

SIXTH ANNUAL

PRACTICE FORUM

SUSTAINABILITY IN PRACTICE:

Applying the Financial Case for

Sustainability Investment

March 14, 2023



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**FINANCIAL
TIMES**

OPENING REMARKS



Raghu Sundaram



Dean and the Edward I. Altman Professor of Credit and Debt Markets
New York University, Leonard N. Stern School of Business



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KEYNOTE ADDRESS

**APPLYING THE FINANCIAL CASE FOR
SUSTAINABILITY INVESTMENT**

TENSIE WHELAN

FOUNDING DIRECTOR, NYU STERN CSB

CLINICAL PROFESSOR OF BUSINESS & SOCIETY



NYU Stern Center for Sustainable Business

**Unleash the business value of
sustainability**

&

**the transformative potential of
business**

to

**solve societal challenges at speed
and scale**

Motivating Leaders to Shape a New Business Paradigm

Innovation in Education



- Top 10 specialization among MBA students with 30+ offered classes
- Fellowships/internships
- Experiential learning
- Executive education

Practical Research



- Return on Sustainability Investment™
- Sustainable Market Share Index™
- Invest NYC SDG
- Private Equity Responsible Investing

Business Breakthroughs



- Research partnerships
- Bespoke executive trainings
- Practice forum

The Latest and Greatest: CSB Research in 2022-23

- ESG reporting is not the same as sustainability
- The trouble with jobs metrics
- Helping private equity transform portfolios and do well
- Data tools to support sustainability improvements
- Deep-dive into consumer demand
- The business case for sustainability (ROSI updates)



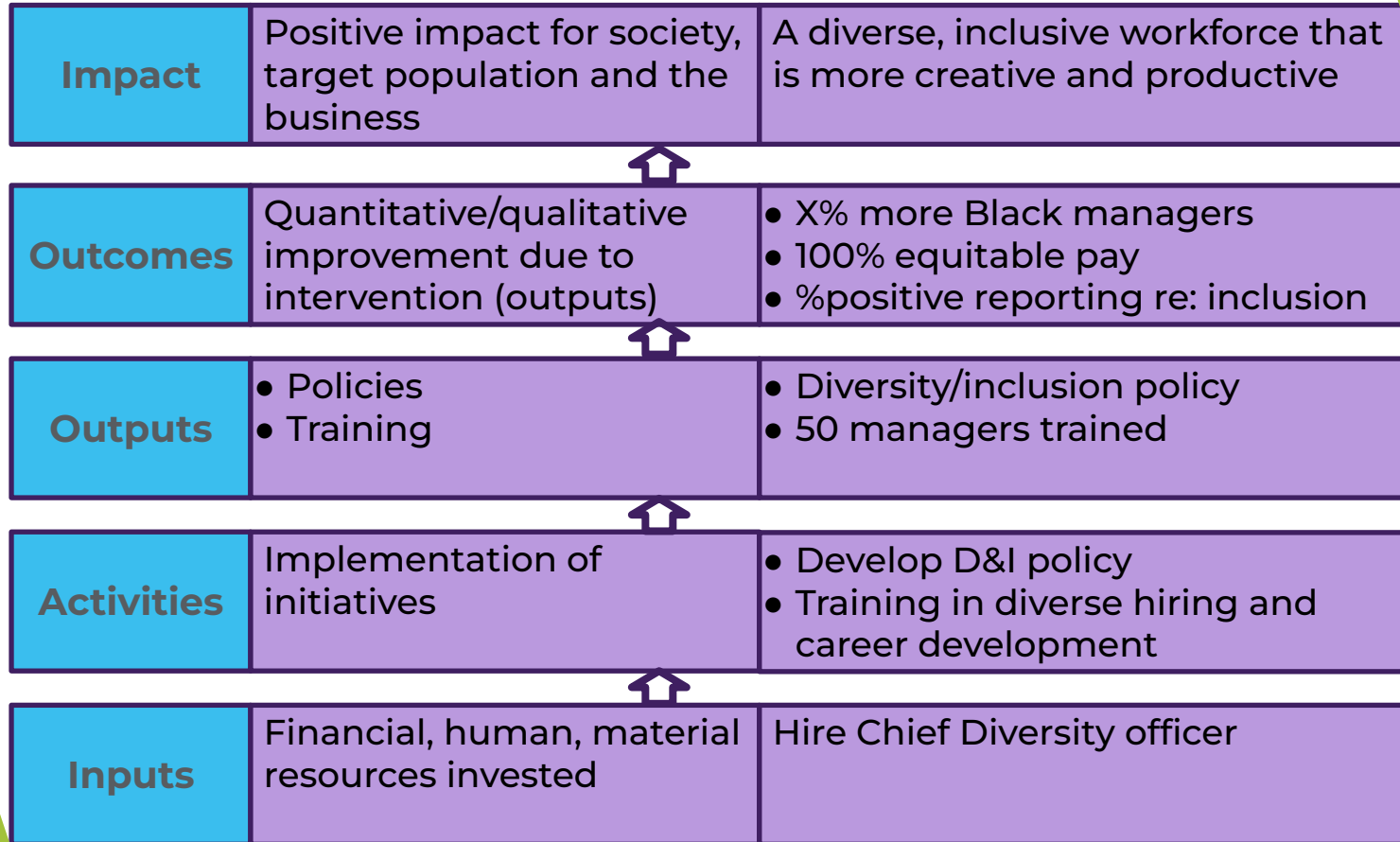
ESG Reporting is Not the Same as Sustainability

- ESG is a system of measurement, not a strategy
- ESG reporting metrics are process/output based
- Tick-the-box reporting does not drive value
- ESG accounting metrics are not tied to financial metrics



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Outcomes, Outputs, Impact: Diversity and Inclusion



SASB Apparel, Accessories and Footwear Reporting Metrics

Management of Chemicals in Processes:

- Discussion of processes to maintain compliance with restricted substances regulations **ACTIVITY**
- Discussion of processes to assess and manage risk and/or hazards associated with chemicals in products **ACTIVITY**

New Metrics:

- Current volume of use of key toxic chemicals (list) and time-based reduction/substitution targets¹³
- Current volume of chemical waste and time-based reduction/substitution targets

Environmental Impacts in Supply Chain Management:

- Percentage of (1) Tier 1 supplier facilities and (2) supplier facilities beyond Tier 1 in compliance with wastewater discharge permits and/or contractual agreement **OUTPUT**
- Percentage of (1) Tier 1 supplier facilities and (2) supplier facilities beyond Tier 1 that have completed the Sustainable Apparel Coalition's Higg Facility Environmental Module (Higg FEM) assessment or an equivalent environmental data assessment **OUTPUT**

SASB Apparel, Accessories and Footwear Reporting Metrics

Labor Conditions in the Supply Chain:

- % of (1) Tier 1 supplier facilities and (2) supplier facilities beyond Tier 1 that have been audited to a labor code of conduct, (3) % of total audits conducted by a third-party auditor **OUTPUT/OUTCOME**
- Priority non-conformance rate and associated corrective action rate for suppliers' labor code of conduct audits **OUTPUT**
- Description of the greatest (1) labor and (2) environmental, health, and safety risks in the supply chain **ACTIVITY**

Raw Materials Sourcing:

- (1) List of priority raw materials; for each priority raw material: (2) environmental and/or social factor(s) most likely to threaten sourcing, (3) discussion on business risks and/or opportunities associated with environmental and/or social factors, and (4) management strategy for addressing business risks and opportunities **ACTIVITY**
- (1) Amount of priority raw materials purchased, by material, and (2) amount of priority raw material certified to a third-party environmental and/or social standard, by standard **OUTPUT/OUTCOME**

SASB Apparel, Accessories and Footwear Reporting Metrics

What material topics are missing from the SASB metrics?

- Greenhouse gas emissions: e.g. Net Zero, SBTI commitment to reduced GhG emissions and annual tracking
- Animal welfare: e.g. % of supply certified to credible third-party animal welfare standards and annual targets
- Water and waste management
- Product design and lifecycle management

What is missing from the SASB metrics overall?

