Introduction

Despite the absence of a universally agreed upon and recognized definition of corporate sustainability, several lists purporting to rank companies’ sustainability are being published. One such list, The Global 100 Most Sustainable Corporations, is published by Corporate Knights, a media, research and financial information products company based in Toronto, Canada. Newsweek also publishes a ‘Green Rankings’ list (adapting and expanding on the methodology used by Corporate Knights), and the Dow Jones has its Dow Jones Sustainability Index. These lists are covered by various media, and to the casual reader, a company on this list presumably would be sustainable, ‘green’ and environmentally friendly.

A look at the Corporate Knights list and its methodology for creating the list, however, raises questions about what is really being measured. For example, one major criterion is a set of 9 financial and operating tests that gauge more a company’s prospects as an investment than its sustainability from an environmental perspective. And the companies on the list cover virtually all industrial/business sectors, which can make comparisons across and within industries difficult. That environmental-oriented actions by firms are not explicit criteria exacerbates the problem.

It therefore is somewhat safe to conclude that these sustainability ranking lists do not necessarily provide useful or generalizable information about how to measure the sustainability actions of companies, nor do they help define corporate sustainability. To address this shortcoming, students in an undergraduate Honors class, ‘Viable Sustainable Businesses’, at St. Francis College tried to develop a more meaningful way to evaluate a company’s sustainability actions.

The Research Task

Each student chose a multinational company from the Corporate Knights list for 2014. Using the company’s own sustainability and/or corporate social responsibility reports, the students looked for (1) how the company defined sustainability for itself; (2) what actions the company chose in pursuing its sustainability; (3) how those actions were measured; and (4) what longer term sustainable strategies the company was considering. Because the companies chosen spanned a variety of industries (see Appendix 1), it was hoped that commonalities about sustainability across industries could be revealed. But first, the students developed their own working definition of sustainability.

Definition of Sustainability

For this task, sustainability for a company means the ability to continue to provide its goods and services and return a profit to its owners. For the planet, though, it means preserving its ability to provide fresh water, food, clean air, and the resources needed to provide
a high quality of life for its human inhabitants. Applying this latter thought to companies, a sustainable company would be one that can deliver goods or services to the consumer in a way that reduces or eliminates its carbon footprint and any and all other forms of environmental damage.

**The Ranking Systems**

**Corporate Knights**

To be considered for the Corporate Knights Ranking list, a company has to be publicly traded with a market capitalization of at least $2 billion and then go through four screenings. The first screening involves the elimination of companies that do not disclose at least 75% of “priority indicators” (any of 12 key performance indicators disclosed by at least 10% of large companies in a given industry) for their industry. The second screening involves looking at the companies’ F-Scores, a series of nine individual tests that include positive net profit, positive operating cash flow, net profit divided by total assets at beginning of year, minus the same number for the previous year is positive, operating cash flow is greater than net profit, long term debt divided by average assets has not increased, the current ratio has increased, no raising of common equity over the previous year, gross margin has improved, and asset turnover has increased. The third screening is the elimination of companies that are sub-industries of tobacco or are sub-industries of aerospace and defense whose revenues are derived primarily from defense. The fourth screening involves the elimination of companies that are on the bottom quartile of their industry for sustainability related fines, penalties, etc. This screening only includes definitive monetary fines, penalties, settlements, etc. The only exception to this fourth screening are companies that were part of the most recent Global 100 ranking and are subjected to this test on a trailing two year basis. Companies who pass all four screenings are then ranked and the annual ranking list is released.

For more detail on the Corporate Knights ranking methodology, see: [http://www.corporateknights.com/reports/2015-global-100/methodology/](http://www.corporateknights.com/reports/2015-global-100/methodology/).

