



2nd IWA Leading-Edge Conference & Exhibition on **Strategic Asset Management**

Successfully Implementing Asset Management in a Changing World

Tony Urquhart

LESAM 2007 – Lisbon 17-19 October 2007

Agenda

- Megatrends
- Common Global Challenges
- Global Evolution of Asset Management
- State of the Practice
- People and Change
- Summary and Conclusion



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Megatrends Shaping the World

Megatrends

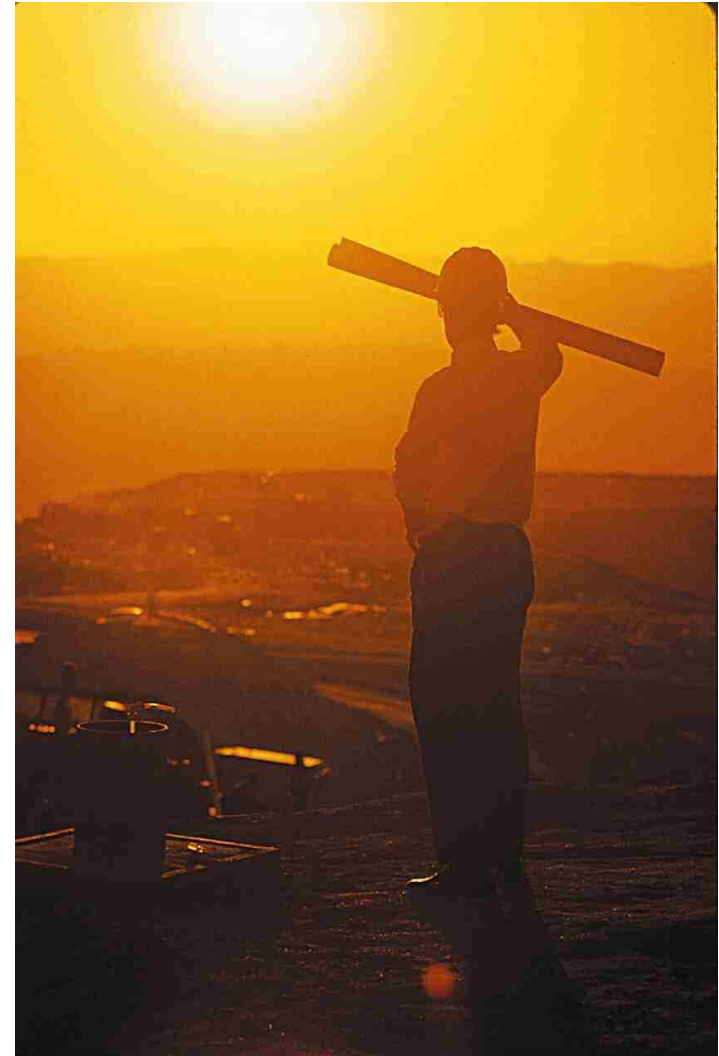
- *“Large social, political, or economic changes that are slow to form, however once in place, their influence can last decades”*

Current Global Trends Positively and Negatively Impact Quality of Life

- Climate Change
- Infrastructure Age and Needs
- Globalization
- Geopolitics
- Emerging Technologies
- Bimolecular Evolution
- Demographics
- Scarcity of Resources

The Big Picture

- **Utilities and municipalities manage the world's largest portfolio of infrastructure assets**
- **Improving management of infrastructure improves the allocation of scarce financial resources:**
 - Inefficient infrastructure investment can place a major burden on public finances, diverting resources that might otherwise go into education, healthcare and meeting other social objectives
 - Enhances economic growth
 - Improves living standards
 - Improved environmental sustainability
- **The community is a major investor in infrastructure and therefore has an interest in ensuring it is well managed**

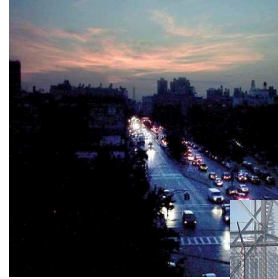




Common Global Challenges

Common Drivers for Asset Management

- Regulatory requirements
- Aging infrastructure and renewal requirements
- Increasing demand
- Political and economic influences and pressures
- Requirements to justify infrastructure investments
- Need for cost effective programs
- Drive to accomplish more with less



Asset Management is Invisible.....