- Context and benchmarking
- Targets and performance over time

But None of Those Metrics Capture the Upside

Nike Flyknit process weaves knit strands of recycled polyester to form one seamless upper:

- Decreases waste 80%
- 19% lighter
- \$1 billion plus business
- Category disrupter



The Trouble with Jobs Metrics

Ulrich Atz
Tensie Whelan

U.S. Workplace Facts at a Glance

- More than 51% of the Russell 1000 are not paying their employees a living wage – *Just Capital 2022*
- More than half of U.S. consumers were living paycheck to paycheck in May 2022, a 4 % increase from May 2021 – *LendingClub 2022*
- 32% of American adults could not cover an emergency expenditure of \$400 – *Federal Reserve System Economic Well-Being of Households in 2021*
- Less than 1 in 4 Americans think they will be able to save the \$1.1 M they think they need in retirement – *2022 Schroders Retirement Survey*

U.S. Accounting Practices Drive Unsustainable HR Practices (HBR, Peter Cappelli 2023)

- Employee salaries, benefits, training, etc are treated as current fixed costs, NOT investments.
- Employees are treated as externalities, NOT assets
- Benefits, vacations, and sick days are treated as liabilities on the balance sheet
- GAAP rules require reporting # of employees, but not workers who have been outsourced
- Managers incentivized to use vendors for leased workers (below the line). Evidence points to less efficiency and lower productivity
- Unlike physical assets, which depreciate over time, employees (with proper investment) become more valuable over time.
- International Financial Reporting Standards (IFRS) outside the United States allow companies to report more of the asset value of human capital.

Material Job Metrics (*Italics NOT Reported*)

Business Basics

- Share of full-time employees (vs alternative employments)
- Turnover (voluntary; involuntary)
- Accidents, injury, and lost time injury rates (where material)
- Labor and safety controversies
- *Fines and legal fees for labor and safety violations*

Financial Security

- *Starting hourly wage (by full-time; alternative employments)*
- *Average hourly wage (by full-time, alternative employments)*
- *Share of employees earning minimum wage (incl. alternative employments)*
- *Health care benefits (starting costs of medical plan; quality of plan if feasible)*

Job Excellence

- Additional benefits (pension; paid time off; family leave, etc.)
- *Internal promotion rate*
- Diversity statistics
- Pay equity (adjusted; unadjusted; by gender and race)
- *Subjective job quality ratings (e.g. crowdsourced)*

Review Jobs-Related Metrics for Six Rating Agencies

- Most “S” metrics are binary (e.g. yes/no answers such as do you have a workplace safety policy) for 40-80% of data. They tend to contain little useful information.
- When the raw metrics are continuous, e.g. percentage of diverse individuals in leadership, companies are unlikely to report on them (not available for 70-90%).
- Turnover is available for 12-50% of firms but varies widely (e.g. may not distinguish between voluntary and involuntary). Pay levels are sometimes disclosed (e.g. lowest pay threshold) but are not available from the ESG raters we analyzed.
- Finally, ESG raters offer no metrics for the value of pensions or health benefits (e.g. starting cost of medical plan) even though some companies disclose such data

Why This Matters: Amazon Turnover

- Regretted attrition: 69.5%-81.73% across Tier 1 to 10 employees
- NYT investigation: 150% amongst hourly employees (others found 100%)
- Only 1 of 3 new hires in 2021 stayed with Amazon for more than 90 days
- Regretted and unregretted turnover costs \$8B
- Total profits: \$33.36B (2021)
- Could have improved profits by 25%



Recommended Material Jobs Metrics

Voluntary and Involuntary Turnover

- Turnover is relatively easy to track, half of the S&P 500 already report it, and it is one of the most robust financially relevant metrics.

Share of employees making a liveable wage

- Wages are the single most important issue for employees, part of SASB, and research demonstrates that high wages can work as a competitive strategy.

Business basics

- Depending on the industry, this may be the ratio of full-time to alternative employments, the injury rate, or investments in employees.
- Accounting for personnel expenses not only as costs but also as investments will relax some of the pressure to minimize labor costs in capital markets.

Responsible Investing with Equity

Julien Marchese
Tensie Whelan
Jessica Weiss

With support from
Arthur D. Little
Climate Works
Foundation

CSB Responsible Investing Framework for Private Equity

Context

After **Phase I**, CSB identified practical tools needed to help private equity embed **sustainability** and conducted interviews with 30+ GPs, LPs, and other stakeholders to get feedback on these ideas:

Ideas 1) ESG valuation model based on ROSI, 2) LP DDQ addendum, 3) guide to embedded sustainability, 4) ESG scorecard, and 5) set of LP/GP guidelines

GPS:

- Currently, not identifying sustainability value drivers at beginning of investments
- Unclear which ESG KPIs to track and how to tie with business case

LPS:

- Not using GP ESG data

Phase I

Academic literature review of the state of private equity

Development of a PE Responsible Investment Framework

Categories of impact: management & human capital, financial engineering, fund management, strategy & innovation, reporting transparency, societal impact

Phase II

The second phase of research will **support the implementation of a responsible investing approach across the ownership lifecycle**

CSB defined GP practices across the lifecycle to understand where specifically tools are needed

*Indicates best practice

	Deal Sourcing / Pre DD	Due Diligence	Early Investment	Ownership Holding	Exit
Current Practice	<ul style="list-style-type: none"> Check company against exclusion list* ESG data request* If Impact focus, sourcing only on specific criteria (e.g., Quality Jobs) Gating methodology 	<ul style="list-style-type: none"> Reviewing material issues, some ESG KPIs* Deal teams conduct valuation analyses (advanced may add ESG sensitivities) ESG scorecard 	<ul style="list-style-type: none"> Outline what KPIs to be tracked* Focus on cost cutting Management team dialogues Outline ESG accountability structures* 	<ul style="list-style-type: none"> Track some KPIs (potentially EDCL, LP-required, or regulatory) Create annual sustainability reports at portco level (SASB material metrics) Send ESG data to LPs 	<ul style="list-style-type: none"> Add a sustainability story to sell at exit (often hacked together instead of planned for)
Limitation /Issues	<ul style="list-style-type: none"> Difficult to understand how deep to go with ESG 	<ul style="list-style-type: none"> Valuation doesn't reflect full extent of ESG Difficulty in understanding how "ESG mature" portfolio company is Lack of data for SMEs Not factoring opportunities 	<ul style="list-style-type: none"> Lack of understanding of what KPIs to use Lack of knowledge around best sustainability levers to focus on Lack of developed ESG strategy 	<ul style="list-style-type: none"> KPIs that are tracked are focused on process, not outcomes 	<ul style="list-style-type: none"> Lack KPIs to point to for sustainability story Never capture ROSI and "avoided costs"
Areas of Interest & Rationale (Where to Prioritize)	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Quick valuation assessment DD tool denoting material issues (separate from holding period tool) 	<ul style="list-style-type: none"> Denoting most impactful sustainability levers is adjacent to ROSI and allows business to know what to focus on immediately Accurately capture specific value creation 	<ul style="list-style-type: none"> Helping frame material sustainability levers at early investment allows GP to know what to track over lifetime Track KPIs and link to valuation throughout 	<ul style="list-style-type: none"> Track ROSI/ESG metrics to substantiate sustainable value growth at exit

During the DD phase, GPs need a quick assessment tool to identify material risks/opportunities; this changes once they are holding the company

Rationale for Two-Part Valuation Tool

Effectively Identifies and Measures Sustainable Value Creation	<ul style="list-style-type: none">Second aspect of framework (after DD assessment tool) will identify the most important sustainable value levers and define KPIs to track over the course of the investment
Different Needs at Each Point of Investment Lifecycle	<ul style="list-style-type: none">DD Phase: quick, high-level tool due to time constraint – identify the material issues, practices, and value drivers before ownershipHolding Period: define the highest impact ESG areas, define associated KPIs, and measure over time, pointing at real data at exit and developing a sustainable growth story
Applicable to Wider Audience	<ul style="list-style-type: none">Framework can be applied by various stakeholders – GPs, portfolio companies, other practitioners



