SPN / NYU Stern
Big Data and Sustainable Development
April 14, 2016

Louis Dominick Coppola
Co-Founder & EVP, Governance & Accountability Institute (G&A)
Board Member, Global Sourcing Council (GSC)
Adjunct Professor, Bard College M.B.A in Sustainability
Welcome back, agent: [REDACTED]

Enter your authorized FBI terminal access code: [REDACTED]

This is a secured Federal government system. Unauthorized access is strictly prohibited. All activity is fully monitored. Individuals who attempt to gain unauthorized access to this system are subject to Federal criminal prosecution.
My Background

- 1994 - FBI Called Mom
- 1998 - Molloy College (CIS & CS)
- 1999 - IT Support @ Rowan & Blewitt
- 2004 - R&B Acquired by IPG
- 2005 - Molloy College (MBA)
- 2007 - G&A Institute Launched in Garage (Literally)
- 2016 - NYU Big Data & Sustainability
G&I’s US, UK, and Ireland Data Partner

- G&A Approached by GRI to Become Exclusive US Data Partner in 2011

- Analyze Every Report Issued By US HQ Organizations
  - 100+ Data Points Collected On Every Report
  - Feeds GRI’s Global Report Database (database.globalreporting.org)
  - Over 1200 Reports Last Year

- Two Years Later GRI Invited G&A To Also Be The Data Partner for UK and Ireland
Sustainability – What Matters?
The Study Parameters

- 1,246 Global GRI reporters materiality assessments
- From 35 GRI defined sectors
- Responses to all 84 performance indicators
  - Full disclosure (1 point)
  - Partial disclosure (1/2 point)
  - Undifferentiated disclosure (1/2 point)
  - No disclosure (0 point)
### Example of Financial Sector GRI Indicator Ratings

- **Full Disclosure**
  - 32.09%

- **Partial Disclosure**
  - 8.21%

- **Undifferentiated Disclosure**
  - 44.03%

- **No Disclosure**
  - 15.67%

<table>
<thead>
<tr>
<th></th>
<th>EN15</th>
<th>EN16</th>
<th>EN17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full</td>
<td>5.22%</td>
<td>32.09%</td>
<td>24.63%</td>
</tr>
<tr>
<td>Partial</td>
<td>0.75%</td>
<td>8.21%</td>
<td>6.72%</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>10.45%</td>
<td>44.03%</td>
<td>29.10%</td>
</tr>
<tr>
<td>No</td>
<td>83.58%</td>
<td>15.67%</td>
<td>39.55%</td>
</tr>
</tbody>
</table>

**Overall**

- EN15: 10.821
- EN16: 58.209
- EN17: 42.537
### Sample – Top 5 GRI Aspects

**Retailers**

<table>
<thead>
<tr>
<th>Rank</th>
<th>All Sector Score</th>
<th>Diff Difference</th>
<th>Sector Sector Score</th>
<th>G3.1 Indicator</th>
<th>G4 Indicator</th>
<th>Category</th>
<th>Aspect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35.51</td>
<td>14.49</td>
<td>50.00</td>
<td>EN29</td>
<td>G4-EN30</td>
<td>(EN) Environment</td>
<td>Transport</td>
<td>Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.</td>
</tr>
<tr>
<td>2</td>
<td>39.25</td>
<td>9.51</td>
<td>48.75</td>
<td>HR2</td>
<td>G4-HR10</td>
<td>(HR) Human Rights</td>
<td>Investment and Procurement Practices</td>
<td>Percentage of significant suppliers, contractors, and other business partners that have undergone Human Rights (HR) screening and actions taken.</td>
</tr>
<tr>
<td>3</td>
<td>45.14</td>
<td>8.61</td>
<td>53.75</td>
<td>PR1</td>
<td>G4-PR1 (Data points moved to Guidance)</td>
<td>(PR) Product Responsibility</td>
<td>Customer Health and Safety</td>
<td>Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.</td>
</tr>
<tr>
<td>4</td>
<td>43.14</td>
<td>8.12</td>
<td>51.25</td>
<td>EN7</td>
<td>G4-EN6</td>
<td>(EN) Environment</td>
<td>Energy</td>
<td>Initiatives to reduce indirect energy consumption and reductions achieved.</td>
</tr>
<tr>
<td>5</td>
<td>23.80</td>
<td>6.21</td>
<td>30.00</td>
<td>EN27</td>
<td>G4-EN28</td>
<td>(EN) Environment</td>
<td>Products and Services</td>
<td>Percentage of products sold and their packaging materials that are reclaimed by category.</td>
</tr>
</tbody>
</table>
### Sample – Top 5 GRI Aspects
### Mining

<table>
<thead>
<tr>
<th>Rank</th>
<th>All Sector Score</th>
<th>Diff Difference</th>
<th>Sector Sector Score</th>
<th>G3.1 Indicator</th>
<th>G4 Indicator</th>
<th>Category</th>
<th>Aspect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18.54</td>
<td>20.94</td>
<td>39.47</td>
<td>EN15</td>
<td>G4-EN14</td>
<td>(EN) Environment</td>
<td>Biodiversity</td>
<td>Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.</td>
</tr>
<tr>
<td>2</td>
<td>31.02</td>
<td>20.30</td>
<td>51.32</td>
<td>EN10</td>
<td>G4-EN10</td>
<td>(EN) Environment</td>
<td>Water</td>
<td>Percentage and total volume of water recycled and reused.</td>
</tr>
<tr>
<td>3</td>
<td>33.31</td>
<td>19.33</td>
<td>52.63</td>
<td>EN14</td>
<td>Entire Indicator Moved to Guidance</td>
<td>(EN) Environment</td>
<td>Biodiversity</td>
<td>Strategies, current actions, and future plans for managing impacts on biodiversity.</td>
</tr>
<tr>
<td>4</td>
<td>29.57</td>
<td>19.11</td>
<td>48.68</td>
<td>EN13</td>
<td>G4-EN13</td>
<td>(EN) Environment</td>
<td>Biodiversity</td>
<td>Habitats protected or restored.</td>
</tr>
<tr>
<td>5</td>
<td>34.11</td>
<td>18.53</td>
<td>52.63</td>
<td>EN11</td>
<td>G4-EN11</td>
<td>(EN) Environment</td>
<td>Biodiversity</td>
<td>Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.</td>
</tr>
<tr>
<td>6</td>
<td>29.05</td>
<td>18.32</td>
<td>47.37</td>
<td>EN9</td>
<td>G4-EN9</td>
<td>(EN) Environment</td>
<td>Water</td>
<td>Water sources significantly affected by withdrawal of water.</td>
</tr>
</tbody>
</table>
## 5 LEAST Reported Indicators in ALL SECTORS

<p>| | | | | |</p>
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>79</td>
<td>18.54</td>
<td>EN15</td>
<td>G4-EN14</td>
<td>Biodiversity</td>
</tr>
<tr>
<td>80</td>
<td>18.22</td>
<td>HR11</td>
<td>G4-HR12</td>
<td>Remediation</td>
</tr>
<tr>
<td>81</td>
<td>17.82</td>
<td>SO10</td>
<td>Entire Indicator Moved to Guidance</td>
<td>Local Communities</td>
</tr>
<tr>
<td>82</td>
<td>17.50</td>
<td>SO9</td>
<td>G4-SO2</td>
<td>Local Communities</td>
</tr>
<tr>
<td>83</td>
<td>16.29</td>
<td>HR10</td>
<td>G4-HR9, G4-HR11</td>
<td>Assessment</td>
</tr>
<tr>
<td>84</td>
<td>15.49</td>
<td>LA15</td>
<td>G4-LA3</td>
<td>Employment</td>
</tr>
</tbody>
</table>

**Biodiversity**
- Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.

**Remediation**
- Number of grievances related to (HR) Human Rights filed, addressed, and resolved through formal grievance mechanisms.

**Local Communities**
- Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.

**Assessment**
- Percentage and total number of operations that have been subject to (HR) Human Rights reviews and/or impact assessments.

**Employment**
- Return to work and retention rates after parental leave, by gender.
SDG Compass / Rosetta Stone for Sustainability What Matters Data

- Guide for Business Action in the SDGs (sdgcompass.org)
- 17 SDGs w/ 169 Underlying SDG Targets
- Compass Links GRI G4 Indicators to SDG Targets
- Rosetta Stone to Examine “What Matters?” Data for SDG alignment trends in sectors, countries, etc
193 World Leaders Committed to 17 SDGs on September 25, 2015

THE GLOBAL GOALS
For Sustainable Development

1. No Poverty
2. Zero Hunger
3. Good Health and Well-Being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation and Infrastructure
10. Reduced Inequalities
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace and Justice, Strong Institutions
17. Partnerships for the Goals
EXAMPLE: Top 3 SDG Targets (of 169) for Chemicals Sector

- **SDG Target 3.9**
  - By 2030, substantially reduce the number of deaths and illnesses from *hazardous chemicals and air, water and soil pollution and contamination*

- **SDG Target 12.4**
  - By 2020, achieve the environmentally sound management of *chemicals and all wastes throughout their life cycle*, in accordance with agreed international frameworks, and *significantly reduce their release to air, water and soil* in order to minimize their *adverse impacts on human health and the environment*

- **SDG Target 14.3**
  - *Minimize and address the impacts of ocean acidification*, including through enhanced scientific cooperation at all levels
EXAMPLE: Top 3 SDG Targets (of 169) for Waste Management Sector

- **SDG Target 8.4**
  - Improve progressively, through 2030, **global resource efficiency** in consumption and production and endeavour to **decouple economic growth from environmental degradation**, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead.

- **SDG Target 12.2**
  - By 2030, achieve the **sustainable management and efficient use of natural resources**

- **SDG Target 12.5**
  - By 2030, substantially **reduce waste generation** through prevention, reduction, recycling and reuse.
GSC’s 17 Weeks / 17 SDGs Initiative
Sign Up @ gscouncil.org

- 17 Weeks Focus on One SDG Per Week
  - March 7 (SDG 1) Thru Week of June 27 (SDG 17)

- Providing through our Newsletters, Partners, Web Pages, Social Media
  - Tools and Resources for Aligning Business
    - Learn From Leaders Taking Action on SDGs
    - Collaborate with NGOs to Amplify SDG Efforts
    - Watch 3S Awards Participants Examples of SDG Impact in The Supply Chain
    - Attend our Webinar Series / Events
Upcoming G&A Research – 2016 / 2017

- Sustainability G4 - What Matters?
  - First 3000+ G4 Reports Published
  - Analyze Disclosure Levels of All G4 Indicators
  - Identify the Material Indicators for 35 Sectors
  - Tie in Multiple Third Party Data Sources for Context (SDG Compass, Reprisk, Sustainalytics, RobecoSAM etc)

- GRI Technology Consortium
  - “Unleash The Data” From PDFs / Websites
  - WikiRate Pilot Project
    - Crowd Sourced Sustainability Data
    - Gamification Techniques
    - Loading First 250 GRI G4 Reports Data
    - Demoing @ GRI Global Sustainability Conference in Amsterdam - May 18-20th of 2016
Thank You! Contact Us Info & Useful Links

Governance & Accountability Institute, Inc
(Sustainability Consulting, Data & Research)
845 Third Ave, Suite 644
New York, New York 10022
Tel 646 430 8230
Visit Us @ www.ga-institute.com

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Navigating the Way to Sustainability...