




TRUCOST
Trucost Environmental Register

Investor Perspectives and Expectations

Cary Krosinsky
Vice President
Trucost




TRUCOST
taking the environment into account

That which is measured can be managed

What can & should be measured?

Climate Change Data



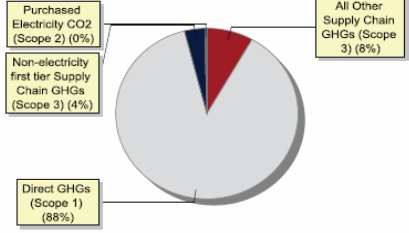
- **Ultimately essential - an understanding of the environmental impact costs that companies & investors will bear going forward**
- **Scope 1, 2 & 3 analyzed in absolute and intensity terms**

Greenhouse Gas Emissions (GHG)
 GHG's are a contributory factor in the growing problem of climate change. The table below shows the quantities of greenhouse gases that Air France emits in tonnes and in carbon dioxide equivalents to aid comparison.

Emission	Source	Quantity Tonnes	CO2 Equivalent (CO2e) Tonnes
Direct GHGs (Scope 1)			
Carbon Dioxide To Air	ENV	26,497,893	26,497,893
Dinitrogen Oxide (Nitrous Oxide) To Air	ENV	1,382	429,277
Methane To Air	ENV	7,745	162,645
HFCs To Air	TC	8.71	20,900
PFCs To Air	TC	-	-
Sulphur Hexafluoride To Air	TC	-	-
Other GHGs	ENV	-	0.0000
First Tier Supply Chain GHGs			
1,225,000			
Purchased Electricity (Scope 2) CO2	TC	105,000	105,000
Non-electricity first tier Supply Chain GHGs (Scope 3)	TC	-	1,120,000
All other Supply Chain GHGs			
2,552,000			
Sum Of All other Supply Chain GHGs (Scope 3)	TC	-	2,552,000
Total			30,886,716


Carbon Footprint (Tonnes CO2e/ per million revenue in USD in EUR)

Direct GHGs	1,044.44	1,263.97
Direct + Electricity GHGs	1,048.49	1,268.88
Direct + First Tier Supply Chain GHGs	1,091.64	1,321.10
Direct + Total Supply Chain GHGs	1,189.95	1,440.07



GHG Damage Costs / Turnover 4.2 % GHG Damage Costs / EBITDA 27.5 %
 CO2 equivalent (CO2e) is the standard unit for comparing the degree of harm which can be caused by emissions of different greenhouse gases.

Environmental KPIs



- In general, the top 7 environmental impacts are:
 - ❑ Greenhouse gas emissions
 - ❑ Acid rain & smog precursors
 - ❑ Volatile organic compounds
 - ❑ Water abstraction and use
 - ❑ Natural resource use
 - ❑ Heavy metals
 - ❑ Waste

It's not just about carbon – in a world with growing population and constrained resources

Environmental Impacts



Over 750 different environmental pollutants / damaging activities

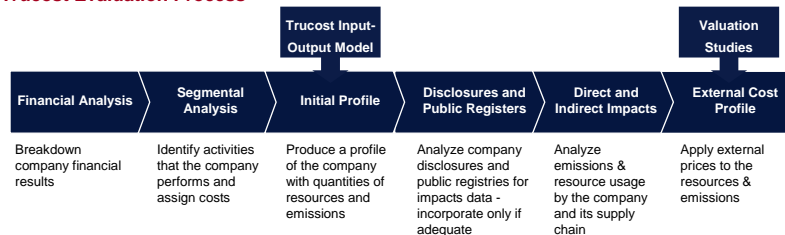
- Sink Air – Acid rain precursors, Greenhouse gases, Heavy Metals, Ozone Depleting Substances, Pesticides, Smog precursors, Volatile Organic Compounds (VOCs)
- Sink Land – Acid Rain Precursors, Fertiliser residues, General Waste, Heavy Metals, Nuclear Waste, Ozone Depleting Substances, Pesticides, Volatile Organic Compounds (VOCs)
- Sink Water – Acid Rain Precursors, Fertiliser residues, General Waste, Heavy Metals, Nuclear Waste, Ozone Depleting Substances, Pesticides, Volatile Organic Compounds (VOCs)
- Source Land – Crude oil, Natural gas, Coal, Metals, Minerals, Stone, Timber, Agricultural products, Water abstraction
- Source Water – Botanical, Zoological

How Trucost Evaluates Companies



Trucost generates an external cost profile for each organisation, and then sends this information to the company for verification before it is published

Trucost Evaluation Process



Company Verification Process



Measuring Companies



Newsweek Green Rankings – 2010

HOW WE RANKED THEM

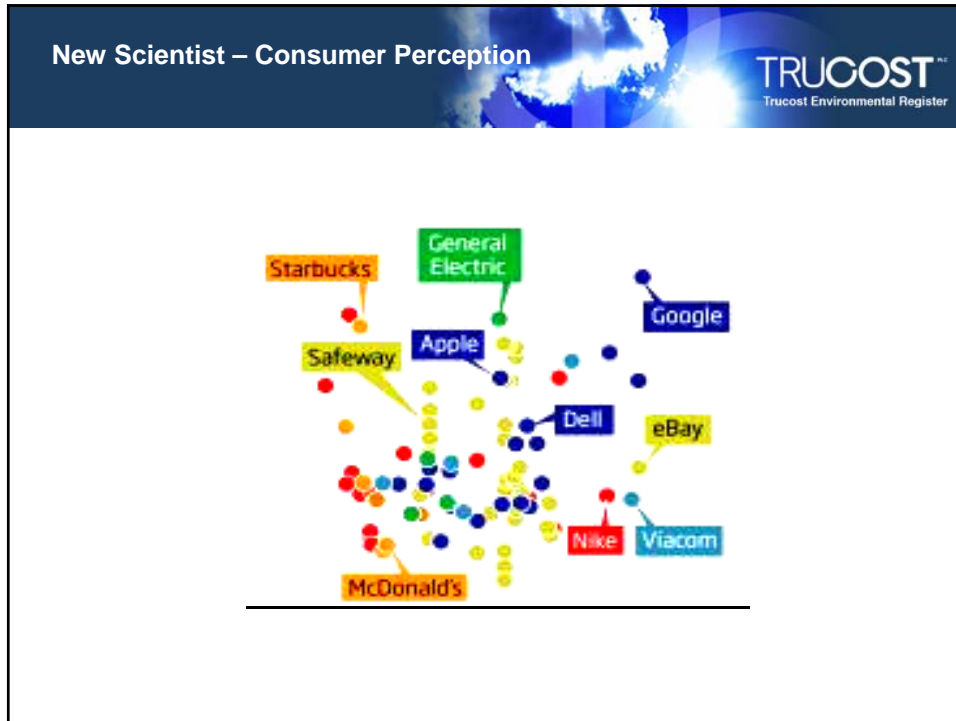
Each company's footprint based on 100 criteria. A comprehensive assessment of metrics. The nationally verified average of all public data sources. Total score is reported per \$1 million of revenue.

INDUSTRY SECTORS:

- Bank and Insurance
- Basic Materials
- Financial Services
- Food and Beverage
- General Industrials
- Health Care
- Industrial Goods
- Transport, Aerospace
- Phils, Travel Leisure
- Oil and Gas
- Consumer Products, Cos
- Pharmaceuticals
- Retail
- Technology
- Utilities

RANK	COMPANY	ENVIRONMENTAL SCORE	SO2 SCORE	WATER SCORE	WASTE SCORE	OVERALL GRADE	REVENUE (\$ MIL)
1	Hewlett Packard	84.80	87.80	88.44	100	A	1,673,000
2	Dell	87.70	100.00	70.80	88.87	A	435,400
3	Johnson & Johnson	56.70	88.17	75.88	88.16	B	1,152,900
4	Intel	66.70	87.87	85.88	85.11	B	2,700,100
5	International Business	76.90	84.20	77.50	84.08	B	2,834,800
6	State Street	95.00	84.38	70.88	82.61	B	88,100
7	NIKE	77.10	78.11	86.90	81.18	B	302,800
8	Bristol-Myers Squibb	27.80	88.50	64.73	82.82	B	848,100
9	Applied Materials, Inc.	50.80	88.51	64.51	81.78	B	1,04,000
10	Starbucks Corporation	30.50	82.01	75.42	81.63	B	800,000
11	Johnson Controls, Inc.	34.30	78.61	72.68	80.53	B	1,712,100
12	Cisco Systems, Inc.	70.60	72.88	87.70	88.58	B	480,600
13	Wells Fargo & Company	81.30	80.12	38.88	88.55	B	878,100
14	Sun Microsystems, Inc.	86.10	77.11	48.88	88.11	B	257,500
15	Sprint Nextel	74.20	77.28	66.51	88.08	B	2,083,300
16	Adobe Systems	86.90	73.27	56.52	87.88	B	35,100

1 SEPTEMBER 28, 2009 NEWSWEEK.COM



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The Guardian, Feb 2010 - **World's top firms cause \$2.2tn of environmental damage**

The cost of [pollution](#) and other damage to the natural environment caused by the world's biggest companies would wipe out more than one-third of their profits if they were held financially accountable, a major unpublished study for the [United Nations](#) has found.



Measuring Investors

Carbon Impact on US Portfolios



Style	Carbon Intensity (tCO ₂ -e/\$M)
• Sustainability/SRI	226
• Sector	233
• Growth	294
• Value	305
• Core	342
• Index	370
• S&P 500	384
• Equity Income	408
• Country/Regional	460

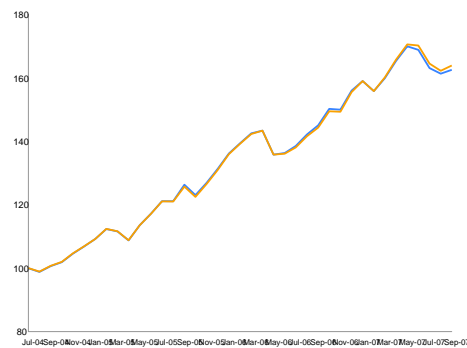


Low Carbon investing

UBS ECO – Carbon Optimized



- European Carbon Optimised (ECO) STOXX 600 launched Q1 2008
- Sector neutral
- Buys every company in the index and re-weights company within the sector by relative carbon efficiency
- Risk averse strategy with significant carbon savings in a region specifically affected by new and pending regulation and customer demand
 - 0.7% tracking error
 - 39% carbon savings



	DJ Stoxx 600 Benchmark	DJ Stoxx 600 CO2 Weighted
Annualised Performance	16.7%	17.1%
Annualised Realised Volatility	8.0%	8.1%

Past performance is not necessarily indicative of future results.

S&P – Carbon Optimized Indices

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Trucost data forms S&P US Carbon Efficient Index – launched Spring 2009
Trucost partners with S&P/IFC to create Emerging Markets Carbon Efficient Index – launching December 2009 – watch for a series of ETFs and other products

Trucost carbon footprint data has been used by S&P to drive **a series of global low carbon indices** to meet growing investor demands for environmentally focused indices.

The S&P US Carbon Efficient Index selects large cap US companies with relatively low carbon risk for their sector. The carbon footprint of the index is 48% lower than that of the S&P 500, while seeking to closely track benchmark returns.

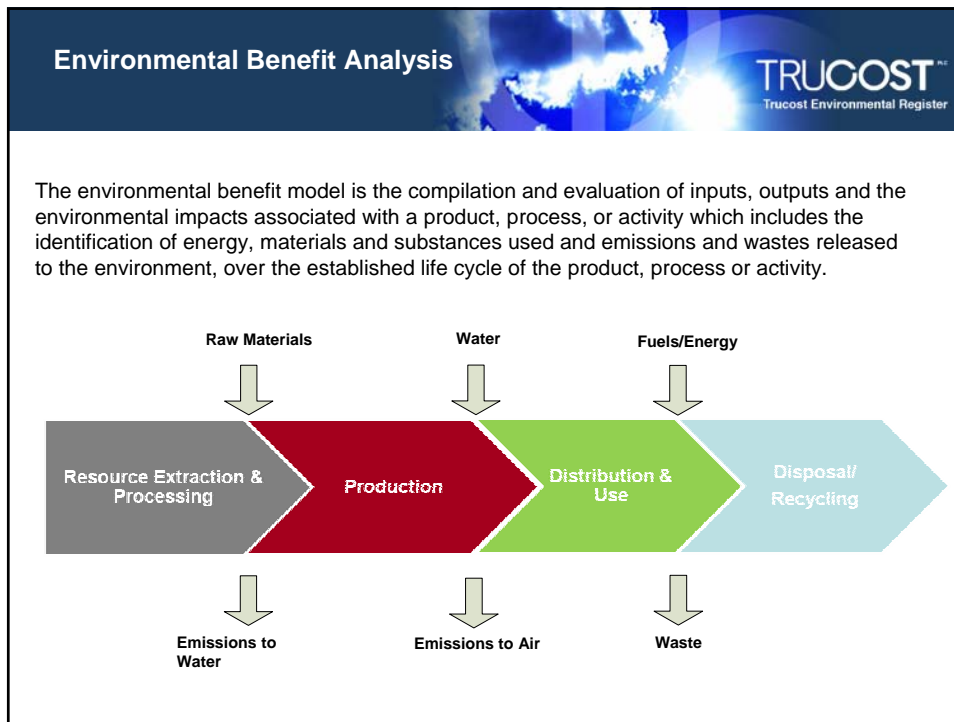
Create environmentally focused investment products

The S&P index demonstrates how Trucost's carbon footprint data can be used by Fund Managers to create innovative environmentally focused investment products, while maintaining and enhancing returns - and provides invaluable input into stock selection across existing portfolios.


Cost implications

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Company	% diff. in carbon intensity vs. MSCI World sector average*	EBITDA before carbon costs (£ mn)	EBITDA after carbon costs (£ mn)	
			£12/tCO ₂ -e	£57/tCO ₂ -e
Utilities				
RWE AG	+4%	6,598	4,445	-3,628
Intl Power Plc	+353%	983	172	-2,869
AEP	+346%	2,000	13	-7,439
Oil & Gas				
BP	-8%	19,831	18,005	11,158
Shell	+1%	31,730	29,260	19,997

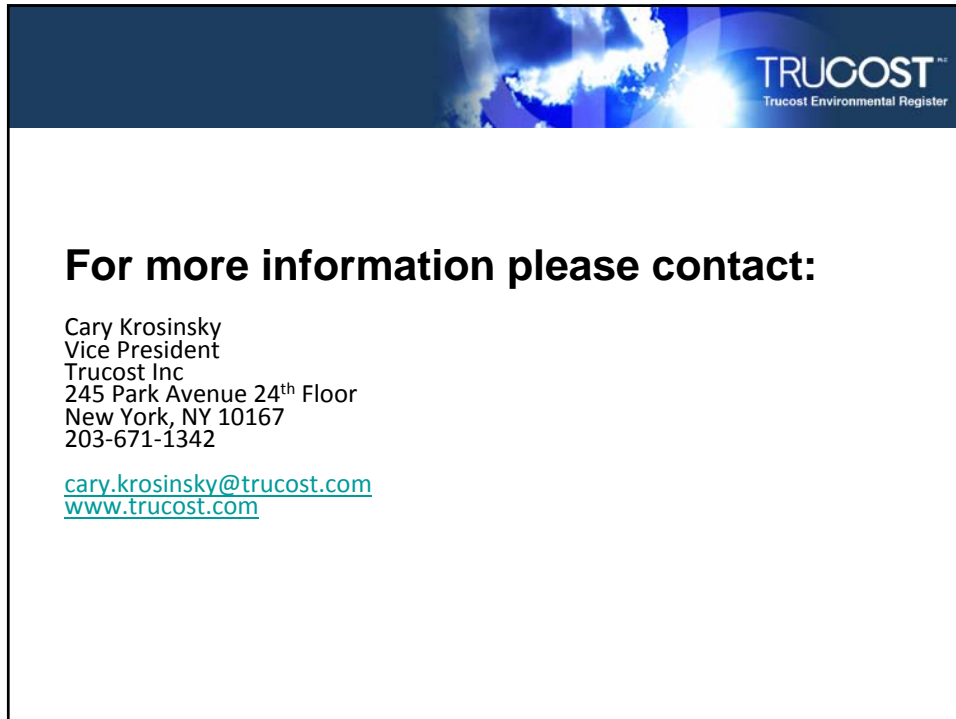


Trucost Advisory Panel



The Trucost Advisory Panel supports and assists in the development of Trucost's methodology. This panel of leading academics now includes:

Name	Experience
Dr. Robert Costanza, <i>Advisory Panel Coordinator</i>	Gund Professor of Ecological Economics and Director of the Gund Institute of Ecological Economics at the University of Vermont, co-founder of the International Society for Ecological Economics, and chief editor of <i>Solutions</i> magazine.
Dr. Daniel Esty	Hillhouse Professor of Environmental Law and Policy, jointly with Yale Law School; Director of the Center for Environmental Law and Policy; and Director of the Yale World Fellows Program; Director, Center for Business & Environment at Yale; Co-Author of the bestselling "Green To Gold"
Tim Jackson	Professor of Sustainable Development in the Centre for Environmental Strategy (CES) at the University of Surrey. Head of Economics division of UK Sustainable Development Commission. Author of "Prosperity Without Growth"
Dr Robert Goodland	Environmental Commissioner, for the EIR, a World Mining Commission, for the UN World Summit on Sustainable Development 2002. Advising H.E. Emil Salim, Chairman of the Summit's PrepCom. Previously Environmental Advisor to the World Bank for 25 years
Dr Peter Victor	Professor of Environmental Studies at York University, Toronto. He was Dean of the Faculty until June 2001. Previously the Assistant Deputy Minister of the Environmental Sciences and Standards Division with the Ontario Ministry of Environment and Energy. Author of "Managing Without Growth."

The image shows a promotional graphic for Trucost. At the top, there is a dark blue banner with a stylized globe and the text "TRUCOST™" and "Trucost Environmental Register". Below this banner, the text "For more information please contact:" is displayed in a large, bold, black font. Underneath, the contact details for Cary Krosinsky are listed in a smaller black font. At the bottom of the contact information, the email address and website are underlined in blue.

For more information please contact:

Cary Krosinsky
Vice President
Trucost Inc
245 Park Avenue 24th Floor
New York, NY 10167
203-671-1342

cary.krosinsky@trucost.com
www.trucost.com