Proposed Workflow

1st Part of Framework Tool – Quick Assessment

1. Once a company has been identified during the DD process, map the industry value chain
2. List the most important material issues, practices, and value drivers for the target (both risks & opportunities)
3. For the specific company, identify highest impact areas and indicate current performance – the analysis for the first tool is complete, providing a quick and directional assessment

2nd Part – Deep Dive

1. Define ESG and ROSI KPIs and key strategies needed at the early investment stage
2. Measure KPIs over time and build the sustainable growth story; at exit, GP / portfolio company can point to track record of improvement and sustainable value creation and receive an ESG premium valuation

In the first stage of the tool, users input the sector of the target portfolio company and rate it across key criteria

1 Identify Target & Sector

Identify sector of target company

2 Auto-Populated Buckets

After selection of sector, the tool identifies the most relevant material issues for the sector, then indicates mitigating or value-adding strategies, and underlying practices and value drivers

Material Issues (Defined by SASB)	Strategies	Practices	Value Drivers
<ul style="list-style-type: none">Energy Management	<ul style="list-style-type: none">Improving Energy Efficiency & Use of Renewables	<ul style="list-style-type: none">Adopt products, services, and processes that use less energyConvert energy purchase (or generation) to renewables where possible	<ul style="list-style-type: none">Lower energy costsReduced exposure to energy cost volatility or grid break-downsReduced regulatory fines and risks.

3 Assessment of Target Company

Next, identify how the target company is responding to the material issues and related strategies, stated commitments, and progress towards commitments

4 Rating

Finally, add scores of 1-5 across five criteria

Current Progress

Clear Targets

Innovation & Growth

Risk Mitigation

Credible Reporting Standards

The DD assessment tool guides towards the most material issues and indicates value-add responses

Assessment of Target Company Performance

Material Issues	Strategy	Total (Weighted)
Ecological Impacts	Ensuring Protection of Biodiversity and Ecosystem Conservation	5.0
GHG Emissions	Mitigating Climate Change Impacts	4.5
Labor Practices	Investing in Worker Wellbeing	2.8
Materials Sourcing & Efficiency	Implementing Sustainable Sourcing	1.9

Recommended Strategies and Practices, and Associated Value Drivers

Strategies	Practices	Value Drivers
Mitigating Climate Change Impacts	Reduce emissions across all three scopes, focusing on direct emissions first, but also focusing on where the biggest emissions are	Operational efficiencies in terms of costs Reduced exposure to regulatory fines and fees Reduced reputational and market risk Lower cost of capital Improved employee recruitment and retention
Investing in Worker Wellbeing	Salary and benefits Engagement on sustainability Close pay equity gap Increase wages Promote flexibility	Improved retention Higher productivity Lower recruitment costs Fewer work stoppages/ strikes/lawsuits
Implementing Sustainable Sourcing	Funding projects/partnerships that protect natural resources/local communities Sustainability certification or code compliance of suppliers Preferred supplier status, long-term contracts and incentives for sustainable sourcing	Increased market share and premium Improved supplier and customer loyalty Reputational brand benefits Reduced regulatory, operational and market risk Increased customer loyalty

- After rating the target company across the five criteria, better understanding of how the company is responding to material issues relevant to the sector and any gaps in current commitments
- For every material issue, the tool provides strategies with linked practices and value drivers







Invest NYC SDG: Private/Public Partnerships for a Sustainable, Equitable NYC

Marianna Koval
Wythe Marschall
Divya Subramanian
Kendra Gibbs

Invest NYC SDG

Developing Concrete Projects Across Six Ecosystems



ECOSYSTEM	Food & Health	Sustainable Mobility	Built Environment	Waste	Renewable Energy	Climate Resilience
PROJECTS	<p>M.A.P. NYC</p> <p>Healthy Corner Stores</p> <p>Rikers Island Indoor Commercial Farm</p> <p>FoodMap NY</p>	<p>The Equitable Commute Project</p> <p>Electric barges and EV infrastructure</p> <p>Last-mile delivery</p>	<p>Carbon Compass: LL97-PACE Data Tool</p> <p>Green workforce development and placement</p>	<p>Organic waste collection and processing</p> <p>Anaerobic digesters</p> <p>Glass waste to low carbon concrete with Pozzotive®</p>	<p>Community solar on city-owned property</p> <p>Geothermal</p> <p>Offshore wind</p>	<p>Early warning and predictive AI systems</p>
SDGs	   	   	   	   	   	   

Invest NYC SDG

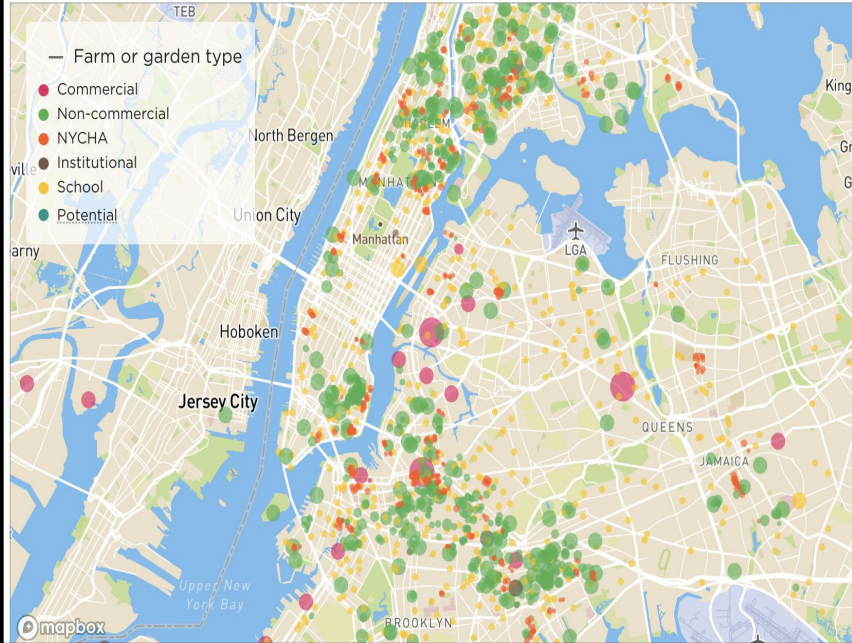
M.A.P. NYC: Measuring and Mapping Agricultural Production in New York City



Welcome to M.A.P. NYC

A catalogue of urban farms and gardens in New York City

Read more about the project on the [About](#) page. Are you running a farm/garden in the city? [Sign up](#) to



Urban agriculture improves community access to fresh local food while offering educational opportunities and green jobs.

Invest NYC SDG/NYU Tandon wiki-style database to map commercial + community agricultural production in NYC, as well as neighborhood demographics, gentrification, and food security status.

Can help NYC set production goals, support policy innovation, assist growers in connecting with resources, build thriving businesses, and help create green jobs.

[Visit the site >](#)

Invest NYC SDG

LL97-PACE Data Tool: Decarbonizing NYC's Built Environment



Local Law 97 and PACE Data Tool

LL97-PACE MAP

BBL: (All) BIN: Property Name: Address: Owner or Managing Agent: Lien Holder:

Borough: (All) Zip Code: (All) Community Board: (All) Council District: (All) Census Tract: (All) Neighborhoods: (All)

Reset Filters

Emissions

LL97 Total Carbon Emissions
0 (MTCO2e) 131,042 (MTCO2e)

Site Energy Unit Intensity (EUI)
0 (kBtu/sqft) 35,352 (kBtu/sqft)

Energy Star Score
0 100

Energy Grade
(All)

Compliance Pathway

Subject to Compliance 2024
 No
 Yes

Terms of Exception
(All)

Excepted Building Category
(All)

LL97 Penalties 2024-2029 (USD)
\$0 \$20,148,951

LL97 Penalties 2030-2035 (USD)
\$0 \$27,866,395

Building Information

Standalone, Child or Parent
(All)

City-Owned Building

Goal: Accelerate PACE lending for energy efficiency retrofits and support NYC's Climate Mobilization Act.

NYU Stern CSB has developed an innovative data tool with MOCEJ and NYCEEC that maps banks' scope 3 emissions from NYC real estate holdings and can help banks generate profit from green lending, beginning with their own portfolios

Searchable by mortgage lien holder, it details the carbon emissions in mortgage lender portfolios.

