

DUAL CITIZEN

Subscriber Insight

January 2019

The [Global Green Economy Index™](#) (GGEI) is an established measurement of national green economies. The GGEI tracks 130 countries based on 20 underlying topics, contained within four key dimensions: leadership & climate change, efficiency sectors, markets & investment and the environment. Click [here](#) to access results from the recent 2018 edition.

We are often asked: how can this GGEI framework be adapted to other entities beyond countries? Does the GGEI offer a framework that can measure the green performance of sub-national entities like regions or cities? Can it be used to create customized measurement frameworks for companies and other private sector actors?

The answer is **yes**. This first subscriber insight of 2019 will explore this customization for a company. To start, let's imagine a **hypothetical** company called Aluminata:

- ✓ Aluminata produces aluminum with both upstream and downstream activities
- ✓ 50% of Aluminata's business is the production of raw aluminum through smelters
- ✓ 50% of Aluminata's business is downstream manufacturing of aluminum-based products
- ✓ Aluminata's business is emission-intensive, linked to coal-fired plants providing electricity for smelters and emissions released during the smelting process itself
- ✓ Technology innovation is critical to greening the aluminum smelting process; aluminum is also easy to recycle and key to greening sectors (e.g. aluminum cars are more fuel efficient than steel ones).

Assuming these general attributes (again, Aluminata is an **imaginary** company), the sections below consider how the GGEI framework is customizable to measure the company's green performance.

Dimension 1: [Leadership & Climate Change](#)

GGEI Topics (Leadership & Climate Change)	GGEI Measurement (Country Performance)	Adapted Company Measurement (Aluminata)
Head of State	Country head of state commitments to promoting green economic growth	CEO and senior leadership commitments to corporate sustainability
Media Coverage	Media coverage of country actions related to the green economy	Media coverage of company actions related to the green economy
International Forums	Contribution of country representatives at international climate forums	Contribution of company representatives at industry climate forums
Climate Change Performance	Country emissions per capita, emissions per unit GDP, emissions per unit primary energy	Company climate reporting as defined by Scope 1, 2, and 3 reporting and guidelines from the TCFD .

GGEI Indicators: The first three indicators listed above are directly relevant to measuring Aluminata's sustainability leadership. Instead of monitoring the head of state commitments to

green economic growth, Aluminata’s framework monitors the CEO and other senior leadership and the extent to which they demonstrate commitments to sustainability. The GGEI approach to monitor media coverage of Aluminata’s sustainability initiatives and behavior at important industry events or conferences related to sustainability is also directly relevant.

GGEI Customizations: The last GGEI topic of climate change performance needs to be customized to Aluminata’s unique circumstances (for countries, the GGEI defines climate change performance by [three variables](#): emissions per capita; emissions per unit GDP; emissions per unit of primary energy). One customized approach to measure Aluminata’s climate change performance is creating a composite indicator based on the company’s [Scope 1, Scope 2 and Scope 3 emissions](#). A composite indicator representing these three values could also be benchmarked against a sector-wide decarbonization target or Science-Based Target.

Dimension 2: [Efficiency Sectors](#)

GGEI Topics (Efficiency Sectors)	GGEI Measurement (Country Performance)	Adapted Company Measurement (Aluminata)
Buildings	Sustainable certification in commercial buildings	Energy efficiency in buildings associated with downstream business
Energy	Renewable energy contribution to electricity production	Renewable energy contribution to electricity production in upstream business
Transportation	Efficiency of national transportation system	Energy efficiency in transportation associated with the business
Resource Efficiency	National waste recycling rates	Recycling in production processes
Tourism	Sustainable tourism in-country	Indirect impact

GGEI Indicators: Buildings associated with Aluminata’s downstream businesses are assessed from an efficiency perspective. The company’s energy use and transportation methods are measured along similar lines. Given how energy-intensive aluminum production is, Aluminata [might have incentive](#) to increase the use of recycled aluminum. The GGEI resource efficiency topic is useful here to assess the rate at which pre and post consumer scrap are used in Aluminata’s production processes. Admittedly, a persistent challenge in sustainability measurement is data availability; Aluminata may not have up-to-date data on many of these topics. But by defining a framework in the first place, companies begin to institutionalize the associated data collection.

GGEI Customizations: Double counting is a risk when creating measurement frameworks. In this Aluminata example, some of topics included in the GGEI Efficiency Sectors dimension are already captured elsewhere. For example, emissions from purchased electricity for Aluminata’s operations are already captured in the company’s Scope 2 emissions, included in the Leadership & Climate Change dimension. In these instances, Aluminata’s measurement framework would define the Energy topic under Efficiency Sectors differently. For example, it can represent the percentage of renewable energy used by the company to generate electricity. This approach provides employee motivation to achieve company-wide renewable energy targets.

Dimension 3: [Markets & Investment](#)

GGEI Topics (Markets & Investment)	GGEI Measurement (Country Performance)	Adapted Company Measurement (Aluminata)
Renewable Energy (RE) Investment Attractiveness	Market attractiveness for RE investments	Company efforts to enhance the integration of renewable energy to upstream and downstream business
Green Innovation	Evidence of green patents and start-ups in country	Green innovation within the company (e.g. patents filed, third party partnerships)
Corporate Sustainability	Adoption of corporate sustainability best practices of largest companies based in country	Adherence of company to best practice corporate sustainability initiatives
Green Investment Promotion & Facilitation	Efforts by government entities to promote and facilitate green investments in country	Indirect impact

GGEI Indicators: Companies are keen to promote innovation on a wide range of topics, and sustainability is no exception. In fact, many of our conversations on [adapting the GGEI](#) to create corporate sustainability measurement frameworks revolve around the topic of innovation. Accordingly, the GGEI topics of green innovation and corporate sustainability translate well to Aluminata. These two topics are often measured differently, though. In the case of green innovation, there are more quantitative indicators to reference (e.g. patents), whereas corporate sustainability tends to be measured more through qualitative variables (e.g. has the company set a [Science-Based Target](#)).

GGEI Customizations: The GGEI topics of renewable energy investment attractiveness and promotion require more customization to be relevant in a corporate sustainability measurement framework. One approach is to measure the extent to which Aluminata is creating conditions for greater renewable energy integration to its upstream smelting. Another approach is to measure the extent to which Aluminata is linking its downstream aluminum-based products with renewable energy systems (e.g. PV and solar collectors) and [other products](#). These measurement decisions are guided by Aluminata’s corporate strategy around renewable energy and best practices from a measurement perspective.

Dimension 4: [Environment](#)

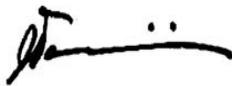
GGEI Topics (Environment)	GGEI Measurement (Country Performance via EPI)	Adapted Company Measurement (Aluminata)
Agriculture	Environmental performance of agriculture in country	Company impacts on surrounding soil
Air Quality	Average ambient concentration of PM2.5 in country	Company impacts on surrounding air quality
Water & Sanitation	Proportion of population facing health risks due to water & sanitation	Company impacts on surrounding water quality
Water Treatment	Percentage of water that undergoes at least primary treatment	Company impacts on surrounding water quality
Biodiversity & Habitat	Percentage of protected areas within national exclusive economic zones	Indirect impact
Fisheries	Fish stocks caught that are overexploited or collapsed	Indirect impact

Forests	Total area of tree loss	Indirect impact
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GGEI Indicators: Company operations and supply chains place pressure on the environment, with these impacts differing across sectors and geographies. Looking at the seven topics defining the GGEI Environment dimension, Aluminata’s environmental impact is mostly related to agriculture, air quality and water. The atmospheric pollutants from aluminum production mix with water vapors to produce acid rain, which can lead to soil erosion and pollute the water supply. Given these direct links, Aluminata’s sustainability measurement framework highlights measurements for these topics that enable reporting on how well Aluminata is reducing these negative impacts, and progressing towards related targets and goals.

GGEI Customizations: Aluminata’s interaction with some of the other GGEI Environment topics may not be as direct, but that doesn’t mean the company can’t address them. Companies with high demand for electricity can accelerate the development of renewable energy in places that may not otherwise do so. [Carbon offsetting](#) is another approach. Understanding Aluminata’s business better and its environmental reporting to initiatives like [CDP](#) would reveal further ways to engage with these other GGEI Environment topics.

This first subscriber insight of 2019 begins a conversation for how the GGEI framework can be customized to measure the sustainability performance of a hypothetical company in the aluminum sector. What are your reactions? I am interested to hear them. As always, to access other insights and data packs related to the GGEI and how we partner with clients, visit the [GGEI Library](#) and the Dual Citizen [website](#).



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