Sustainability 101: Trends, drivers, and why it’s important

2017 Engineering and Construction Conference

Agenda

Module / Topic
What is sustainability?
The current landscape and business context
What does sustainability mean to E&C?
Deep dive on select sustainability topics
Q&A

Moderator and Panelists	
Moderator:	Mark Cohen, Managing Director – Deloitte
Panelists:	Chris Drew, Director of Sustainability – Adrian Smith + Gordon Gill
	Kate Wieczorek, Superintendent – Structure Tone
	Jamie Varkey, Specialist Leader – Deloitte
	Jenny Lynch, Senior Manager – Deloitte

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What is sustainability?

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The many definitions of sustainability

Defining sustainability

American Institute of CPAs (AICPA): "Triple bottom-line" considerations of 1) economic viability, 2) social responsibility, and 3) environmental responsibility

Source: https://www.aicpa.org/InterestAreas/BusinessIndustryAndGovernment/Resources/Sustainability/Pages/SustainabilityFAQs.aspx

Sustainability Accounting Standards Board (SASB): ESG dimensions of a company's operation and performance

Source: https://navigator.sasb.org/reference-material/glossary

Merriam Webster: Able to be used without being completely used up or destroyed

Source: http://www.merriam-webster.com/dictionary/sustainable

United Nations: Defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

Source: World Commission on Environment and Development, 1987

International Integrated Reporting Council (IIRC): 4 capitals – intellectual, social and relationship, human, and natural – that (combined with financial and manufactured capital) that an organization uses and depends on

Source: http://integratedreporting.org/what-the-tool-for-better-reporting/get-to-grips-with-the-six-capitals/

Harvard Business Review: An activity is sustainable when all costs are internalized, because if the costs are too high, the activities stop

Source: https://hbr.org/2008/06/we-need-a-definition-of-sustai.html

Global Reporting Initiative (GRI): How an organization contributes, or aims to contribute in the future, to the improvement or deterioration of economic, environmental and social conditions, developments, and trends at the local, regional or global level

Source: https://www.globalreporting.org/resourcelibrary/G3.1-Guidelines-Incl-Technical-Protocol.pdf

US Environmental Protection Agency: Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations

Source: https://www.epa.gov/sustainability

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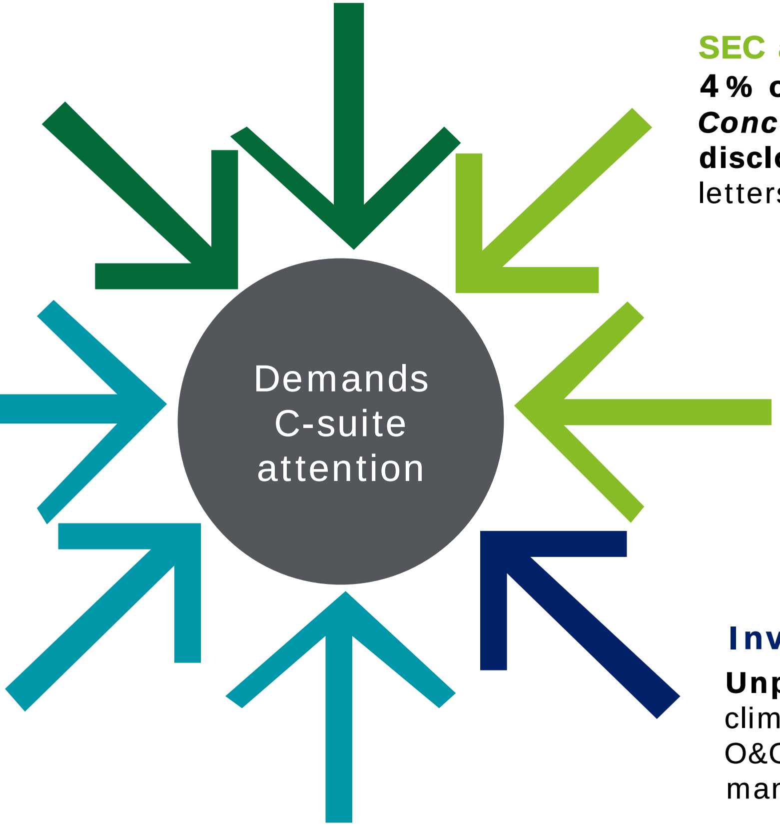
The current landscape and business context

The current sustainability landscape – think tank updates

EU Directive on non-financial reporting[1]
Requires **mandatory reporting**

Financial Stability Board's Task Force on Climate-related Financial Disclosure
Issued guidelines and recommendations for **disclosure of *climate-related risk* in financial statements**[2]

SEC attention
4% of the SEC's April 2016 *Reg. S-K Concept Release* addressed sustainability disclosure, yet **2/3** of non-form comment letters discuss sustainability disclosures[8].



