

Our role in addressing today's challenges

Dr. Christian Roberts – President, Institute of Asset Management Principal, Infrastructure – KPMG

Now is our time | Shift in focus – Economic value, Societal value and Long-term value



New value drivers for infrastructure: **Economic** value, **Societal** value – equity and well-being, and **Long-term** value – including climate resilience and sustainability.

| Today - A significant investment in Infrastructure: | A decade of growth – driven by: | Recognition that challenges extend beyond maintenance: | | | |
|--|--|---|--|--|--|
| US construction market value \$1.4 trillion (2020). | Infrastructure deficit – \$2.5 trillion funding gap from decades of decline in funding and urgent need | Funding – Infrastructure Deficit requires alternative funding solutions | | | |
| Record government spending in infrastructure * \$1.2 trillion (IIJA). | to address SOGR. Climate resilience – Urgency to address asset | ESG – Significant rise in new ESG related capital sources. Only 39% have defined strategies for ESG | | | |
| 22.7% increase in smart city technology by 2025. Market value ~ \$68 billion | resilience to ensure infrastructure can continue to provide the fabric of society. | Workforce Exodus – Resulting from "baby boomer" retirement, and younger generations seeking more | | | |
| Real estate market value ~ \$9.6 trillion | Path to Net-Zero – 70% of the worlds GHG comes from infrastructure. | meaningful work. Supply Chain – Ongoing supply chain disruptions | | | |
| 42% increase over last two years in assets under management using sustainable investment | Energy Transition – A shift to renewable energy requires significant infrastructure investment ~ \$4.5 | impacting capital delivery. | | | |
| strategies. ESG asset value expected to be \$53 trillion by 2025. | trillion to convert US grid. | Transparency – Increased funding is driving calls for improved audit and review. | | | |
| Two thirds of asset owners are expanding their capital programs – with 30% of developers and contractors expect over 10% growth. | Equity and Well-Being – Addressing the widening society equity gap requires purpose led infrastructure investment. | Technology Gap – EAM market value ~ \$5.5billion by 2026, plus expected investment in IoT, AI and other technologies. | | | |
| | Expectations and Demand – Shifts in use of infrastructure as a result of the technology opportunity and driven by society demands. | Cyber-Security – 60% increase in cyber-crime. Infrastructure is the modern battleground. | | | |
| © 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved. | | | | | |

Asset Management vs. Managing Assets | Shovel Ready vs. Shovel Worthy



Managing Assets

- Maintaining asset performance
- Lifecycle activities
- Fault management
- Asset location, inventory and condition
- Work management
- Shovel READY



Asset Management

- Delivering value and longterm outcomes
- Lifecycle management
- Organization performance
- Asset criticality, risks, costs and performance
- Total costs of ownership
- Shovel WORTHY

© 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved.

Bipartisan Infrastructure Law (IIJA) | unprecedented funding bill based on asset management principles

- Unprecedented: Authorizes \$1.2 trillion on infrastructure
- Value Driven. Future Focused: Based on asset management principles:
 - * Economic Value: Recognizes that to remain competitive requires modernization of infrastructure
 - * **Societal Value:** Acknowledges infrastructure's impact on well-being and social equity
 - Planning for the Long-term: Acknowledges the impact of infrastructure on the effects of climate change, and the need to build the capabilities of the future. Includes introduction of infra-innovation.
 - Acknowledged need to be shovel ready: However lessons learned from 2008, need to move beyond shovel ready to support recovery. Need to be planning ready.
- Critical and Social Infrastructure broad provision:
 - \$621bn Transportation Infrastructure (EV and charging infra, modernize highways, transit and airports improve resilience, reconnect neighborhoods, improve ports).
 - \$590bn Domestic Manufacturing and R&D (modernizing supply chain, financing programs, semiconductor manufacturing, clean energy, research infra).
 - * \$400bn Home care services and care workers
 - * \$400bn clean energy tax credits
 - * \$328bn Social infrastructure (housing, schools, child-care facilities, VA hospitals and federal buildings)
 - * \$311bn Invest in broadband, electrical grid and clean drinking water.

© 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved.