For the most recent ranking list, see: [http://www.corporateknights.com/magazines/2015-global-100-issue/2015-global-100-results-14218559/](http://www.corporateknights.com/magazines/2015-global-100-issue/2015-global-100-results-14218559/)

**Newsweek**

The Newsweek Green Ranking list, which partners with Corporate Knights and HIP (Human Impact + Profit) Investor, Inc., ranks the 500 largest publicly traded companies (based on market capitalization) on a national and global level. The corporations included in these lists are ranked based on overall environmental performance during the calendar year preceding the publication of the ranking.

The Newsweek list follows six core principles: transparency, objectivity, public data, comparability, engagement, and stakeholders. Eight key performance indicators also are used, with all eight calculated using empirical data and various formulas to arrive at a score. The performance indicators are: (1) Combined Energy Productivity; (2) Combined GHG (Greenhouse Gas Emissions) Productivity; (3) Combined Water Productivity, (4) Combined Waste Productivity; (5) Reputation; (6) Sustainability Pay Link; (7) Sustainability Board Committee; and (8) Audited Environmental Metrics. The data used for scoring are obtained from primary sources including annual reports, audited financial statements, proxy statements and
For more information on the methodology used, see: http://www.scribd.com/doc/225485386/Newsweek-Green-Rankings-Final-Methodology

For the latest ranking list, see: http://www.newsweek.com/green-2015/top-green-companies-world-2015

Dow Jones Sustainability Indices

Dow Jones’ corporate sustainability assessment begins in March of each year, with new scores released in September. Companies involved in the assessment respond to an extensive industry-specific questionnaire on financially relevant, economic, environmental and social factors. The Indices are maintained collaboratively by S&P Dow Jones Indices and RobecoSAM. RobecoSAM evaluates companies based: its determination of the potential financial impact of the company’s exposure to sustainability factors; implementation of company strategies to manage sustainability risks; the measurement of results in relation to key performance indexes to evaluate the company’s sustainability strategy; validation of external audits and transparent communication of corporate sustainability strategies; and the extent to which slated targets have been met.

The world’s largest 2,500 publicly traded companies are invited to participate in RobecoSAM’s Corporate sustainability assessment for possible inclusion in the Dow Jones Sustainability World Index. Companies that participate receive a total sustainability score between 0-100 and are ranked against other companies in their industry.

For more information on the Dow Jones Sustainability Indices’ methodology, see: http://www.djindexes.com/mdsidx/downloads/meth_info/Dow_Jones_Sustainability_Indices_Methodology.pdf

Comment on the Ranking Lists

Each list starts with market capitalization and are primarily investor-focused; they intend to signal to potential investors those companies that are ‘doing well’ while at the same time being ‘sustainable’. Presumably, then, the lists should show similar results, but this is not the case. The top 10 ‘most sustainable’ companies in each list for 2014 are different, with three different companies ranked first (Westpac Banking, Vivendi and BMW). Corporate Knights and Newsweek, even though Newsweek uses some of Corporate Knights' methodology, only have two companies in common: Biogen (ranked 2nd in Corporate Knights and 8th in Newsweek), and Schneider Electric (ranked 10th in both). And the Dow Jones list has only one company in common with Corporate Knights (Westpac Banking) and none in common with Newsweek. (see Appendix 2 for the top 10 for each ranking list.) Rankings also can fluctuate widely from year to year. Corporate Knights’ 2015’s top 10 list includes only 3 from 2014. Three companies in Newsweek’s 2014 top 10 list appear on its 2015 list. (Dow Jones’ 2015 list is not yet available). And Unilever, which is widely regarded as the model of sustainable companies, is ranked just 93rd in Corporate Knights’ 2014 list (22nd in 2015; 82nd in 2013). And while it is ranked 7th on Newsweek’s 2015 list, it was just 31st in 2014. Someone reading and comparing these lists, then, might well have difficulty understand just what a sustainable company is.
Company Profiles and Approaches to Sustainability (In alphabetical order)

Bayerische Motoren Werke AG (BMW)

Bayerische Motoren Werke AG, commonly known as BMW or BMW AG, is a German automobile, motorcycle and engine manufacturing company founded in 1916. BMW is headquartered in Munich, Germany. It ranked 13th on the Corporate Knights 2014 ranking list (and 6th on the 2015 list).

Sustainability has been established as a strategic corporate objective in the BMW Group’s management logic since 2009. Every major project must be measurable in terms of “sustainability” as a corporate objective. This ensures that economic factors, environmental and social aspects are all accounted for in decision-making. In addition, sustainability as a corporate objective cascades down to personal target agreements for managers and is thus part of their performance-based remuneration. BMW participates in the Carbon Disclosure Project, and divulges a large amount of voluntary information in its annual sustainability report.

Between 2006 and 2013, BMW was able to reduce energy and water consumption, waste and VOC emissions by around 40% per vehicle produced through investments in environmentally friendly plants and technologies as part of its Clean Production Strategy. The electrification of the drivetrain by way of various hybrid solutions is a vital component for BMW to realize further fuel-saving potential. Since autumn 2012, the BMW Group has offered hybrids in its 3, 5 and 7 series line. Starting in 2014, the BMW i8, the first plug-in hybrid produced by the BMW Group whose battery can also be charged via the electricity grid, will round out the program. BMW aims to pioneer radical new solutions in this field to reaffirm its technological leadership.

BMW creates its vehicles in such a way that components can largely be reused or recycled efficiently once the vehicle reaches the end of its life cycle. The BMW Group Recycling and Dismantling Centre (RDZ) near Munich (another one is scheduled to become operational in Shenyang, China in 2016) is working to come up with new solutions for vehicle recycling. In addition, secondary raw materials are finding more and more applications; up to 20% of the thermoplastic materials in its automobiles are already made from recyclates (raw materials sent to, and processed in, a waste recycling plant or materials recovery facility). By using recyclates in its vehicles, BMW reduces the need for mineral oil to manufacture plastic components while contributing to saving energy and to resource efficiency.

Hennes & Mauritz (H&M)

H&M is a Swedish multi-national clothing retailer headquartered in Stockholm, Sweden. It was founded in 1947 and was ranked 64th in the 2014 Corporate Knights list.

H&M describes its sustainability goals as the company needing to be economically, socially and environmentally sustainable, with all of these aspects being heavily interconnected. It considers these things imperative for its future growth. The key sustainability issues it has chosen to address include worldwide scarcity issues in multiple sectors and the massive amount of people that still live in poverty. Clean water, climate change, textile waste, wages and overtime in supplier factories are some of the key challenges in the textile industry. It desires to make more sustainable fashion choices available, affordable and attractive to as many people as possible. Ultimately H&M wants to use its methods to bring about systemic change to the textile industry and across the lifecycle of its products.
H&M has focused on 7 commitments to work toward and abide by in order to create and maintain a sustainable company: (1) provide fashion for conscious customers; (2) choose and reward responsible partners; (3) be ethical; (4) be climate smart; (5) reduce, reuse, and recycle; (6) use natural resources responsibly; and (7) strengthen communities. For each commitment, H&M uses subgroups to measure the progress of each sustainability goal/commitment. Within each focus, progress to achieve the goal is measured using categories such as “More to do”, “On track”, & “Done” to signify completion of a task, giving a visual account of the progress being worked toward. All of the data is displayed in its annual sustainability reports.

Hess Corporation

Hess, founded in 1933, is a leading global independent energy company now primarily engaged in the exploration and production of crude oil and natural gas. Hess Corporation is headquartered in New York City. It was ranked 88th on the 2014 Corporate Knights list.

To Hess, a sustainable company is one that minimizes negative environmental and social impacts to every extent possible, makes wise investments, and manages capital and resources well. Hess measures these objectives by diligently reporting water and carbon usage, using renewable energy and energy-saving sources when possible, as well as shifting financial focus to more long-term projects. Hess also recognizes all of the criticism declaring that an oil company is inherently unsustainable. The VP of Hess’s Corporate Social Responsibility responded by stating the reality that there are no immediate alternatives to hydrocarbons and the world in in constant need of energy, so companies like Hess are still relevant, but the company continues to work to make sustainability where the environment is concerned a part of the business plan instead of just an afterthought. Transparency in sustainability disclosures is one way that Hess holds itself accountable to bettering its environmental practices; for example, it responds annually to the Carbon Disclosure Project.

Hess invests in ways to reduce greenhouse gas emissions caused by flaring, and also is involved in using renewable energy to power its plants, purchasing electricity for owned operations from renewable energy sources such as wind power. It also is reducing emissions of methane by switching from natural gas powered engines to high efficiency electric motors in its compressor stations.

Johnson & Johnson Company

Johnson & Johnson is a multinational manufacturer of pharmaceutical, diagnostic, therapeutic, surgical, and biotechnology products, as well as personal hygiene and healthcare items. It was founded in 1886 and is headquartered in New Brunswick, New Jersey. It is the world’s largest and most diverse medical devices and diagnostics company, and the world’s fifth-largest pharmaceuticals company. The company’s business is divided into three major segments, Pharmaceuticals, Medical Devices and Diagnostics, and Consumer Products. It ranks 57th on the Corporate Knights 2014 ranking list.

Johnson & Johnson defines sustainability as “…reflecting our commitment to maintain in good order the property we are privileged to use, to protect the environment and natural resources both on our properties and through responsible business practices throughout the world.” They view Citizenship & Sustainability as a vital component of their aspiration to help billions of people around the world live longer, healthier and happier lives. Johnson & Johnson
measures its progress through the reduction of facility CO2, increases in clean energy, reduction of Fleet CO2, reduction in water consumption, reduction in water disposal, and products receiving Earthwards recognition. Johnson & Johnson is not a member of the Carbon Disclosure Project, but its commitment is demonstrated through the Global Report Initiative and being a member of the United Nations Global Compact.

**L'Oreal**

L'Oreal is a 108-year-old total beauty care company based in Paris, France whose main goal is to provide affordable luxury to women who want great quality from their beauty products. L’Oréal was ranked 45th on the Corporate Knights 2014 list, and has been named among a select group of corporations in the Carbon Disclosure Project (CDP) Carbon Disclosure Leadership Index (CDLI) for its leading practices in the data management of carbon emissions.

L'Oreal defines sustainability as, “its commitment to produce more with less impact and to engage consumers who are at the heart of its business, to make better choices by offering them products that are both environmentally friendly and desirable.” The company has a sustainability commitment for 2020 known as the “Sharing Beauty With All” commitment, which involves a four-point plan to grow and succeed sustainably: innovating sustainably, producing sustainably, living sustainably, and developing sustainably. L’Oreal’s goal for innovating sustainably is to innovate so that all of its products have some sort of environmental benefit. For every innovation made, L'Oreal will better its environmental profile against one or all of the following criteria: the environmental footprint is reduced through the new formula, the new formula uses renewable raw materials that are sustainably sourced or derived from green chemistry, the packaging is improved, and the new product has a positive social impact.

In terms of producing sustainably, L’Oreal plans to reduce its environmental footprint by 60% from reducing CO2 emissions at its plants, reducing its water consumption, reducing waste, sending zero waste to landfills, and reducing its CO2 emissions from transportation of products by 20% per finished product unit. In order to live sustainably, L’Oreal will use a product assessment tool to evaluate the environmental and social profile of all new products, and all brands will make this information available to allow consumers to make sustainable lifestyle choices. Also, all of its brands will evaluate where they have the largest environmental and social impact and will make commitments to improve their footprint. The brands will then report their progress in order to raise awareness to consumers about sustainable life choices.

In order to develop sustainably, L’Oreal plans to work more closely with its employees, suppliers, and communities. With regard to its suppliers, L’Oreal wants 100% of them to participate in its supplier sustainability program. All suppliers will be evaluated and chosen based on social and environmental performance. They will also have a self-assessment completed, discussing their sustainability policies with L’Oreal’s support. Suppliers will also have access to training tools in order to improve their sustainability policies. Communities will also be involved and be able to access work through L’Oreal, mostly those from underprivileged communities. This goal will be reached through solidarity sourcing, inclusive distribution, beauty professionalization, mentoring and community education, and employment of disabled people and underrepresented socio-ethnic groups.