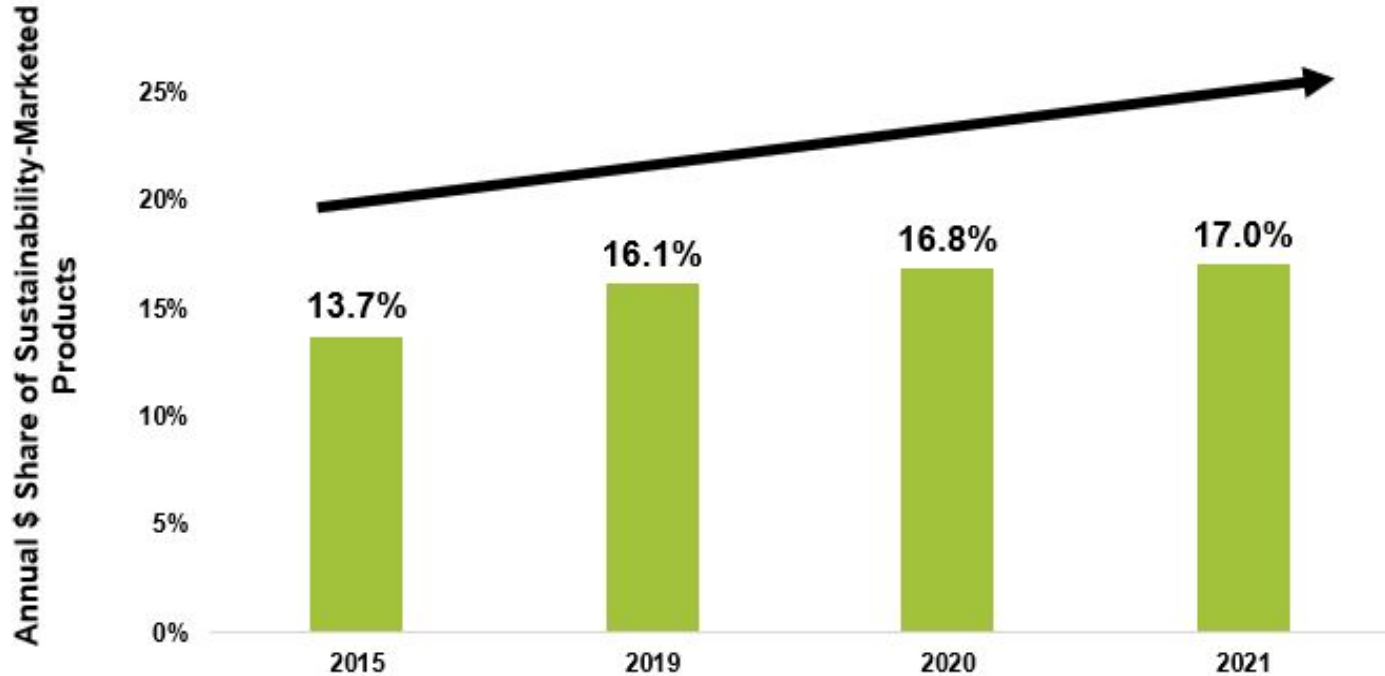
[Check out the tool](#)

Consumer Purchasing of Sustainability-Marketed Products Annual Review

Randi Kronthal-Sacco
IRI

Sustainable Market Share Index: U.S. Consumer Purchasing

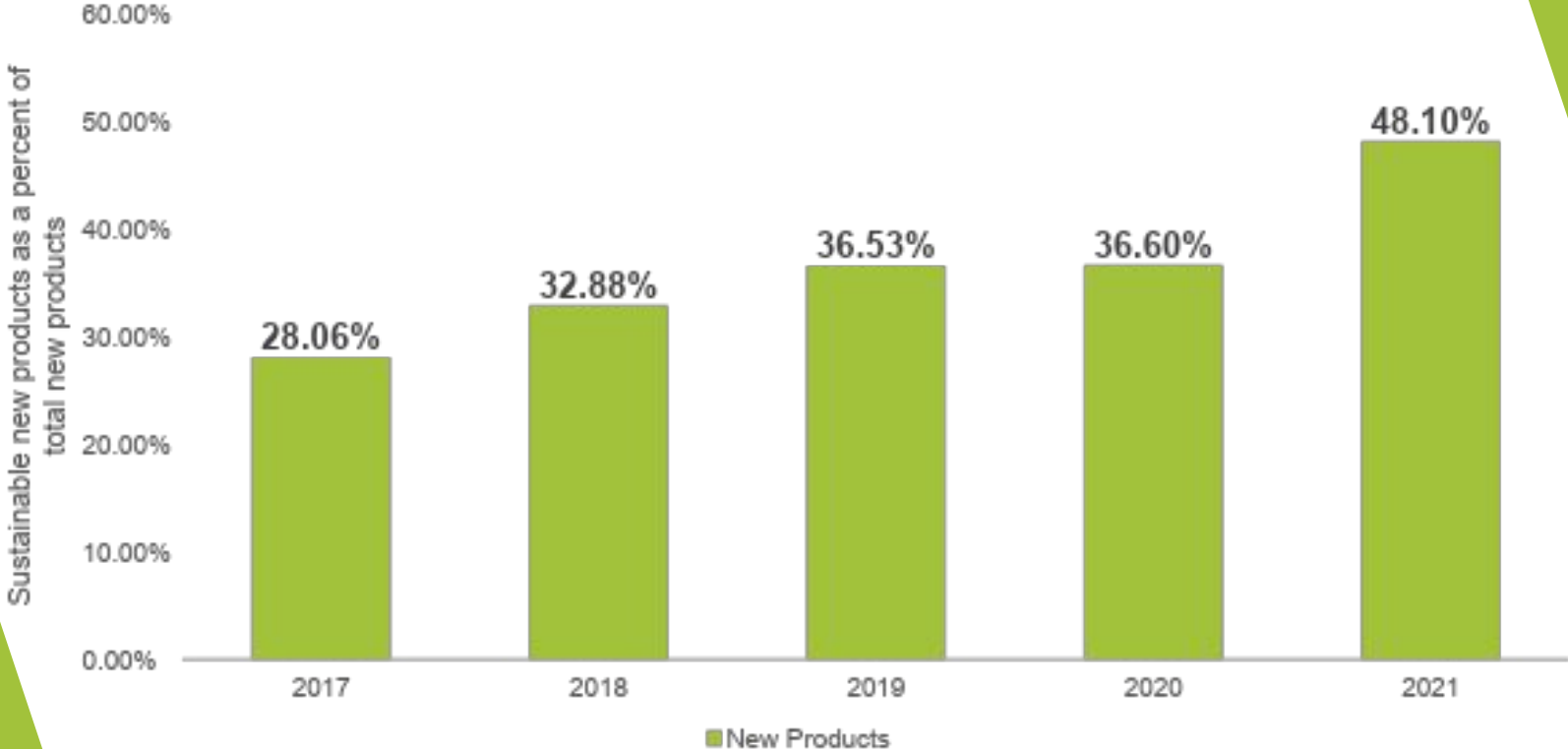
Sustainability-marketed products continue to grow share every year



36 categories examined

Sustainable Market Share Index: New Products

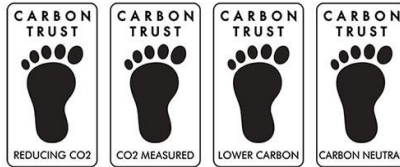
The percentage of new products that incorporate and communicate sustainability benefits have increased every year since 2017.



Note: Based on 32 categories examined

Sustainable Market Share Index: 2021 Carbon Labeling

Sales of carbon-labeled products doubled from 2020



+\$3.4B

The Return on Sustainability Investment (ROSI) in the Food and Beverage Sector

Researchers:

Chisara Ehiemere

Elyse Douglas

Divya Chandra

Maggie Paruta

Funders: ArcaContinental,

HSBC Bank USA,

Investindustrial Foundation

Overview of Food & Agriculture Framework



NYU Stern CSB has developed a ROSI™ framework for food & agriculture with publicly available monetization tools to help the industry understand where and how sustainability can unlock financial value.