4 | September 2022 | Asset Leadership Network | National Academy of Sciences



Content provided by:

The Institute of Asset Management

ESG | Tapping into \$53trillion of investor funding



Environmental, Social and Corporate Governance (ESG)

- A framework to integrate a wide range of non-financial risks and opportunities into a firm's strategy to build long term financial sustainability and value creation.
- It is used by investors and other stakeholders to assess the impact of a company's products and business practices on sustainability and social causes.

| Environmental | Social | Governance | |
|---|---|--|---|
| Our IMPACT on our planet | Our IMPACT in our communities | Our conduct | |
| Climate change Greenhouse gas (GHG) emissions Natural resource depletion Waste and pollution Deforestation Hazardous materials Biodiversity | Working conditions, including slavery and child labor Impact on local communities Conflict regions Health and safety Employee relations and diversity Product mis-selling Data protection | Executive compensation Bribery and corruption Political lobbying and donations Board diversity and structure Tax strategy Data breaches/cyber security Operational governance and risk control | ESG strategies can help companies drive economic vibrancy and deliver long- term value through effective engagement with all stakeholders – generating trust and competitive advantage |

© 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved.

Why ESG now | Perception is changing



| | Shareholders/Investors | Lenders | Regulators |
|------------|--|--|--|
| | Institutional investors are demanding increased transparency of a company's ESG strategy and reporting. | Borrower discounts and preferential loan pricing are becoming more common amongst lenders. | SEC proposed recommendations for disclosure standards (e.g., human capital, cybersecurity, climate- related). |
| | Consumers | Employees | Ratings agencies |
| Perception | 80 percent of consumers prefer buying from brands | Surveys show employees increasingly want to work for | Poor ESG ratings can lead to stocks being labeled as |

1 Source: KPMG International, Me, my life, my wallet 2020

© 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved.

C Suite Interest | SEC proposed climate rules put asset operations and management on the board agenda



Who will this impact?

□ All regulated US companies

Domestic and foreign filers

What is the expected started?

Phased transition, possibly starting fiscal 2023; assurance one year later

Where else are we seeing this?

Similar proposals in Canada, UK, Europe and elsewhere

Financial Statements:

Financial impact metrics, line item basis
 Expenditure metric, disaggregated
 Financial estimates and assumptions

Other Disclosures:

Governance and risk management processes
 Physical and transition risks, actual or likely impacts
 Targets, goals and any transition plan
 Scenario analysis, if used

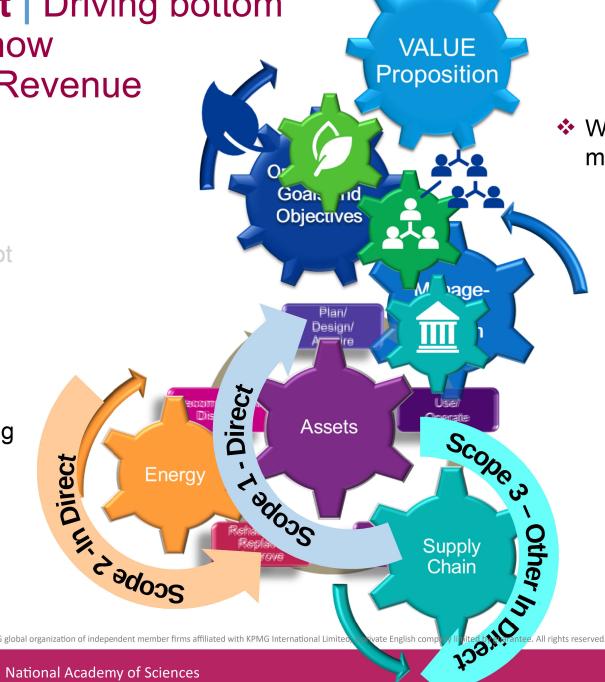
Carbon offsets or RECs, if used

Auditable and Verifiable: Data sources need to be verifiable

© 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved.

