bbl in 1980’s to current level of $2/bbl
- USD 8-12 million saved in new plant construction
- 60% inventory reduction in material service company
- USD 78 million production losses per annum avoided in North Sea
Infrastructure Asset Management reviewed the challenges facing asset owners and managers in 2015, “Leveraging an organization's data” was identified as No 1 priority…
Leading organizations have integrated their asset register, financial systems, investment planning, and work order management system to improve balance sheet, efficiency...

**Detailed asset register:**

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**Aggregated view on asset portfolio level:**

- AC
- Metal
- PE
- PVC
- Undetermined

Link with GIS for geographical representation:
The case for Asset Management is straightforward. Urban infrastructure owners and operators have the opportunity to **leverage their investments in technology** at the asset level.

- Leadership Commitment
- Your data is an asset
- Collaboration within the organization
- Remove decision making bias

- ✓ Transparency & Governance
- ✓ Operational Resiliency
- ✓ Enhanced Service Delivery
- ✓ Bottom Line Cost Reduction
- ✓ Improved Decision Making
- ✓ Long-Term Sustainability
KPMG role as thought leaders offers deep industry insights to urban infrastructure clients

Selected KPMG publications…

Assessing the value of Infrastructure investments
Assesses the “true” value of infrastructure investment and explores the current infrastructure investment assessment and prioritisation process in three merging markets – Brazil, India and South Africa – as well as the UK.

Who controls our infrastructure
Explore some of the big challenges and trends influencing the debate around control. Taken together, their viewpoints and experiences paint a telling picture of the ongoing debate now at play across the sector.

Infrastructure 100 – World Markets Report
A report showcasing 100 best-in-class infrastructure projects and key trends driving infrastructure investment around the world.

KPMG’s 2011 Energy Survey
Provides quantitative findings on executives’ outlook on oil prices, industry challenges, impact of shale oil and gas, R&D investment in alternative energy, clean energy sources, capital spending, M&A, the global workforce, and operating costs.

Prospects for the Central and Eastern European Market
Compiled to report on and frame prospects of development till the year 2020, specifically in light of the preset economic environment.

Power & Utilities Profile and Perspectives
Contains a broad overview of KPMG’s experience and expertise in the industry, including partner perspectives from around the world.

Green Power 2011
Provides insight into global mergers & acquisitions (M&A) activity in the renewable energy sector. The findings are based on a survey of 500 senior executives active in the renewable energy industry worldwide.

Powering Ahead: 2010
Provides an insight into the global M&A activity in renewable energy. The findings are based on a survey of over 250 senior executives active in the renewable energy industry worldwide.
KPMG Asset Management thought leadership provides insights and guidance

ISO 55001: a new era for asset management

ISO 55001: Build an international competitive advantage

IAM – Asset Management: An Anatomy

Published in the Sunday Times, UK, May 2014

International Case Studies in ISO55000 implementation guides and client experiences

Evolving asset management

A business-driven approach