Based on research, experience, and engagement with industry leaders, we have identified the following sustainability strategies* used by the industry to include in the framework:

Improving water security

Improving soil health

Mitigating and adapting
to climate change

Reducing the use of
harmful chemicals

Ensuring protection of
biodiversity and
ecosystem conservation

Raising and treating
animals with respect and
care

Incorporating circularity
into food waste
management

Implementing
sustainable sourcing

Improving nutritional
profile of food products

Adopting sustainable
packaging solutions

Investing in employee
and supplier well-being

Investing in sustainable
brand marketing and
communications

ROSI™ Applied to Multiple Products and Strategies

Improving
regen. soil
health practices

Better nutrient management practices by barley growers improves regenerative soil health practices on-farm, improves operating efficiency, reduces carbon emissions, and captures brand value.



Regenerative
ag. practices in
beef

Launching an innovative sustainable beef category using verification and consumer-facing labeling to increase consumer awareness, creates upside



Protection of
Biodiversity

Promoting sustainable bee friendly farming practices improves fruit pollination and yields, reduces input costs for growers and leads to carbon sequestration benefits for achieving Scope 3 targets



Sustainable
sourcing

Responsible sourcing of cocoa improves supply chain transparency and creates market opportunities



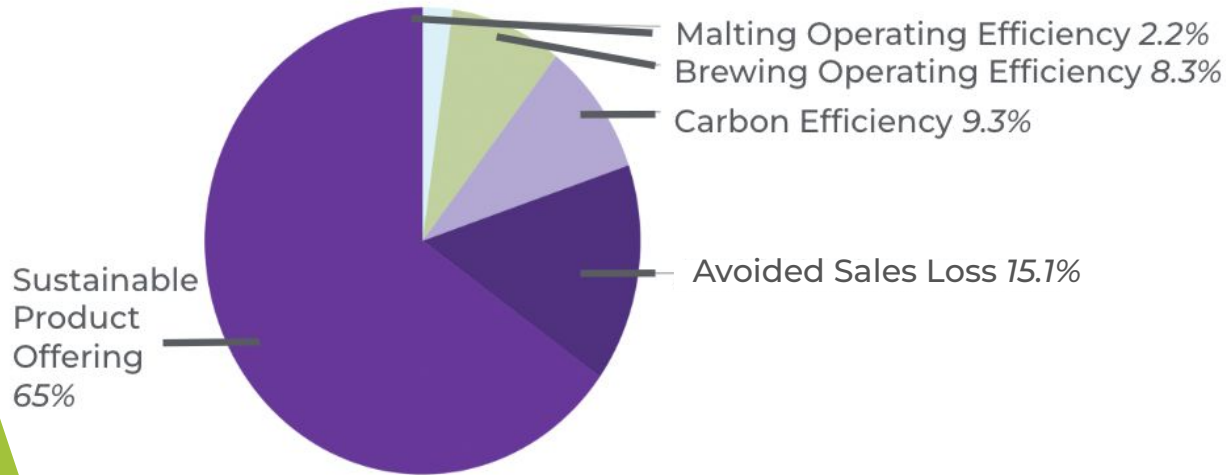
Reducing Food
Waste

The adoption of biological controls to combat aflatoxins in corn increases yields for growers and lowers risk and improves operational efficiency for the company



Nutrient Management Practices Drive Carbon Emissions Reductions, Operational Efficiencies, and Brand Value

ROSI™ methodology was used to assess the benefits of working with barley growers to accelerate adoption of nutrient management practices



ROSI™ results show benefits amounting to ~\$40 million in 10-year NPV terms and an average annual operating income improvement of ~\$7.5 million



Drives **higher operating performance** for the company



Reduces **carbon emissions** to help achieve the company's net zero 2040 goal



Captures **brand value** by offering a more sustainably-produced product

The Value of Regenerative Beef Production and Consumer-Facing Labeling for Applegate

Benefits &
Associated Costs
Explored

Sales and
Marketing of
*The DO GOOD
DOG™*



Increase in Earned
Media



63%
of
10-Yr
NPV*

37%
of
10-Yr
NPV*

DO GOOD DOG™ is the first, nationally available hot dog made with beef sourced from verified regenerative U.S. grasslands.

ROSI™ monetization for Applegate and rancher benefits:

- Focus was on a verified regenerative agriculture beef product with a consumer-facing label
- Includes investment in building consumer awareness for a growing category
- Incorporates media coverage and sales & marketing benefits



APPLEGATE.

The Business Case for Sustainable Farming to Improve Biodiversity



- **Financial Opportunities**
Adopting sustainable bee friendly farming practices improves fruit pollination and yields as well as reduces inputs costs
- **Environmental Benefits**
Adopting bee-friendly farming practices within the company's supply chain helps achieve Scope 3 targets through carbon sequestration
- **Competitive Advantage**
Being the first to introduce a sustainably sourced natural spread addressing biodiversity protects against a competitor gaining first mover advantage

Hero

A 10-year NPV of €3.6 million (before costs) was estimated with an average annual operating income impact of €650K. ROSI™ was estimated to be 33%

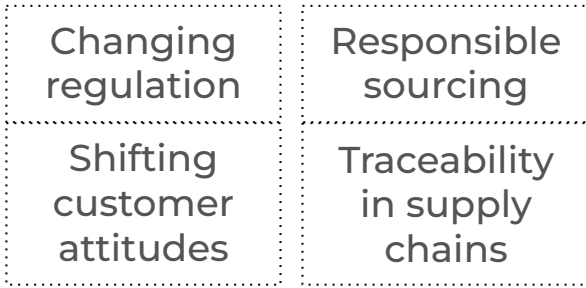
Sustainable Sourcing in Cocoa Drives Better Performance

For Natra*, a private label chocolate manufacturer, its investment in fully traceable cocoa yields a net positive bottomline benefit.

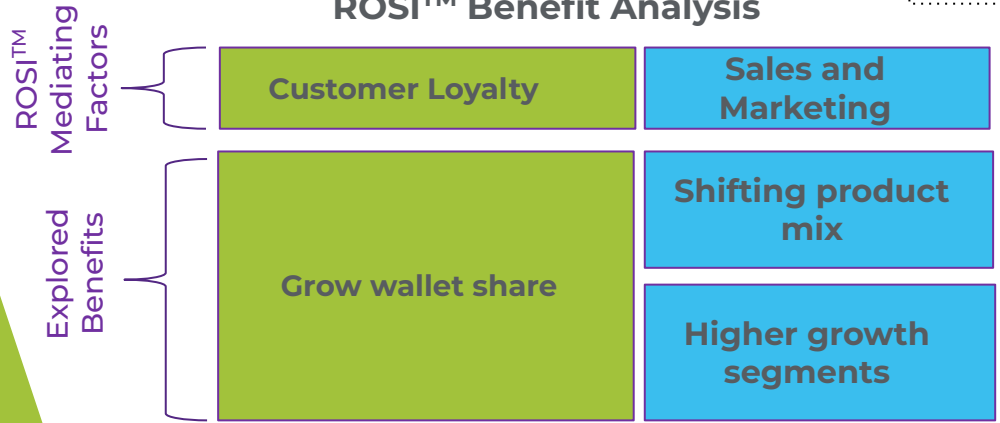
Social and environmental challenges plague cocoa sourcing...



...while chocolate consuming markets are experiencing



ROSI™ Benefit Analysis



Results

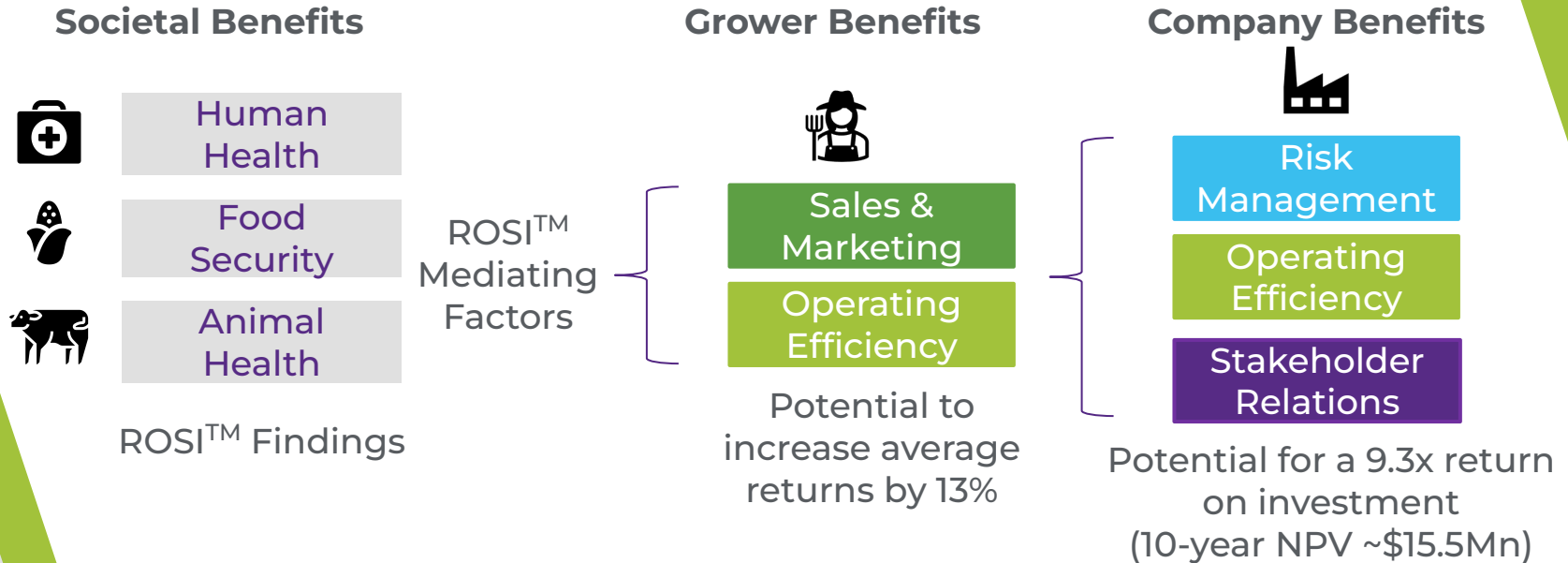
PV ¹	€ 2.4Mn
As % of EBITDA (2020)	5.4%

*a former Investindustrial company; 1- 4 year PV

Agricultural Interventions Drive Positive Societal Impact



Aflatoxins are naturally occurring toxins in agricultural crops, and pose a severe health risk to plants, humans and animals if consumed. Contaminated crops pose an economic risk of food waste loss. CSB partnered with Ingredion USA's affiliate, Rafhan Maize, to assess benefits from promoting the use of AflaPak™, an aflatoxin biocontrol product, in its upstream corn supply chain.



Additional ROSI Projects

Green H2 Project In UK Supports Net Zero Goals and a Good ROI: Kimberly-Clark with ALO Advisors

- Implementation of this project would **eliminate up to 25.7K MT of GHG annually**, representing **35%** reduction in K-C's UK total Scope 1 emissions vs. 2021 actual emissions
- ROSI™ analysis revealed significant upside for the project, including forecasted sales growth, less GHG taxes and the ability to secure government grants
 - Represents leadership opportunity for K-C as many business in the UK are using electricity from renewables, but few have decarbonized their thermal energy sources

ROSI™ Monetization Analysis 8-Year Cumulative Benefits Supporting Investment

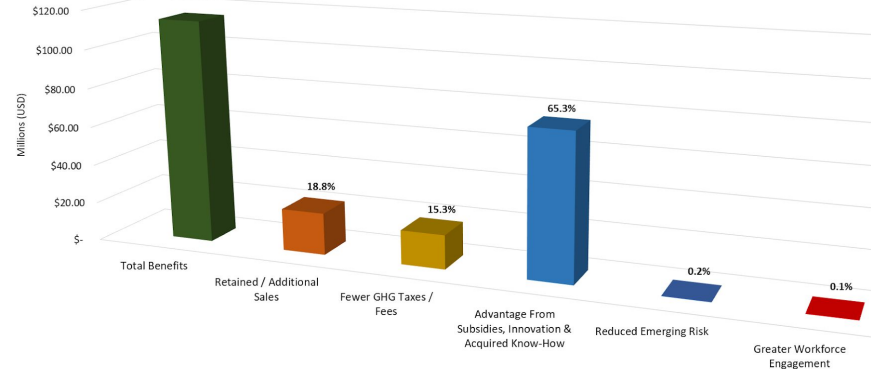
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NEWS

Barrow: Plans for £40m 'green hydrogen' plant submitted



An 8-year NPV of \$20.9 million (net benefits) was estimated, having an IRR of 144% and a payback period over 3.4 years



The Business Case for Decarbonization in Healthcare

- Healthcare accounts for 4.5% of greenhouse gas (GHG) emissions globally, and 8.5% of US emissions.* Could reach six gigatons per year by 2050. **
- CSB is developing a strategy map and monetization framework to support decarbonization in healthcare delivery systems by providing the business case for actions that the healthcare delivery systems can take.
- Analysis of how the industry can expand the methods it uses to account for and value investments in decarbonization practices and provide tools and insights that companies can use for calculations
 - Tools and insights will be open source for use by delivery systems of all sizes
 - Project completion August 2023

* [Health Care's Climate Footprint](#), Health Care Without Harm and Arup, 2019

**[The Global Roadmap for Healthcare Decarbonization](#), Health Care Without Harm



Initial Findings on Decarbonization Strategies

Adoption of decarbonization interventions by hospitals can be complex, including regulatory, clinical, supply chain, and OR approvals. There are opportunities nonetheless:

- **Energy**
 - Reductions through lighting changes and other building retrofits
 - Change energy sources (location dependent) and/or VRECs
- **Buildings**
 - Design and build focused on energy efficiency and resilience
 - Lower emissions materials
- **Supply Chain**
 - Reprocessed medical devices
 - Procurement contract requirements to cover “influenceable scope 3”
- **Clinical**
 - Switching anaesthetic gases
 - Care delivery changes for reach and equity
- **Waste Reduction**
 - Tray optimization; only open what will be used
 - Medical waste
- **Awareness and Training**

Decarbonization Strategy Example (illustrative)

Practice	Example of Sub-Practice	ROSI™ Benefits (for a hospital purchasing the reprocessed device)	Types of Information/Potential metrics to monetize
Implement Reprocessing/Circular Healthcare	<ul style="list-style-type: none">• Hospital switches to reprocessed medical devices, as available, from devices typically designated as “single-use” (In compliance with FDA requirements)	<ul style="list-style-type: none">• Carbon Reductions for Scope 3• Cost Reduction for medical devices• Avoiding potential future fines• Reductions in cost of capital if adopted broadly within the hospital	<ul style="list-style-type: none">• Total annual purchased cost for the devices before changing and after changing (Operating Efficiency)• Scope 3 emissions pre- and post-changing and the related cost of carbon (suggested by research, or used by the entity) (Operating Efficiency)• Regulatory changes (Risk Management) Where regulatory changes are afoot, costs of implementing now vs. waiting for when supply might be tighter• Cost of Capital (Operating Efficiency)• Innovation - Overall staff and administration being more open to switching based on success of one program• Avoidance/saving of waste disposal costs

ROSI™ Digital Tool Development

Digital tools to increase ROSI accessibility



Valutus
The Value of Values

ROSI™ Employee Wellbeing

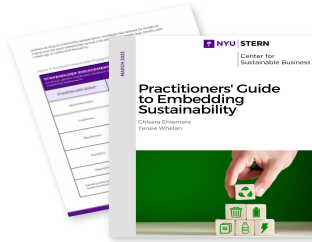
- Monetize companies' investments in employee wellbeing strategies across industries
- Companies input data on employees (headcount, hours worked, wages, turnover, % of high performers, etc.)
- Tool provides a directional estimate of cost savings due to reduced turnover and increased productivity

Decarbonization Risk & Opportunity

Tool that allows investors and companies to estimate the financial value of strategies to reduce GHG

- The values will be expressed in terms of:
 - P/E impact for Investor purposes
 - Revenue impacts for corporates

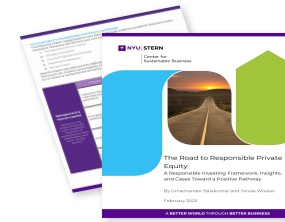
Recent Publications



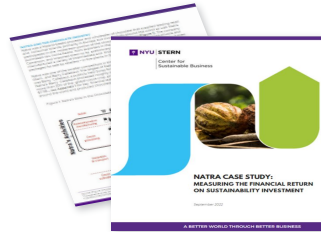
Practitioners' Guide to Embedding Sustainability



Finding the Return on Sustainability Investments



The Road to Responsible Private Equity



Measuring the Financial Return on Sustainability Investment in the Chocolate Industry



**Coming soon...
Global Change Begins at Home**

Questions?

Get Involved with CSB



Learn more and stay up-to-date about CSB educational programs, ROSI Methodology and other original research, career resources and events. www.stern.nyu.edu/sustainability



Support CSB to ensure the continuation of our education, career development, research and outreach initiatives. CSB is grateful to raise all of our own operating and research funds from alumni and other supporters.



Reach out to CSB if you are interested in learning more about educational programs, partnership opportunities, working with current students, or just to introduce yourself!
sustainablebusiness@stern.nyu.edu



Follow us, tag us and join the conversation on LinkedIn at NYU Stern Center for Sustainable Business

Today's Agenda

9:55 - 10:40 am

ESG in Black and White: Media's Role
in Sustainability Culture Wars

10:40 - 11:00 am

Fireside Chat w/ Investindustrial

11:00 - 11:50 am

ROSI Roundtable: Monetizing
Sustainability Initiatives Across
Industries

11:50 am - 12:50 pm

Lunch

12:55 - 1:10 pm

Trends in Technology

1:10 - 1:45 pm

2022 Sustainable Market Share Index

2:15 - 2:25 pm

NYC's Climate Transition

2:25 - 3:00 pm

Capital for Climate
Commitments

3:00 - 3:20 pm

Practitioners' Guide to Embedding
Sustainability

3:20 - 4:00 pm

Coffee Break

4:00 - 5:00 pm

Breakouts:

- Embedding Sustainability Strategy
- ROSI & Circularity
- ROSI & Sustainable Sourcing
- Stakeholder Mapping & Materiality
- Marketing & Communications

5:00 - 6:00 pm

Happy Hour

ESG IN BLACK AND WHITE

THE MEDIA'S ROLE IN SUSTAINABILITY CULTURE WARS



Heather Clancy
VP & Editorial Director
GreenBiz



Amy Cortese
Editorial Director
ImpactAlpha



David Gelles
Climate Reporter
The New York Times



Mindy Lubber (Moderator)
CEO and President,
Ceres



Gillian Tett
Chair, Editorial Board &
Editor-at-Large, US, Financial Times

FIRESIDE CHAT



Roberto Ardagna



Managing Principal
Investindustrial



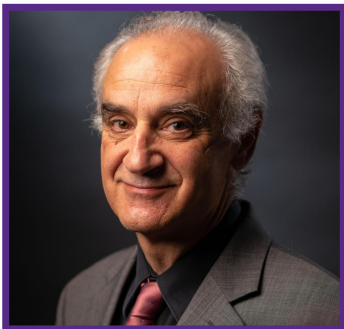
Patrick Temple-West



Governance Reporter
Financial Times

ROSI™ ROUNDTABLE

MONETIZING THE RETURN ON SUSTAINABILITY INVESTMENT



Gary Cohen

President
Healthcare Without Harm and
Practice Greenhealth



Virginia Covo

Head of Sustainability, North America
AB InBev



John Platko (Moderator)

Managing Partner
ALO Advisors



Michael Tears

Senior Director, Energy & Environment
Kimberly-Clark

LUNCH BREAK



Programming will continue at 12:50pm EDT

TRENDS IN TECHNOLOGY



Nana Baffour



Chairman, CEO, and Chief Cultural Officer
Qintess



NYU | STERN

Center for
Sustainable Business



Qintess™

Maximizing Sustainability through Data and Technology Innovation

PRESENTED

BY:

NANA BAFFOUR, CFA

Global CEO and Chief Cultural Officer, Qintess

GLOBAL TRENDS

1

**Climate
change**

2

**Diversity
and
Inclusion**

3

**Economic
downturn**

The world demands an action - the moment is now for a more sustainable ecosystem driven by technology innovation and data

THINK GLOBAL

How do we respond to challenges in our businesses and everyday lives ?

Our ability to create sustainable solutions is critical for market transformation and improving people's lives



CREATE SUSTAINABLE SOLUTIONS



Key impact areas:



ESG Reporting



Supply Chain Management



Manufacturing Efficiency



Impact Assessment



DEI Initiatives execution

ESG REPORTING AND IMPACT ASSESSMENT



ESG Data Monitoring Dashboards:

- ❑ Integrated ESG data platforms

novisto



AUDITBOARD

velocityEHS®



Energy Management Systems:

- ❑ AI driven platforms to track energy consumption



Wattics
An EnergyCAP Solution

eSightenergy



inavitas

SUPPLY CHAIN MANAGEMENT



End to End Blockchain:

- ❑ Promote more ethical sustainable sourcing



Robotics and Automation:

- ❑ AI powered tracking and transparency

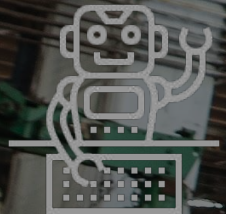
MANUFACTURING EFFICIENCIES

Waste Management:

- Executing a circular economy strategy
- Advanced Recycling using AI and Machine Vision

Production Efficiency:

- Industrial Automation (smart sensors, cloud computing,)
- Industrial IOT (Additive manufacturing/ 3D printing)



1

Employment

Recruiting

**Employee
Management**

DEI INITIATIVES

2

Healthcare

**Data Integration
Technologies**

**Robotics and
Automation**

3

Smart Cities

**Water Conservation
Technologies**

**Smart Traffic System
Mgt**

TECHNOLOGY FOR GOOD, TECHNOLOGY FOR ALL

Our dependence on
Technology Innovation
and Data for
sustainable solutions
should be free from
bias, projecting Social
Inclusion for all

Technology companies
need to ensure that
there is a strong focus
not only on building
sustainable solutions for
clients, but also on
projecting DEI
initiatives internally at
their workplace

CREATING A DIGITAL TRANSFORMATION DEI HUB



Qintess[™]
ACADEMIES

At Qintess, we have our Talents Academy, a framework that combines hard and soft skills, agility, design, and innovation.

CREATING A DIGITAL TRANSFORMATION DEI HUB

**We aim for 50% of our trainees to be women,
dedicating as well, additional quotas for
minority professionals (Black, LGBTQI,
disabled)**



CREATING A DIGITAL TRANSFORMATION DEI HUB

**More than 40% of our leadership
positions are held by women.**

A CLEAR PATH TOWARDS MAXIMIZING SUSTAINABILITY

An Optimistic Vision:

**The moment is now to transform our challenges
into opportunities....**

**.... An opportunity to leverage high-level technology and
data to design and build sustainable solutions**

**.... Accelerating human creativity and maximizing
social impact**

THANK YOU !



2022 SUSTAINABLE MARKET SHARE INDEX™



Randi Kronthal-Sacco



Senior Scholar
NYU Stern CSB

2022 SUSTAINABLE MARKET SHARE INDEX™



Randi Kronthal-Sacco



Senior Scholar
NYU Stern CSB



Nishat Mehta



President, Global Products & Solutions
Circana (formerly IRI)

FIRESIDE CHAT



Paul Knopp



**Chair and CEO
KPMG**



Gillian Tett



**Chair, Editorial Board & Editor-at-Large, US
Financial Times**

NYC'S CLIMATE TRANSITION



Rohit Aggarwala



**Commissioner, New York Department of Environmental Protection
Chief Climate Officer of New York City**

CAPITAL FOR CLIMATE COMMITMENTS



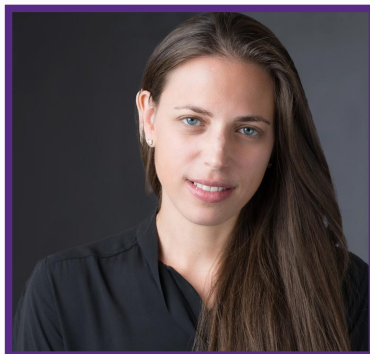
Kenza Bryan (Moderator)
Moral Money Reporter
Financial Times



Andrew Kessler
President
NY Green Bank



Priscilla Lu
Partner/Managing Director, Head of
Sustainable Investments for APAC,
DWS



Lindsay Luger
Co-Founder and Partner
Energy Impact Partners

PRACTITIONERS' GUIDE TO EMBEDDING SUSTAINABILITY



Chisara Ehiemere



Senior Research Lead, ROSI
NYU Stern Center for Sustainable Business

Why Produce an Embedded Sustainability Guide?

The challenge: companies are working to understand and address sustainability risks and opportunities with inadequate background and tools

The opportunity: a guide that provides:

- Step-by-step practical guidance on how to build a sustainability strategy, culture, governance and reporting/communications
- Case examples from companies
- An analysis of common barriers and how to address them
- An embedded sustainability maturity model for self-assessment

Generous support provided by



What is Embedded Sustainability?

Sustainability is embedded when the proactive management of material sustainability issues and a balanced approach to the needs of stakeholders (including shareholders) are completely and effectively integrated into the company's business strategy with the goal of creating positive societal value as well as better financial returns.

Why Embed Sustainability Core to Business Strategy?

Provides a total quality management approach through a sustainability lens:

- Identify and mitigate environmental, social and governance risks
- Identify growth and innovation opportunities
- Identify operational efficiencies
- Unlock opportunities to increase sales and customer loyalty
- Increase ability to attract and retain talent
- Improve stakeholder relations (including suppliers)
- Increase positive media coverage and reputation

Examples highlighted

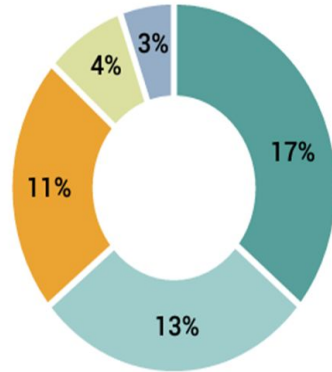
STAKEHOLDER ENGAGEMENT

GOODYEAR GATHERS STAKEHOLDER FEEDBACK, BUILDING ON INFORMATION GATHERED DURING MATERIALITY ASSESSMENTS

STAKEHOLDER GROUP	REGULAR STAKEHOLDER INTERACTION
Board Members	<ul style="list-style-type: none"> Board meetings Committee meetings Annual shareholders meeting
Customers	<ul style="list-style-type: none"> Daily communication via email, calls and meetings Occasional on-site visits Annual customer conferences
Distributors	<ul style="list-style-type: none"> Daily communication via email, calls and meetings Occasional on-site visits Annual customer conferences
Suppliers	<ul style="list-style-type: none"> Daily communication via email, calls and meetings Occasional face-to-face meetings at Goodyear or supplier facilities
Regulators	<ul style="list-style-type: none"> Engagement with governments in countries of operation, as necessary
Industry Associations and Non-Governmental Organizations (NGOs)	<ul style="list-style-type: none"> Tire Industry Project and ongoing working groups Trade Associations Frequent interactions with NGOs
Investors	<ul style="list-style-type: none"> Quarterly earnings calls Annual shareholders meeting Frequent investor calls and emails
Collaborators	<ul style="list-style-type: none"> Various collaborator engagements throughout the year on a variety of projects
Community Members	<ul style="list-style-type: none"> Communication with and contributions to charity Regular volunteer activities Community program development



ESG Pay-Link Adoption by Region



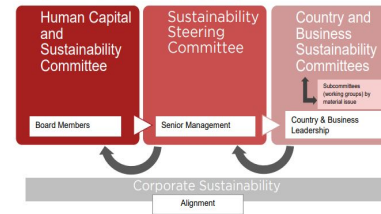
- Europe
- U.S. and Canada
- Africa and Middle East
- Asia-Pacific
- Latin America and Caribbean



Figure I: Arca Continental's Governance Illustration.



Figure II: Arca Continental's Sustainability Committees Illustration.



NYU STERN
Center for Sustainable Business

Sustainability Materiality Matrices Explained

May 2019

A Better World, Through Better Business

Process Steps

Section 1. Design Your Corporate Strategy

Section 2. Create a Culture of Sustainability

Section 3. Governance and Organizational Structure

Section 4. Communications and Reporting

Section 1. Design Your Corporate Strategy, Steps 1 to 4



Step 1: Determine Material ESG Factors for the Company
Strong performance on material issues leads to better results



Step 2: Map and Engage Stakeholders
Identify opportunities for learning and collaboration



Step 3: Create a Materiality Matrix
Internal analysis and stakeholder views to prioritize efforts



Step 4: Develop Your Sustainable Business Strategy
Plan for prioritized issues and create baseline

Section 1. Design Your Corporate Strategy, Steps 5 to 8



Step 5: Develop Organization-Wide KPIs
Develop outcome and impact-based KPIs



Step 6: Develop and Implement Action Plans for Goals
Timing, resources and activities



Step 7: Identify and Recruit Partners and Collaborators
Includes NGOs, precompetitive partnerships



Step 8: Understand and Track ROSI™
Identify value drivers and monetize results

Section 2: Create a Culture of Sustainability

Includes the company's beliefs, attitudes, and values at the core of their business operations and how they affect employee engagement:

- Ensure vision, mission, purpose, and values align with sustainability; act ethically
- Address Employee Relations and Diversity, Equity & Inclusion
- Assess and Manage Culture Change
- Employee Training

Our Purpose is "To Stand Together for the Future of Flavor."

Our Vision is "A World United by Flavor—where healthy, sustainable and delicious go hand in hand."

– McCormick*



patagonia[®]



KPMG

TRANE
TECHNOLOGIES[®]

Section 3: Governance and Organizational Structure

Evaluates the structural processes in place to promote and monitor sustainability integration across business functions

- Board Governance
 - Sustainability committees, ESG credentials
- Leadership, Management and Accountability
 - Capital Allocation
 - Organization-wide KPIs and work plans
 - Executive compensation tied to results
- Structuring an effective sustainability function



Section 3: Governance and Organizational Structure

Example: Structuring an impactful sustainability function – not a one-size fits all, and considerations include

- CEO prioritization and visibility
- Sustainability function aligns with the way the rest of the organization works
- Sustainability function has the authority to have cross-departmental and cross-functional reach
- Buy-In from the finance function

Section 4: Communications and Reporting

Discusses how the company communicates its sustainability values and commitments to internal and external stakeholders

- Employee Communications
- Communicating with Investors
- Communication with Suppliers
- Communication with Customers and Consumers



Navigating Barriers

Some barriers that are addressed are:

- Our employees know that sustainability is important, but they don't have the knowledge they need to take action
- We have conflicting KPIs across departments
- I am having some difficulty making the consumer argument and can only find anecdotal proof that consumers want these products and will pay more for them
- We are concerned about setting aggressive public (or even internal) goals for fear of missing them
- I feel stuck in bureaucratic inertia

How Embedded is Sustainability Within My Organization?

- Corporate Strategy – Evaluates the degree to which sustainability is integrated into core business operations. It has a higher weighting as it is the backbone of embedding sustainability – 40%
- Governance – Evaluates the structural processes in place to promote and monitor sustainability integration across business functions - 30%
- Culture – Evaluates the company’s beliefs, attitudes, and values at the core of their business operations and how they affect employee engagement - 15%
- Communications – Evaluates how effectively the company communicates its sustainability values and commitments to internal and external stakeholders- 15%



Beginner

Explorer

Integrator

Embedder

Practitioners' Guide for Embedding Sustainability



Please take a few moments to fill out the below feedback survey. Thank you for joining us this year!