**Novartis**

Novartis is a healthcare and pharmaceutical company that was founded in 1996. It has headquarters in Basel, Switzerland and currently operates in 140 countries around the globe.
Corporate Knights ranked it 99th in its 2014 ranking list. According to its own reports, Novartis is very active in the sustainability community and is committed to reducing greenhouse gas emissions and water consumption while working to conserve natural resources. Renewable energy – solar, bio-fuels and organic waste fuels – are used at many of its work sites around the globe.

Novartis also works to minimize the impact of its products once they reach the consumer by developing new packaging using less material. As of 2007, Novartis has banned all of its sites from dumping hazardous organic waste in landfills. It also participates in voluntary carbon off-set projects such as the United Nations Clean Development Mechanism. The company has various projects to sequester carbon, create renewable wood resources, and protect endangered species. The company has voluntarily adopted the Kyoto Protocol principals, participates in the Carbon Disclosure Project, and has a goal to reduce its emissions 20% by 2020.

Novartis’ goals are measured in percentages compared to 2008 levels. The company releases a corporate responsibility report each year in which the amount of energy used and purchased, amount of water consumption, amount of greenhouse gasses emitted from projects and the amount of waste that is found in the environment around its facilities is disclosed. To reinforce its responsibility efforts, Novartis established in January 2014 a “Governance, Nomination and Corporate Responsibility Committee” to monitor its corporate responsibility strategies.

Royal Philips (Koninklijke Philips, N.V)

Royal Philips (Koninklijke Philips N.V.), known commonly as Philips, is a diversified technology company founded in 1891 with its headquarters in Amsterdam. It ranked 48th on the 2014 Corporate Knights ranking list.

Sustainability is strongly embedded in the core business processes, like innovation (EcoDesign), sourcing (Supplier Sustainability Involvement Program), manufacturing (Green Manufacturing 2015) and Logistics (Green Logistics) and projects like the Circular Economy initiative. In all the products Philips sells and develops, minimal environmental impact is a major factor that is taken into account, and the company has dedicated a product category specifically to environmental improvement – Green Products. Green Products are derived from one or more green focal areas: energy efficiency, packaging, hazardous substances, weight, recycling, disposal and lifetime reliability. A product’s overall environmental impact is determined by calculating the environmental impact of the product over its total life cycle. This includes the effects of raw materials and their sourcing, manufacturing, the product use and eventual disposal of the product.

Environmental data is therefore one of the most important sets of data that the company uses to determine its effect on the environment and its sustainability. The company has its own sustainability reporting and validation tool. All environmental data is reported on a bi-annual basis. In order to ensure consistent data quality, internal validation processes are followed and peer audits performed. This also allows the company to assess the effectiveness of their data reporting systems. This data is then compared to the Green Operations Program targets. Philips measures its progress toward sustainability through the amount of damage done by its operational carbon footprint that is measured bi-annually and includes emissions from industrial sites, non-industrial sites, business travel, and logistics.
Royal Dutch Shell

Founded in 1907 and headquartered in the Netherlands, Royal Dutch Shell, 51st on Corporate Knights’ 2014 list, is a global group of energy and petrochemical. Its upstream business focuses on finding and extracting crude oil and natural gas. The downstream business deals with refining, supplying, trading, and shipping crude oil worldwide as well as manufacturing and marketing products, and producing petrochemicals for industrial customers.

Shell’s focus on integrating sustainability is separated into three parts: running a safe, efficient, responsible and profitable business, sharing wider benefits where it operates, and helping to shape a more sustainable energy future. The first part is the foundation of its approach and includes having global standards, processes, and tools that together provide effective management of safety, environment, and community involvement. The second part deals with long termed planning that includes developing local economies and supporting community projects. The third part involves developing in alternative sources of energy that are cleaner and necessary for further economic development in a time of growing environmental pressures.