Asset Management Driving bottom Line Revenue and now impacting Top Line Revenue

- Recognition that asset management is about more than managing the lifecycle
- Focus on value. Outcome not output.
- Integrated approach to achieving organization goals and delivering business outcomes (value)
- Strong alignment to emerging requirements for ESG.
- THE key component in enabling the corporate sustainability/ESG strategy





- While still providing much broader benefits:
 - ✓ 2 to 3 times reduction in safety incidents
 - 20% to 30% reduction in service outages
 - 50% reduction in risks
 - ✓ 30% increase in productivity
 - ✓ 20% decrease in equipment downtime
 - 19% saving in material costs
 - 18% decrease in inventory maintenance/ repair

© 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independen

The Institute of Asset Management | An introduction



We exist to advance the discipline of asset management, not only for people and organizations involved in the acquisition, operation and care of physical assets but also for the benefit of the general public.



Established in 1994



Network of over 30,000 people

Members in over 60 countries



8 established chapters +2 under development

Guiding the biggest asset owners on the planet – With trillions under management







© Copyright 2016 Institute of Asset Management. All rights reserved

Planning for the Long Term | Positively Impacting the World's Biggest Challenges

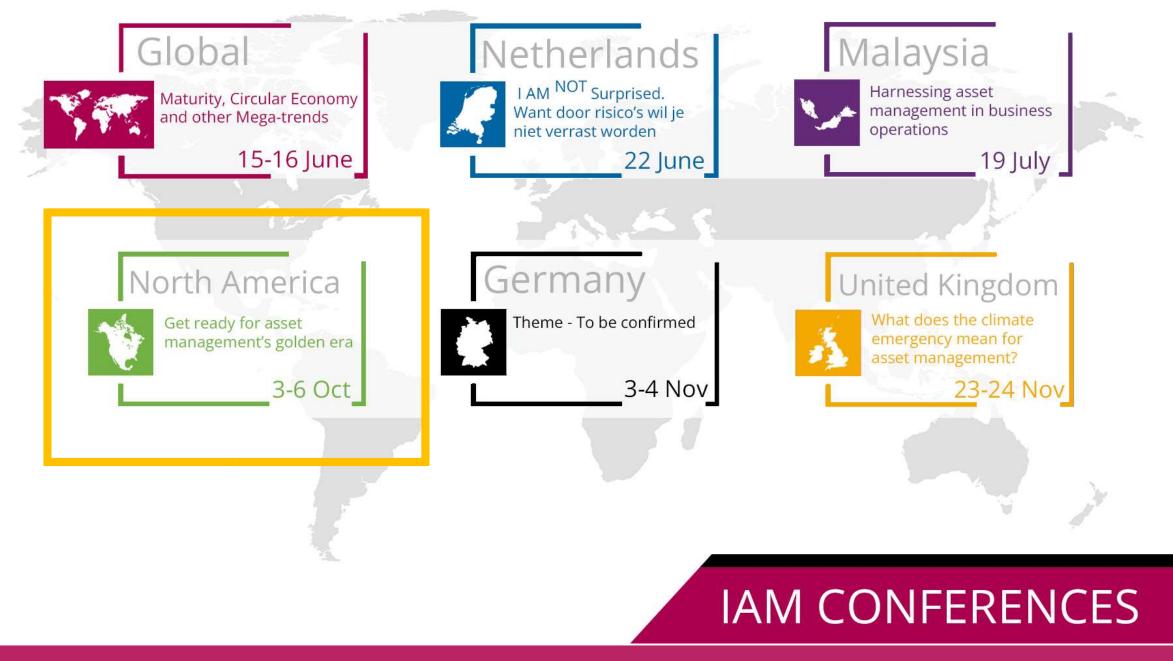


The IAM partnered with UK's **ITN News Productions** to produce a broadcast quality program *Planning for the Long Term*

- Focus on how to increase the long-term value assets provide to society and the economy.
- Campaign was seen by over half a million people within first 2months
- Launch stats:









Dr. Christian (Chris) Roberts, FIAM, AMP

- ➤ Tel: +1-571-528-0728
- Email: christianroberts@kpmg.com



Some or all of the services described herein may not be permissible for KPMG audit clients and their affiliates or related entities.



kpmg.com/socialmedia

- The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation.
- © 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved.
- The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization.