



**Nexalogy**  
ENVIRONICS

## **Case Study: Alcan vs Alcoa in the Icelandic Blogosphere**

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# Table of Contents

- 1. Introduction ..... 3
  - 1.1 The Authors ..... 3
- 2. Methodology ..... 4
  - 2.1 Query Selection and Results ..... 4
- 3. Publisher Map ..... 5
- 4. Key Blogs ..... 6
  - 4.1 GNN Campaign ..... 6
  - 4.2 Various ..... 6
  - 4.3 Bjork ..... 6
  - 4.4 Voltzman ..... 6
  - 4.5 Solistraumi.org ..... 6
- 5. Key Findings ..... 7
- 6. Lexical Analysis Summary ..... 8
- 7. Recommendations ..... 9

# Case Study: Alcan vs. Alcoa in the Icelandic Blogosphere

## 1. Introduction

Global companies operating in highly competitive environments face many challenges at all levels of their operations. This case study was developed to highlight the investigative and analytical capacity of Nexalogy's strategic blogosphere intelligence approach to a specific set of corporate reputational risk factors faced by Alcan in Iceland, with specific comparison to its direct competitor, Alcoa. Both are large, integrated multinational aluminum producers needing to expand capacity at the lower end of their overall cost curves while facing increasing resistance from both local and global stakeholder communities. The specific context is Iceland, a country increasingly favoured by the aluminum industry because of its abundant low-cost hydro and geothermal energy supply, and within which Alcan and Alcoa have both production facilities and expansion plans.

Aluminum smelting is an important industry in Iceland, providing employment and generating significant export revenues. Aluminum alone accounts for 19% of gross national commodities exports. As such, aluminum production is a key political, social, and environmental issue, one that was a factor in recent national elections and that promises to generate continued public debate and activist resistance.

One key requirement to maintaining and growing efficient and cost-effective components of an aluminum producer's supply chain and production facilities involves gaining support from local communities, to secure a *social license to operate*. Both Alcan and Alcoa have recently faced challenges in winning community support for the expansion of their aluminum smelters, both in Iceland and elsewhere.

Increasingly, both companies are focusing on social responsibility/sustainability commitments and reputation-enhancement strategies to reinforce positive public perceptions related to the impact of global mining, processing and smelting facilities. Positioning related to corporate sustainability performance is a critical competitive factor in achieving overall strategic corporate objectives, such as low-cost smelter capacity increases.

This case study seeks to demonstrate that sustainability reputation and positioning relative to key issues such as power generation was a key factor explaining the difference in the degree of success achieved by Alcan and Alcoa in developing greater future smelting capacity in Iceland.

### 1.1 The Authors

This case study was undertaken as a collaborative effort by Eric Steedman and Claude G. Théoret of Nexalogy Environics. Eric brings expertise on corporate sustainability and reputational issues, while Claude is an astrophysicist and an expert in heterogeneous dataset analysis.

Nexalogy Environics employs advanced semantic data mining techniques to quickly and accurately process the large amount of data available in the social media landscape. Our analysis is based on co-word analysis and Actor-Network Theory, which we use to identify and interpret vital networks communicating online.

These proprietary methodologies allow our trained content analysts to precisely interpret the semantically analyzed database. We use a customized combination of computer and human analysis to compliment our client’s unique needs.

## 2. Methodology

Actor Network Theory (ANT) is used to identify key elements in emerging communities. ANT has been used to analyze and later plan scientific research by governments for years. Networks exist all around us: on the Internet, in journalism, in business contacts, in neighbourhoods, and in all aspects of nature from cells to galaxies. The mathematics that describe networks is now mature enough for this type of analysis to bear fruit for business.

When analyzing a network, the importance of elements within the network is dependent not only on the number of elements, but their degree of connectivity within the network environment. Key actors are identified by their links and position within the network. By calculating the number of co-occurrences in a body of text, semantic links between actors can be made explicit, and the relative importance of various actors can be brought to the forefront. It is important to stress that these links are not simply direct URL links between websites or weblogs. The actors that are most linked to the issues identified with keywords are those actors that become identified as “hubs” within the relevant segments of the blogosphere. Identifying such “hubs” affords Nexalogy the ability to track the ongoing activity of these actors.

For the Alcan vs. Alcoa example in Iceland, a list of keywords associated with the aluminum smelter debate in Iceland was developed (this is usually done using a client workshop in order to best understand their strategic concerns). These keywords were then used in queries to retrieve all of the relevant data from weblogs, which were then analyzed using Nexalogy’s advanced network intelligence tools.

### 2.1 Query Selection and Results

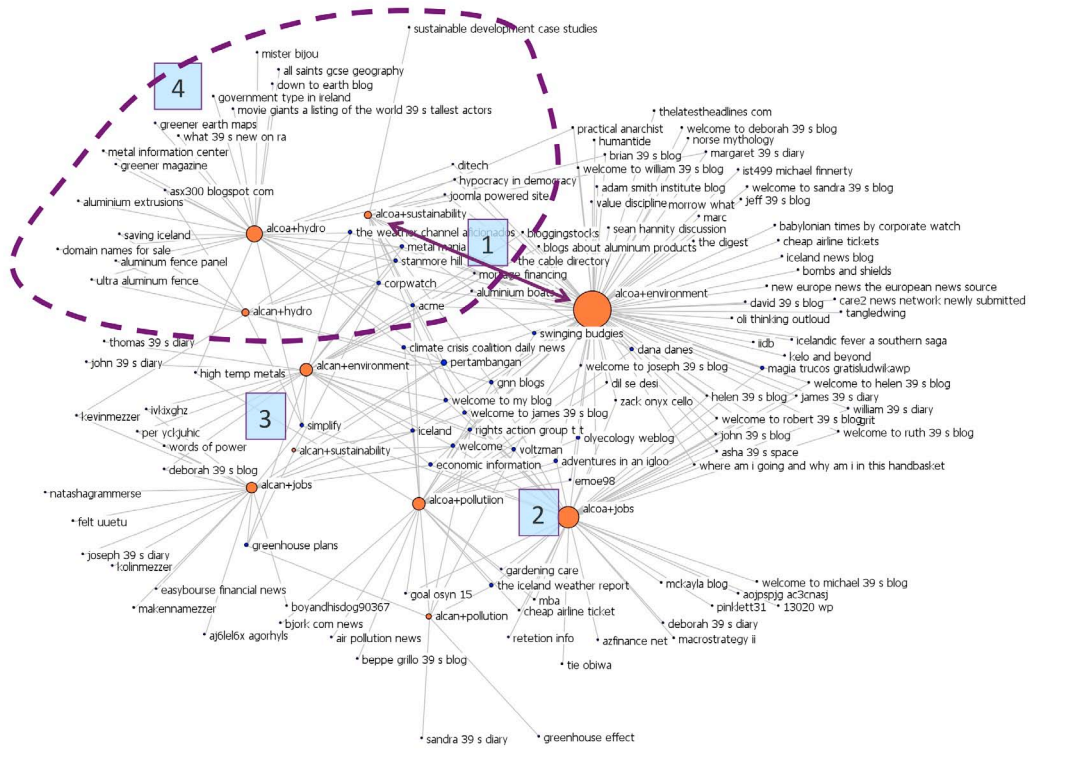
- The term “Iceland” is used as a filter in all queries.

**The number of blogs returned for each query:**

Source:		Blogs	Blogs
Key Word	Filter	"Iceland"+ Alcan	"Iceland" + Alcoa
Environment		27	100
Jobs		25	46
Hydro		14	31
Sustainability		6	13
Pollution		8	31

### 3. Publisher Map

#### Publisher Map



**Key:**

1. Alcoa + environment and Alcoa + sustainability are very closely associated. Alcoa + environment is the most resonant node on the map.
2. Alcoa + jobs has greater resonance than Alcan + jobs. This is related to the fact that Alcoa’s development represents job opportunities in the North of Iceland, which is generally not as prosperous as the South (near Reykjavik).
3. Alcan + environment and Alcan + sustainability are more dispersed from one another and less resonant on the map. This shows a weaker association related to these two issues and Alcan than was the case for the same issues and Alcoa.
4. There is a distinctive, somewhat independent discourse related to issues surrounding the question of hydro power in Iceland. The nodes bounded by the dotted line are all directly related to this issue.

This graph is a representation of the top 100 nodes in the Icelandic Alcoa vs. Alcan blog network. The network graph was based on a total of 287 blog query results.

- The orange disks represent individual queries; blue dots are individual blog titles.
- The size of the nodes is scaled linearly to their importance.

- The distance between nodes is inversely proportional to the statistical correlation that exists between them: if the nodes have a high frequency of keywords co-occurring they will appear closer together. If they have little in common they will appear farther apart.
- The lines represent actual keyword links in the content of the blogs.

## 4. Key Blogs

### 4.1 GNN Campaign

([http://shiftshapers.gnn.tv/blogs/20525/Iceland\\_Summer\\_2007\\_Campaign\\_Against\\_Heavy\\_Industry](http://shiftshapers.gnn.tv/blogs/20525/Iceland_Summer_2007_Campaign_Against_Heavy_Industry)); also linked to Saving Iceland (<http://www.savingiceland.org>)

Campaign (including a protest camp) to stop the further industrialization of Iceland. Iceland is characterized as “Europe’s vastest remaining wilderness”. This effort included ties to the campaign against ALCOA and AluTrint’s plans for a smelter in Trinidad and the campaign against ALCAN in India.

### 4.2 Various

(<http://kobason.spaces.live.com/Blog/cns!C873246EA6369396!10551.entry>)

The “Welcome to my blog” and “Welcome” blog nodes seem to be a group or person that issued anti-Alcan messages daily on blogs that were later removed. Since the title of the blogs remained the same every day, they were detected.

### 4.3 Bjork

(<http://bjork.com/news/?id=567;year=2006>)

Bjork is one of Iceland’s most prominent citizens. Her blog mentioned Alcoa in the context of a “Save the Icelandic highlands” benefit concert against further damming for hydro electric development.

### 4.4 Voltzman

(<http://voltzman.blogspot.com/index.html>)

Voltzman is an energy industry analyst with a good understanding of the technological and scientific issues concerning the industry. His analysis of the Icelandic smelter debate also has a good grasp of the political landscape related to green issues in Iceland.

### 4.5 Solistraumi.org

(<http://www.solistraumi.org>)

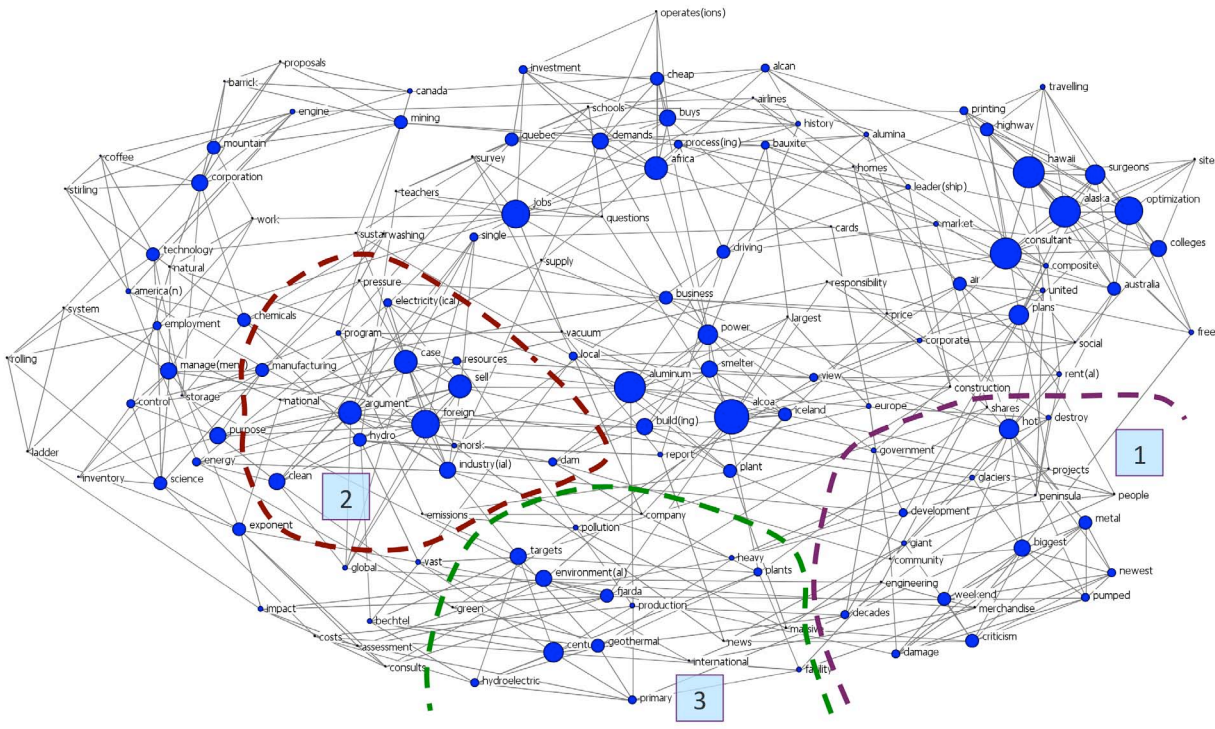
Icelandic language blog focusing on grass roots resistance to Alcan. Other blogs have referred to its authors as leaders in the anti-Alcan side of the referendum held on March 31’ 2007.