Measurement of the first part is measured through data that record all of its environmental and social data. Measurement of the second part is carried out by Shell through its investment into communities. Progress toward the third part is followed through the development of new technology such as carbon capture and storage. In addition, Shell has created a joint venture in Brazil to produce a biofuel based on sugarcane ethanol, and it also works with natural gas, liquified natural gas, and the development of wind power.

Outside of its Sustainability Report, Shell reports to an External Review Committee, the Global Reporting Initiative, Conflict Mineral Disclosure, the Carbon Disclosure Project, the UN Global Compact, and reports to IPIECA, which guides oil and gas sustainability reporting. It should be pointed out, too, that Shell acknowledges that climate change is a challenge that is far too great for one company or industry to resolve, and advocates for a united front from businesses, government, and civil society to shape a sustainable future.

Sigma-Aldrich

Sigma-Aldrich, 20th on the Corporate Knights 2014 ranking list, is located in the United States, headquartered in St. Louis, Missouri. Sigma-Aldrich describes itself as a “leading life science and high technology company. Our chemical and biochemical products, kits, and services are used in scientific research, biotechnology, and pharmaceutical development, the diagnosis of disease and as a key components in high technology manufacturing.”

Sigma-Aldrich is a member of the Carbon Disclosure Project and has been listed on CR’s 100 Best Corporate Citizens of 2014, and is on many other corporate social responsibility or sustainability lists. It defines sustainability as “proactively managing our impact in many areas of our business. Whether it’s our natural resource usage, our supply chain partners, or our products, we’re working to minimize our impact.” In terms of sustainability, Sigma-Aldrich focuses on 7 key points: waste, emissions, water, energy, supply chain, greener alternative products, and Team Sigma-Aldrich. Its goals are to reduce its waste intensity by 20%, reduce its Carbon Emissions intensity by 20%, reduce its water usage intensity by 30%, and reduce energy usage intensity by 20%, and for each category they measure the amount of money earned over the amount of emission used or over the amount of energy used or over the
amount of water used. The company also is surveying suppliers to develop more transparent and sustainable practices.

Sigma-Aldrich measures its waste intensity by recording the amount of Scope 3 emissions from the waste produced, and compare dollars earned over the amount of Scope 3 carbon produced. Sigma Aldrich takes the same approach for its emissions intensity. It measures the amount of Scope 1 direct emissions and Scope 2 indirect emissions in metric tons, and looks at the dollars earned over tons of carbon produced. Water used is measured in cubic meters, and since 2010 it has managed to save 650,000 cubic meters of water. As for energy, the vast majority comes from non-renewable sources, however the company has been applying retrofits to its facilities with the hope of reducing its energy needs.

Umicore

Umicore, formerly known as Union Miniere and established in 1805, is a global materials technology and recycling company headquartered in Brussels, Belgium. It specializes in recycling, emission control and providing rechargeable batteries and photovoltaics. The company was ranked 9th on the Corporate Knights 2014 ranking list.

Umicore has incorporated sustainability into its overall vision, defining sustainability as the means to reducing its carbon emissions, reducing the impact of its metal emissions and improving its understanding of the life cycles, and impact, of its products. Umicore is a member of the Carbon Disclosure project and voluntarily report its emissions and waste consumption. Its major goal is to review alternative technologies aimed at decreasing metal concentration in discharge and decrease the volume of solid waste material produced. Umicore’s sustainability goals are measured and compared to each previous year rather than using a benchmark from a prior year, however its objective is to decrease the impact of metal emissions to air and water by 20% compared to 2009 levels. Each year Umicore measures emissions to water, emissions to air, CO2 (greenhouse gas) emissions, water consumption, and waste.

Comments on Company Approaches to Sustainability

The most striking thing that is absent from each company’s discussion of its approach to sustainability is a clear definition of sustainability. As a result, the companies essentially are free to design their own measures of how they are making progress toward ‘sustainability’. Not only might this be confusing to those who are interested in what specific companies and/or industries really are doing to be sustainable, but it also calls into question the credibility or reliability of sustainability ranking lists.

Some common features do emerge, though, particularly with respect to what the companies are doing to reduce their carbon footprint, reduce waste, reduce pollution, and in general use resources more responsibly. And all of the examined companies try to value their efforts in financial terms. This makes sense because it is ‘easier’ for a company to pursue (at least what it calls) sustainability if there is a financial reward. Another common feature is the intermixing of socially responsible activities with business sustainability initiatives. This, too, makes sense because there is a good chance that each company started reporting on its corporate social responsibility activities before it started to address sustainability. Interestingly, what a company does to be socially responsible is not prevalent in the methodologies used to determine sustainability rankings, however the blending of social initiatives with efforts to protect the environment are part of the sustainable development goals which, one can hope, will be something companies address going forward.
Summary and Conclusion

This research effort was begun in the hope that some additional context could be provided to the sustainability ranking lists that garner much media attention and to see if some common features or definition of and approaches to sustainability of a random sample of companies on the Corporate Knights ranking list could be found. While no discernible common definition of sustainability emerged, one thing the companies had in common was an interest in reducing their carbon footprint, finding ways to reduce waste and pollution, and cut costs. With respect to the working definition of sustainability that was used for, first, a company, and, second, the planet, each company examined addressed the former but rarely addressed the latter.

One lesson from this research effort is that the popular sustainability ranking lists are not sufficient on their own to assess what a company is doing to be ‘sustainable’. Another lesson is that to really know what a company is doing to be sustainable, an individual needs to conduct considerable separate research, digging into the company’s published reports as well as the sustainability ranking lists. And probably the most important lesson is that without a generally agreed upon definition of sustainability that can be applied universally (or at minimum to individual industries), it may not make much sense to rank companies in terms of their ‘sustainability’.

So what is the best way to measure the sustainability activities of corporations? First, what is needed is a definition of sustainability that can be applied to companies as a whole and then adapted to companies within specific industries. Once a definition is determined, appropriate metrics can be derived against which a company can measure its progress, and which can be used by outside evaluators. An implicit assumption here is that the company should be looking at its impact on the environment and society first, and on its financial performance second. This implies further that the company’s investors (shareholders and creditors) need to take a broader and longer view of company performance and that the company likely is going to experience financial ups and downs in its progress toward sustainability as it will be defined. That this requires a serious rethinking of how a company’s performance as a whole is evaluated is an understatement, but it is a rethinking that needs to be done.
Appendix 1
Sampled Companies and Their Primary Industry Classification
(as stated in the 2014 Corporate Knights ranking list)

<table>
<thead>
<tr>
<th>Company</th>
<th>Industry Classification</th>
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<td>BMW</td>
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<td>Hess Corporation</td>
<td>Energy</td>
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<td>Specialty Retail</td>
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<td>Pharmaceuticals &amp; Biotechnology</td>
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<td>Personal Products</td>
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<td>Sigma-Aldrich</td>
<td>Materials</td>
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<td>Umicore</td>
<td>Materials</td>
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# Appendix 2

The ‘Top 10’ Most Sustainable Companies According to Three 2014 Ranking Lists

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<thead>
<tr>
<th>Rank</th>
<th>Corporate Knights</th>
<th>Newsweek</th>
<th>Dow Jones</th>
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<tbody>
<tr>
<td>1</td>
<td>Westpac Banking</td>
<td>Vivendi</td>
<td>BMW</td>
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<tr>
<td>2</td>
<td>Biogen Idec</td>
<td>Allergan</td>
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<td>Outotec OYJ</td>
<td>Adobe Systems</td>
<td>Siemens AG</td>
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<td>Kering</td>
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<td>NTT Docomo</td>
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<td>Ecolab</td>
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<td>Biogen Adec</td>
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