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.....until something goes wrong!



- Brooklyn, NY - Workers feverishly attend to broken pipes after a water main break closed down businesses and schools in the area
- Construction company workers said "the pipes were so old they had to break some time."

... Did they?



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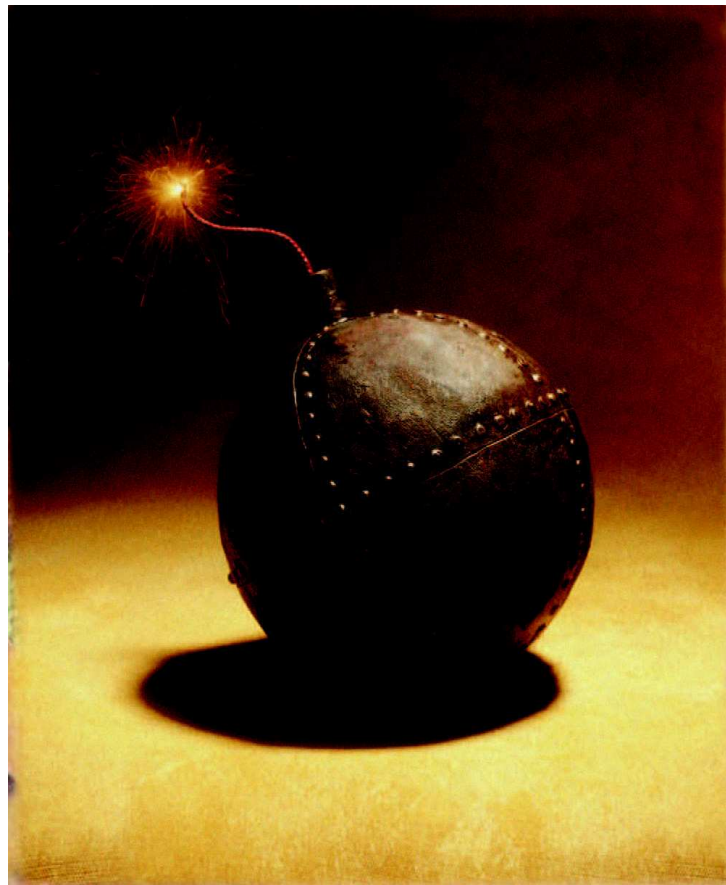
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Is Infrastructure decay a time bomb?





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Infrastructure Report Cards



US Infrastructure Report Card

	<u>2001 Grade</u>	<u>2003 Trends</u>
Roads	D+	↓
Bridges	C	↔
Transit	C-	↓
Aviation	D	↔
Schools	D-	↔
Drinking Water	D	↓

	<u>2001 Grade</u>	<u>2003 Trends</u>
Wastewater	D	↓
Dams	D	↓
Solid Waste	C+	↔
Hazardous Waste	D+	↔
Navigable Waterways	D+	↓
Energy	D+	↓

Bottom Line - All Categories	2001 GPA
Total Investment Needs:\$1.6 Trillion	D+



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US Infrastructure Report Card