## 5. Key Findings

- The blogosphere map shows that Alcoa and Environment and Sustainability (green transparent circle) are perceived to be one and the same. This is not true for Alcan, suggesting that Alcan faces positioning challenges and may be sending out confusing messages to stakeholders related to environment and sustainability.
- Resistance to further aluminum smelter development is linked more strongly to concerns about increases in damming and flooding than pollution caused by the smelters themselves. This can be seen by the clustering of the blogs around the hydro keywords highlighted by the transparent yellow ellipse.
- A review of Alcan's Icelandic website reveals that the focus is on pollution reduction, not the impact of hydro-electricity generation.
- A large proportion of the blogs are written by people who aren't Icelandic in origin but have concerns related to the environmental issues occurring in Iceland.
- In Iceland there is growing general awareness and specific negative perception of other proposed new projects by Alcoa (i.e., Trinidad) and Alcan (i.e., India), in part due to press coverage and also blog chatter.
- It appears that the economy of Iceland has started to "connect globally" in terms of understanding the larger implications and consequences of local industrial activity- for example the impact of Bauxite mining, a key raw input for the production of aluminum.
- There is popular support for the anti-industrialization movement in Iceland, and it is linked to a sense of sentimental nationalism. This is revealed by the popularity of a recent book: *Draumalandið – sjálfshjálparbók handa hræddri þjóð*, or "Dreamland – a self-help book for a frightened nation", by Andri Snaer Magnason. The text has sold over 20 000 copies (a huge success in a country of its size), and features quotes such as, "smelters like Alcoa's, and the geothermal and hydroelectric plants that power them, has created a heroin economy".
- The recently opened Alcoa plant (which first production of Aluminum on April 24, 3 weeks after the Alcan referendum) seemed to have galvanized a resistance movement that culminated in a "greening" of the Icelandic political landscape as witnessed in the May 12th elections. The Alcan "No" vote must be taken into the context of this growing political movement.

## 6. Lexical Analysis Summary

### Lexical Analysis



The lexical analysis is based on word correlations within blog posts between every post that is downloaded. Hundreds of thousands of word combinations are calculated and a new plot is generated based on these content word co-occurrences. This powerful tool illustrates the top 150 nodes in this co-relational analysis. Discussions and themes appear as word clusters. This graphical method illustrates the lexical interconnectivity between related themes in the debate.

1. This lexical cluster refers to a Reuters news release about the first hot metal pumped out of Alcoa’s new smelter and echoes concerns about the new smelter’s environmental impact.
2. This second cluster refers to criticisms of the ‘foreign’ aluminum companies surrounding the question of why dams are being built in Iceland, this, despite the fact that the energy produced is ‘clean’ energy.
3. The Alcoa node is still strongly associated to the ‘environment’ node and the Iceland node. It should also be noted that the Alcoa node is also strongly associated to the geothermal node. We believe that Alcoa’s investment in geothermal energy generation played a successful role in their smelter expansion plans.

## 7. Recommendations

- Improve communications strategies to position Alcan more closely with environment and sustainability elements. Environment should fall squarely within the sustainability space related to Alcan's public perception.
- Alcan should improve its understanding of the relationship between the Alcan brand and elements such as sustainability, pollution, jobs, human rights, wild spaces, etc. This will improve the positioning related to key local issues such as power production and resistance to industrialization.
- Explore the Alcan power production issue through further in-depth study of the status of geothermal energy generation development as a cleaner alternative to continued hydroelectric dam construction.
- Local issues need to be viewed from a global perspective: The Internet easily connects like-minded people seeking to resist local projects by drawing on negative elements from Global operations (i.e., the link between bauxite mining in developing nations and aluminum production in Iceland or Canada).
- Do not underestimate the power of blogs and Internet to overwhelm traditional stakeholder engagement and PR strategies. One skilled opinion leader on a blog can wield tremendous power and influence.
- Alcan should create a local blog in Icelandic and English to bolster and consolidate its blog presence versus Alcoa and to act as a contact point between the growing grassroots smelter resistance movement.
- Periodic monitoring of the Icelandic blogosphere surrounding the ongoing smelter debate and identification of actors and key spokespeople.