World Business Council for Sustainable Development (WBCSD)[3]
Part 2 2017: Assurance – Generating Value from External Assurance of Sustainability Reporting

Stock Exchanges
Of the world's largest **64** exchanges, **15 have issued environmental, social and governance (ESG) guidance while 23 have committed to providing such guidance**[7].

Sustainability Accounting Standards Board (SASB)
launched an **Investor Advisory Group**[4] to directly engage with companies

Investor interest
Unprecedented investor support for 2017 climate- related shareholders proposals to US O&G companies on climate risk disclosure over management opposition

Global Reporting Initiative (GRI)
Sustainability reporting standards, required for reports published **on or after July 1, 2018**[5]

1European Commission, Non-financial Reporting Directive 2014/95/EU
[2] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures
[3] WBCSD Resources: http://wbcsdpublications.org/project/generating-value-from-external-assurance-of-sustainability-reporting/
[4]SASB Investor Advisory Group: http://using.sasb.org/investor-advisory-group/

[5] GRI, Sustainability Reporting Standards
[6] https://www.ceres.org/news-center/press-releases/exxonmobil-investors-make-history-majority-vote-climate-risk-disclosure
[7] 2016 World Federation of Exchanges Annual Sustainability Survey
[8] SASB, SEC Comment Letters

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The business context

Financial and non-financial reporting is evolving

In a Deloitte Touche Tohmatsu Limited (DTTL) CFO survey*, 60% of CFOs at large global enterprises indicated that sustainability challenges will change financial reporting and the associated auditing activities.

*DTTL global survey of 208 CFOs, 2011, see: http://www.deloitte.com/view/en_GX/global/4ca8b6140c0d2310VgnVCM1000001a56f00aRCRD.htm

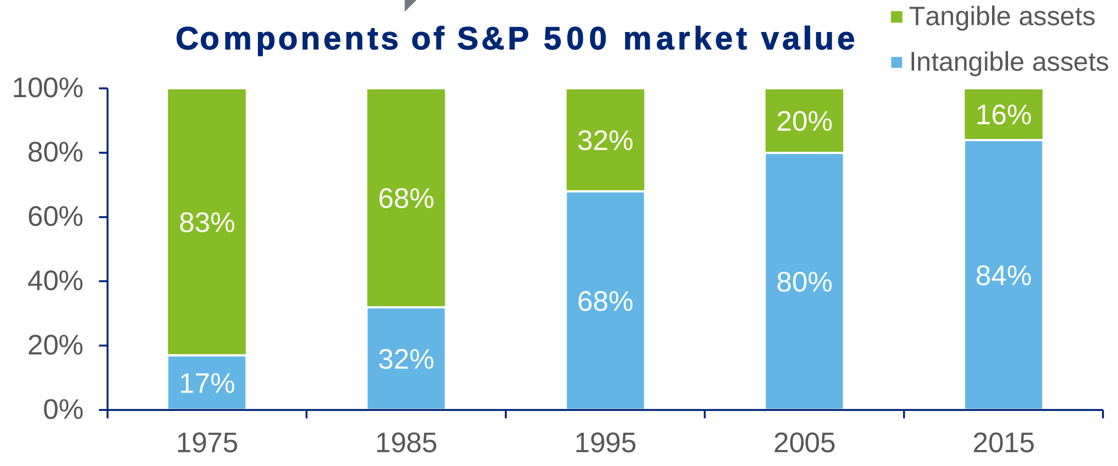
The lens through which material issues are identified is expanding from strictly financial to other sustainability issues affecting human, social, natural, intellectual, and manufactured capitals.

Applying the principle of materiality, drawn from financial accounting practices, is an essential filter for disclosing ESG information that is useful to the economic decisions of an interested user.

The financial and nonfinancial reporting landscape is rapidly evolving

Tangible assets reflect steadily diminishing components of shareholder value

Intangible assets represent an important driver of business value but are not captured effectively in traditional financial measures



Source: Ocean Tomo, “Ocean Tomo’s Intangible Asset Market Value Study,” 2015

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The business context

Sustainability for performance management: four stages of value creation

1 Reducing costs

Since 1975, a containers & packaging company has **saved $1.7 billion** by changing products or processes and recycling or reusing materials (e.g., replacing a solvent-based paper treatment process with a water-based process).