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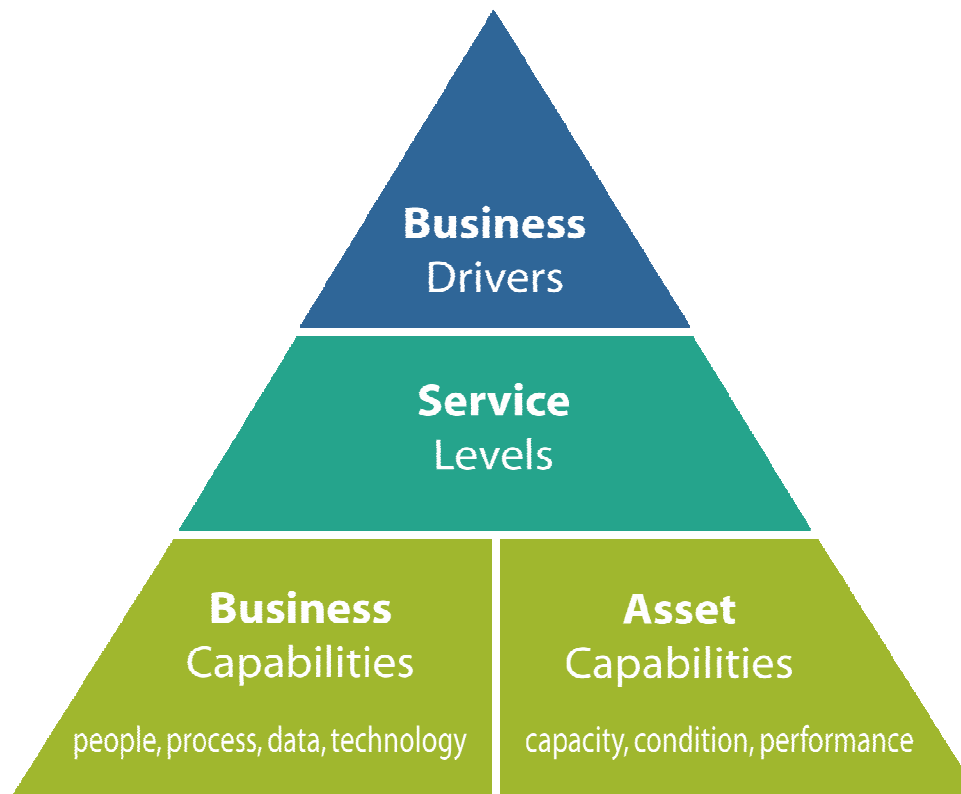
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Evolution of Asset Management – Case Studies

A Model for Asset Management



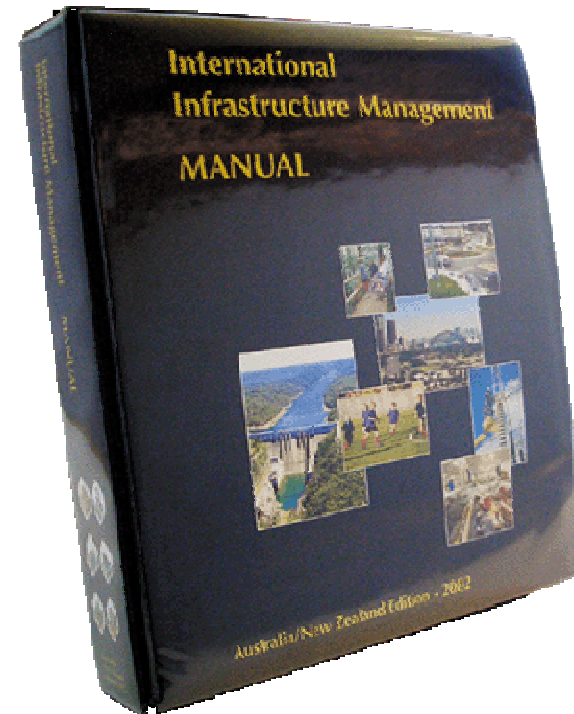
The Evolution: New Zealand

- Population: 4 Million
- 72 Public Water/Wastewater Utilities
- Asset Management Semi-Regulated
- Customer Focus and Continuous Planning



The Results: New Zealand

- New Zealand Infrastructure Asset Management Manual
- Intensive Series of Workshops
- National Implementation through Common Decision-Making and Management Tools
- Demonstrate Customer Consultation
- Audited Asset Management Plans



