



# Quantifying the Impact of Social License for Investment Decision-Making

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Current Trends in Mining Finance Conference  
Society for Mining, Metallurgy and Exploration  
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# Agenda

- 1. What is Social License to Operate (SLO)*
- 2. How does it impact mining valuation*
- 3. How to quantify it and use it for management and investment decisions*

# What is Social License to Operate? (SLO)



Stakeholder  
risk



Non-technical  
risk

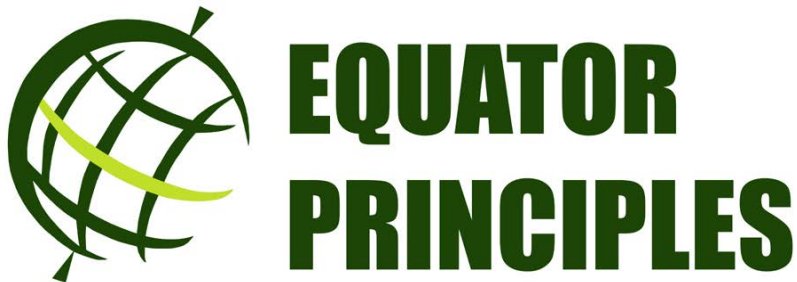


Sustainable  
development/  
Sustainability



Above-ground  
risk

# Protocols and Institutions



# And more...



**1987**  
 "Our Common Future" introduced the notion of sustainable development



**1992**  
 The United Nations Conference on Environment and Development produced the Rio Declaration, several important treaties and Agenda 21

**1992-1998**  
 ESIA became established as a key tool for environmental decision making throughout the world



**1998**  
 Several International Labour Organization Conventions were recognised as standards of fundamental importance from a human-rights perspective



**2000**  
 The United Nations Millennium Declaration was produced



The United Nations Global Compact was officially launched



The Voluntary Principles on Security and Human Rights were launched



**2001**  
 The International Council on Mining and Metals was formed



**2001-2002**  
 The Millennium Development Goals were published



**2002**  
 The Global Reporting Initiative was officially launched



Global Mining Initiative and the Mining, Minerals & Sustainable Development projects culminated in the production of the Breaking New Ground report & global mining conference, called Resourcing the Future



The Extractive Industry Transparency Initiative was launched



**2003**  
 Several private banks published the Equator Principles



**2003-2008**  
 The ICMM established a Sustainable Development Framework for mining companies



**2004**  
 The World Bank's extractive industry review was completed



**2006**  
 The IFC Performance Standards were published



The Equator Principles were revised, increasing their scope and strengthening their processes



**2007**  
 The Declaration on the Rights of Indigenous Peoples was adopted by the United Nations General Assembly



The IFC Performance Standards are matched with corresponding Guidance Notes. New versions of the World Bank Group Environmental, Health, and Safety Guidelines (known as the 'EHS Guidelines') were published



# How can SLO impact valuation, and access to capital in general?

\$25 Bln in stalled mining projects

Non-core assets  
>80% of management time

\$20 Mln per WEEK in delays

2/3 of market cap from SLO

\$200 Bln in write-downs

\$1 of \$6 managed funds are SRI in US

# Competing with Sector Funds for Capital: Exchange-Traded Funds (ETFs) vs Equities

Zoom: 1d 3d 1m 3m 6m YTD 1y 5y 10y All

Apr 15, 2011 - Apr 14, 2016

● NYSE:ABX -70.50% ● NYSE:AU -70.17% ● NYSE:GG -88.26% ● NASDAQ:RGLD +2.16% ● NYSE:NEM -49.15% ● GLD -17.82%



Unlike equities, commodity ETFs do not run risk of:

- Permitting
- Rising input costs
- Management changes
- Tax and royalty hikes
- Expropriation
- Strikes
- Security threats
- Social unrest/violence

# Socially flawed projects can be bargains



## **Torex Gold acquisition of Morelos Gold property in 2009: \$150mln**

- Teck reported blockage due to community conflict in 2008
- After acquisition, Torex brought in cultural anthropologist
- Construction of El-Limon Guajes began 2013
- 43-101 in Sept 2015: After-tax NPV over \$1 Bln
- First pour at ELG end of 2015



# When does social license expire? Anytime.



**March 31, 2016: Community Members Block Access to Media Luna Mine in Guerrero**

# Social License and Time to Market



## Anglo American acquisition of Minas Rio from MMX in 2007: \$5.1 Bln

- Seller had stronger community relationships than buyer
- Problems after acquisition: licensing, political and social
- Cost more than doubled from \$3.6Bln to \$8.4Bln
- Surface agreements for pipeline and mine resulted in 2-year delay

# *Tools to Quantify and Use SLO in management and investment decisions*

- 1. Existing data, taken to next level of value-added analysis*
- 2. Non-traditional data*



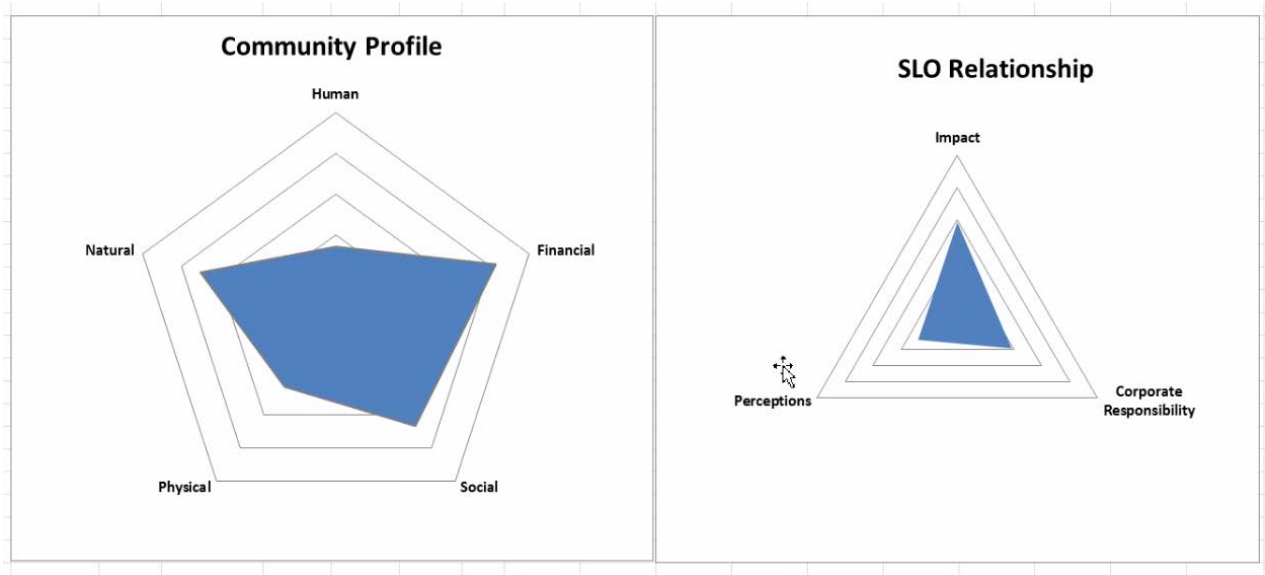
# Social License Index

- Input: existing data from baseline study and subsequent reports
- Produces overall score, but also a graphical representation of the project's areas of strength or weakness across five categories.

## Results:

- Roadmap for where to allocate resources
- Viability of investment from SLO perspective

# Graphical Roadmap: SLO Deficiencies



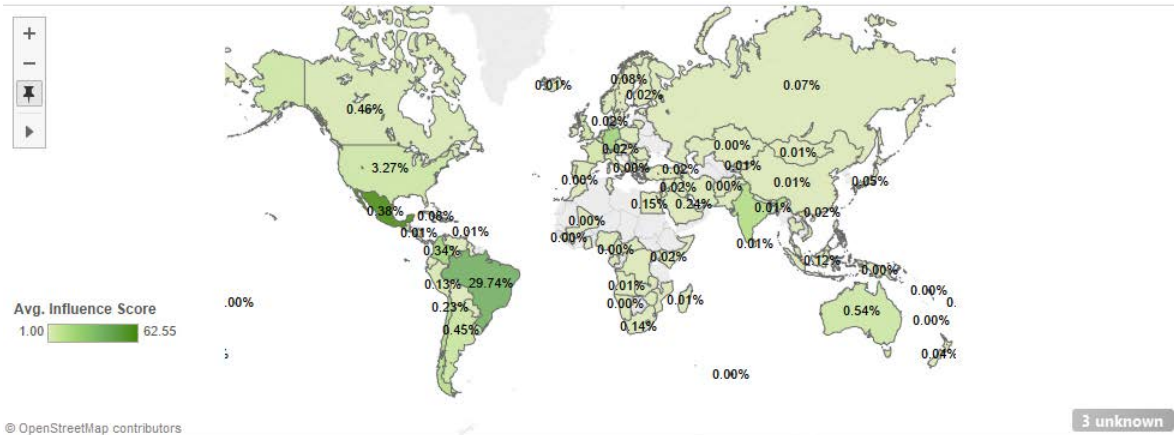




- 305 million monthly active users worldwide
- Most tweets are public (unlike Facebook)
- Twitter usage by country is highly correlated with mineral-dependent economies

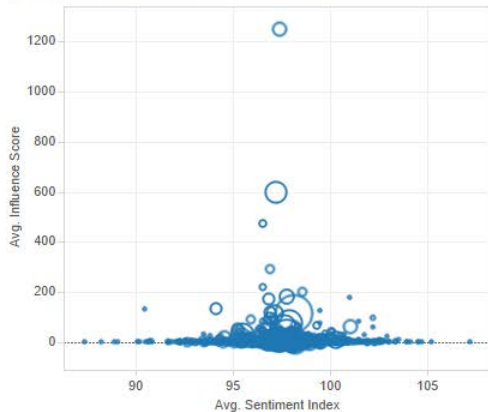
**Compelling data source for mining industry public sentiment analytics**

# Public Sentiment Analytics: Samarco Tailings Dam Failure



## User Sentiment & Influence >

Click on a marker to filter user tweets

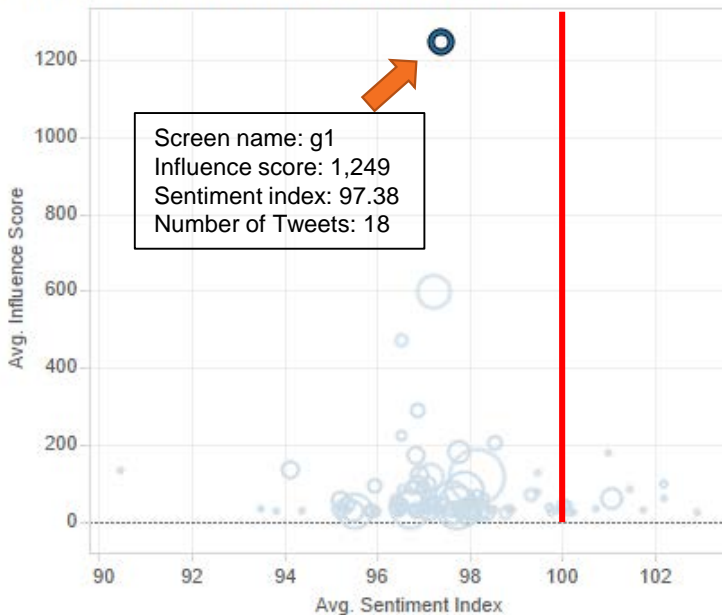


## User Tweets

User Name	Month, Day, Year	Tokens	Avg. Influence Score
2twthe	November 9, 2015	lama deixa governador valada...	1
	November 12, 2015	cemig precisar limpar trÃs ...	1,249
	November 13, 2015	dilma anuncia multa de r\$ 250...	73.20
	November 13, 2015	justiÃa determina bloqueio d...	110.72
	November 13, 2015	restaur natureza tomada por...	
	November 13, 2015	restaur natureza tomada por...	
	November 13, 2015	restaur natureza tomada por...	
	November 17, 2015	multa Ã samarco deve passar...	
	November 17, 2015	samarco reconhece risco de r...	
	November 18, 2015	polÃcia recolhe documentos n...	
	November 18, 2015	polÃcia recolhe documentos n...	
	November 18, 2015	rejeitos da barragem da sama...	
	November 19, 2015	moradores desconfiam da qua...	
	November 19, 2015	passagem de lama pelo rio do...	
	November 20, 2015	vale perdeu r\$ 12,6 bi em valo...	
	November 21, 2015	justiÃa determina que samar...	

# Public Sentiment Analytics

User Sentiment & Influence >  
Click on a marker to filter user tweets



Sentiment analytics provide guidance on:

- Influencers (+ or -)
- Country risk factors
- Real-time response to crisis situations
- External affairs planning & budgeting
- Allocation of resources

And has  
**predictive capability**

# Take-aways

*Social License to Operate has been shown to damage valuation of:*

- *Projects*
- *Companies*
- *Large portions of the industry*

*To determine, quantify and Benefit from SLO:*

- *Stop pondering and fretting*
- *Get quantitative*
- *Get actionable information, and act on it.*



# Questions and Comments

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