2 Optimizing efficiencies

Through its "zero waste" initiative, a US conglomerate weighed future earnings against business and environmental risks, **eliminating divisions with significant waste** products (e.g., carpets and nylons).

3 New products and/or technologies

A chemical company's focus on sustainability innovation led **to new products and breakthroughs** such as solar roof shingles and hybrid batteries, which helped shift its core business from commodity chemicals to advanced materials and high-tech energy.

4 New business models and differentiated value proposition

A global multinational's initiative to reduce environmental impact **generated $160 billion in revenue between 2005 and 2014**, based on $12 billion in R&D. Consequently, it has emerged as a differentiated energy and environmental solutions provider.

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E&C and sustainability

What does sustainability mean to E&C?

Many of the fundamental factors that influence a company's performance and profitability today — energy prices and availability, supply chain reach and resilience, regulation, and public sentiment, among many others — are changing quickly and dramatically.

No business or organization is immune to these systemic challenges and societal responses. This means it is critical to plot adaptive strategies for operating effectively and communicating transparently.

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Example: Application of sustainability during the life-cycle of a project

Pre-design	On-site	Design	Construction	O&M
• Material selection • Building program • Project budget • Team selection • Partnering • Project schedule • Laws, codes & standards • Research • Site selection	• Site analysis & assessment • Site development & layout • Watershed management & conservation • Site material & equipment	• Passive solar design • Materials & specification • Indoor air quality	• Environmentally conscious construction • Preservation of features & vegetation • Waste management • IAQ issues • Source control • Responsible practices	• Maintenance plans • Indoor quality • Energy efficiency • Resource efficiency • Renovation • Housekeeping & custodial practices

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Deep dive on select topics:
Environmental impacts

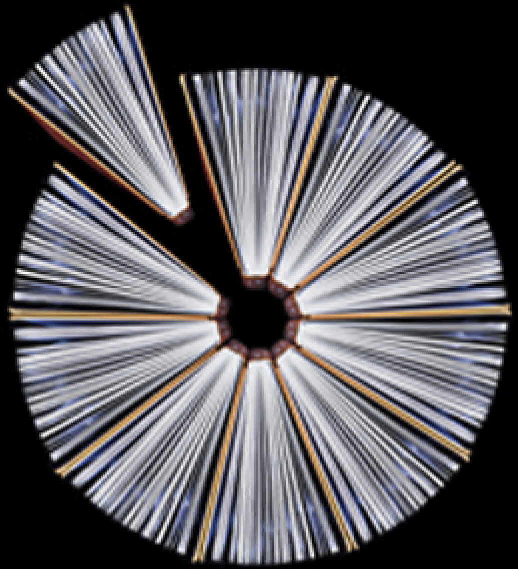

Ecosystems and biodiversity


Materials lifecycle & waste

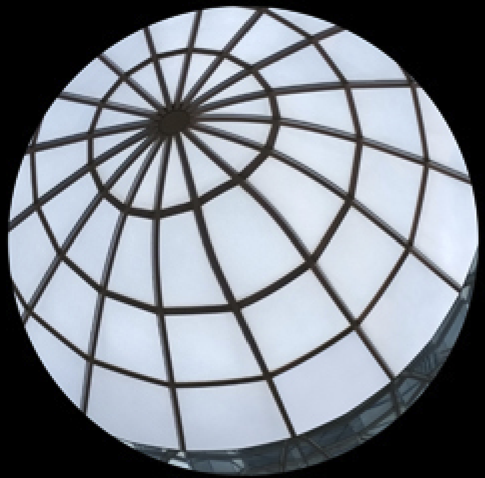

Remediation activities

Deep dive on select topics:
Community and customer welfare

Local community engagement



STEM & trade education



Structural integrity / safety

Deep dive on select topics:

Workforce – human capital

Health & well-being

Attracting talent

Employee engagement

Q&A

Closing thoughts

Business and society are facing an array of urgent and critical social, environmental, ethical, and economic challenges. In fact, six of the 10 global risks of highest concern (in terms of impact) identified in 2017 by the World Economic Forum[1] are environmental and societal issues.

Because of this, broad societal responses are playing out in the realms of policy, technology, and the marketplace, including a significant growth in the number of CSR indices launched by financial institutions.

[1] World Economic Forum, The Global Risks Report 2017

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