The Evolution: Australia

- Population: 20 Million
- 200 Public Water/Wastewater Utilities
- Asset Management Regulated at State Level
- Customer-Focused Regulation
- Water Resource Scarcity



The Results: Australia

- Australia Infrastructure Asset Management Manual
- Regulating Performance by Comparison
- WSAA Benchmarking
- Varying Implementation Due to Differing Frameworks from State to State
- Current Industry Issue is Scarcity of Water



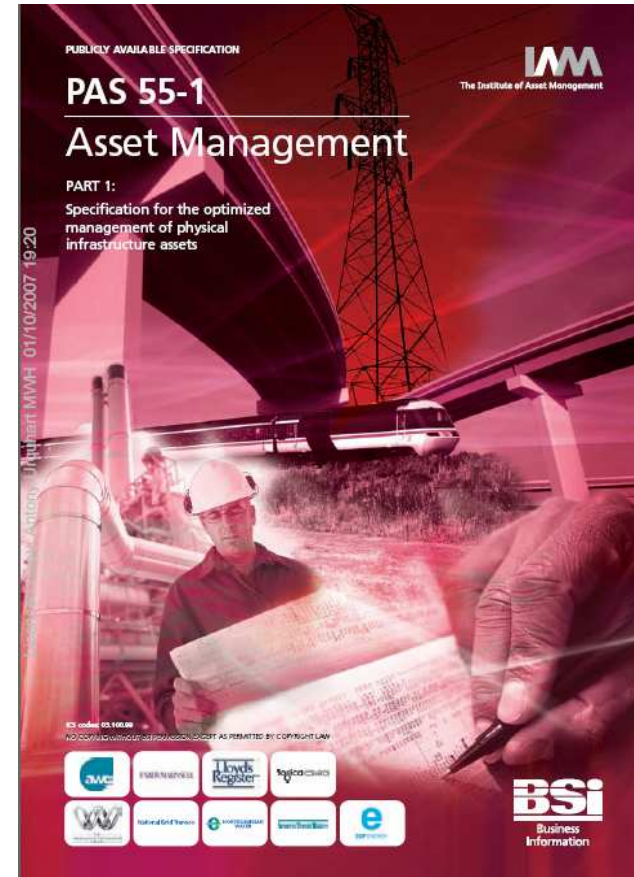
The Evolution: United Kingdom

- Population: 60 Million
- 27 Private Water/Wastewater Utilities
- Asset Management Highly Regulated
- Regulator Acts for Customer



The Results: United Kingdom

- Five-Year Asset Management Plans (AMPs)
- National Regulator (Ofwat)
- Robust Business Cases and Comprehensive Approach and Framework
- Investment Focused – Optimize assets to deliver required standards
- Asset Management Developing as a Practice



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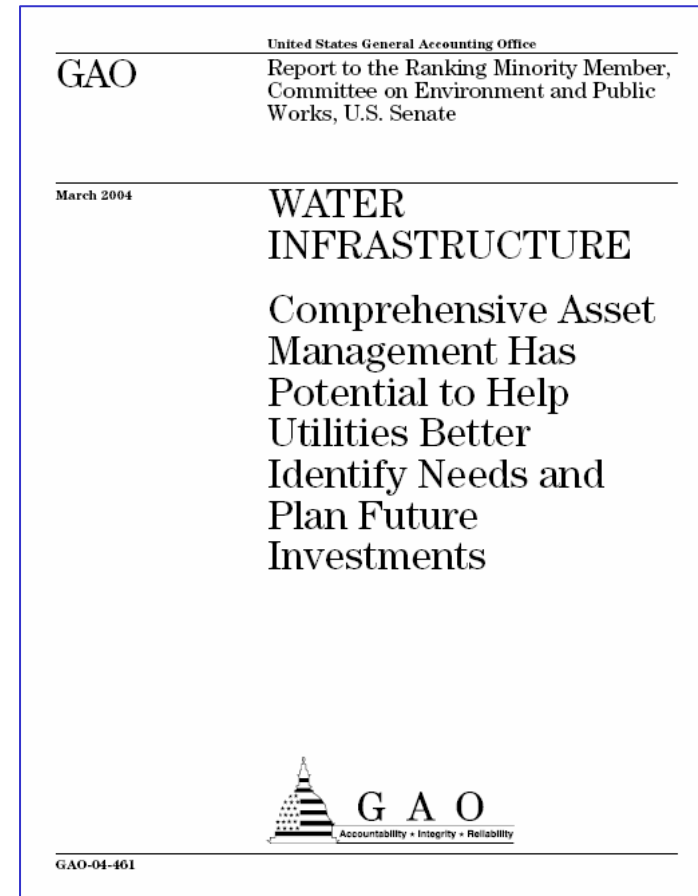
The Evolution: United States

- Population: 295 Million
- 70,000 Water/Wastewater Utilities
(Public and Private)
- No Real Regulatory Driver
- Municipal Governance
- Strong Political Influence
- Technology Focused



The Results: United States

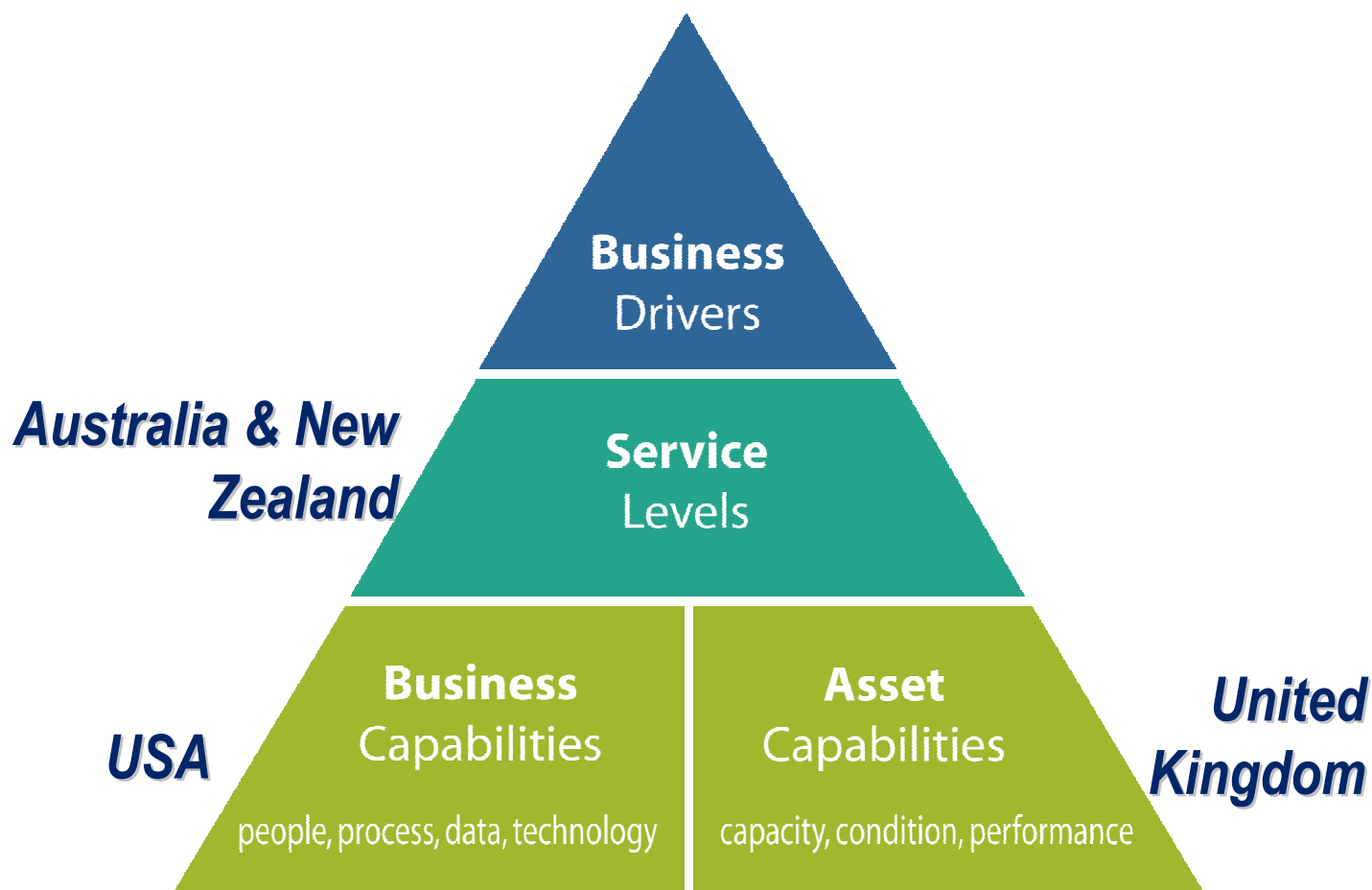
- American Public Works Association (APWA) Subcommittee
- Water Environment Research Federation (WERF) Projects
- AwwaRF Research Projects
- Environmental Protection Agency (EPA) Workshops and Collaborative Sessions
- GAO Report
- Awareness growing rapidly at the industry level
- Political buy-in/awareness lacking



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So Where Do “Best Practices” Come From?



Success Factors are the Same Globally

- **An AM Culture** - Getting people on board - culture and change management. Creating urgency!
- **A Strategic Intent** - A vision of where asset management can take the organization
- **A Process View** - Focus on 'end to end' value producing processes
- **The Right Structure** - organization structure based on process rather than function
- **The Right Information** - Data requirements driven by decision-making needs
- **The Right Technology** - driven by process and data requirements using systems integration



People and Change Management

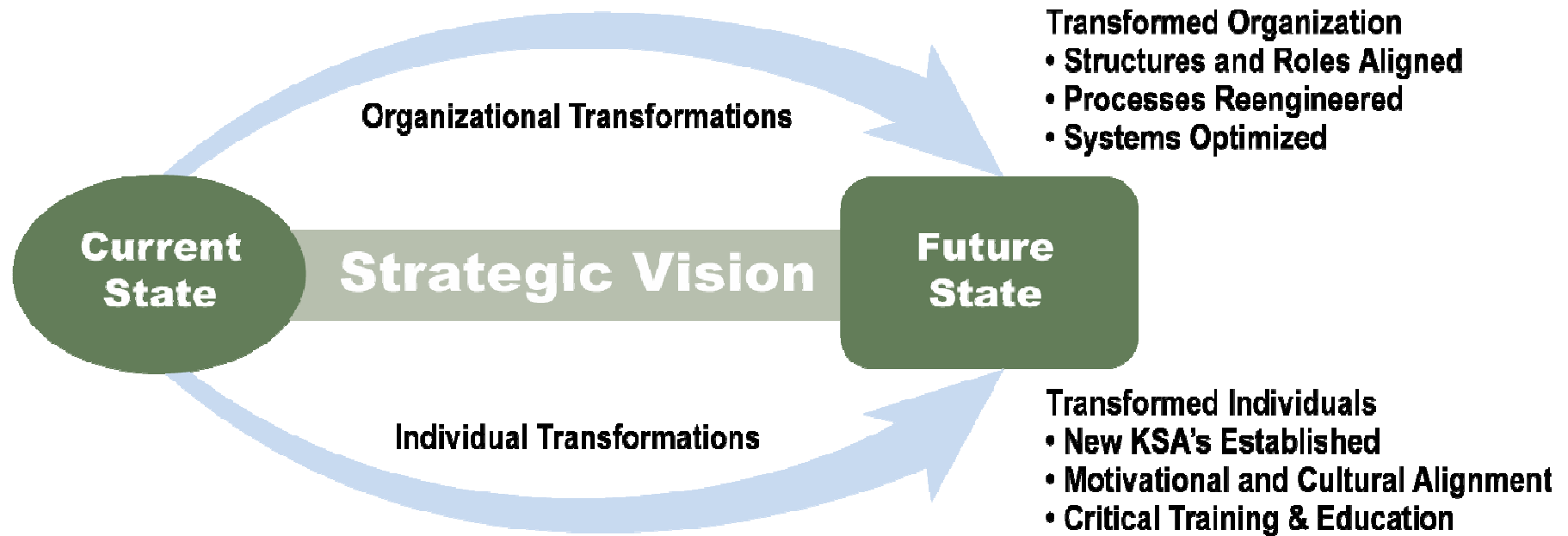
Asset Management Involves People



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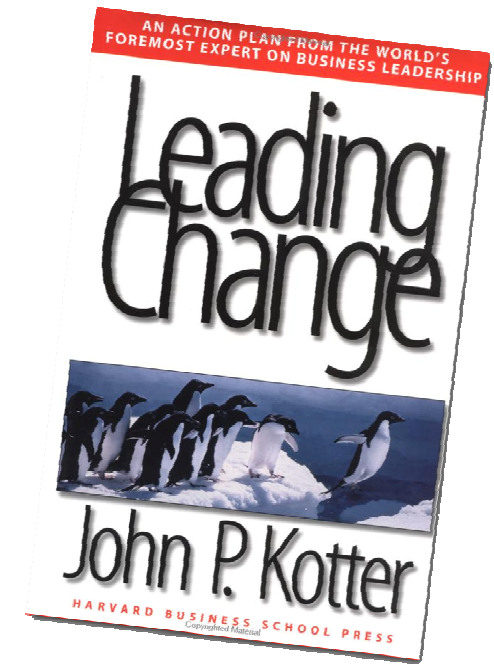
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Successful Asset Management Requires Political, Industry, Organization and Individual Change



Eight Steps to Change

- Establish a sense of urgency
- Create the guiding coalition
- Develop a vision and strategy
- Communicate the change vision
- Empower broad-based action
- Generate short-term wins
- Consolidate gains and produce more change
- Anchor new approaches in culture





Lessons in “Change” from Climate Change



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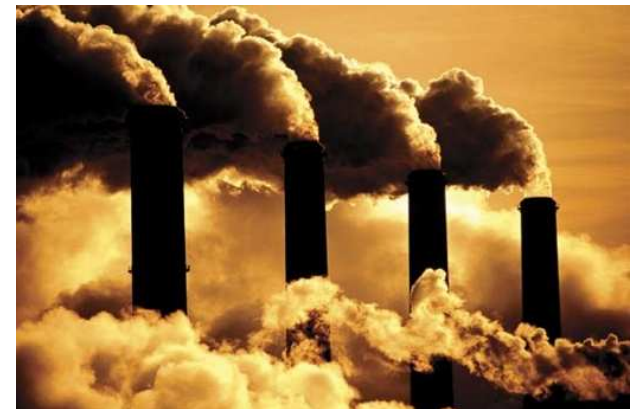
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Summary and Conclusion

We Are Competing For Attention with Some Big Issues

- Climate Change
- Infrastructure Sustainability
- Globalization
- Geopolitics
- Emerging Technologies
- Bimolecular Evolution
- Demographics
- Scarcity of Resources



Re-Branding Asset Management

- Asset Management is **Sound Business Practice** applied to asset rich organizations
- The goal is **Sustainable Built Infrastructure**
- The need is **Urgent**
- It will **Save Significant Money** for dealing with other big issues



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Global Issue of Infrastructure Sustainability Requires Global Response

- Establish a Sense of Urgency
- Form a Team with the Power to Lead
- Formation of Global Asset Management Institute
 - Identify and provide access to the Asset Management Body of Knowledge
 - Standards and guidelines
 - Competency standards



A SUSTAINABLE BUILT ENVIRONMENT

