

Alcoa Russia Values-Driven
Organizational
Transformation

Case Study

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Alcoa Russia

"In 2009, the aluminum industry faced one of the toughest years I have seen in my over 40 years at Alcoa." Alain J. P. Belda, Chairman, Alcoa

It was 5:00 p.m. on January 11, 2010 in Pittburgh, Pennsylvania and the 2009 Fourth Quarter Earnings Conference Call was about to begin. Chuck McLane, Executive Vice President and CFO, and Klaus Kleinfeld, President and CEO, prepared their quarterly presentation to investment analysts from firms such as Deutsche Bank, J.P.Morgan, Credit Suisse, and UBS. Alcoa, Inc. was one of the world's largest producers of aluminum and aluminum products. The global economic recession in the previous year hit the aluminum industry hard as demand in enduser markets such as aerospace, automotive, construction, and packaging declined. The price of aluminum dropped 50 percent from its high in 2008. These were challenging times indeed!

Eight hours and five thousand miles away, Andrey Donets, President of Alcoa Russia, already had the news McLane and Kleinfeld were about to share. The Cash Sustainability Program produced impressive results as the company tried to create opportunity out of crisis. Since the acquisition of Samara Metallurgical and Belaya Kalitva Metallurgical by Alcoa, Inc. in 2005, significant progress was made in revenue growth, safety records and environmental protection activities. Alcoa Russia was experiencing is own "corporate glasnost" as the guiding principles of the Alcoa Business System from the parent company served as the catalysts for systemic change in the company's culture and operational processes. Despite the harsh economic environment, results were encouraging as Alcoa Russia had its first zero fatality year in 2006. Revenues in 2009 reached \$1 billion, up from \$705 million in 2006. Although the recession delayed the company's forecasted break-even status in 2009, still losses were decreasing and 2010 was predicted to be the first profitable year in history.

On the morning of January 12, 2010, as Donets watched the snow fall on the Moscow River from his office on the seventeenth floor of corporate headquarters outside the center of Moscow, he pondered about some of the tough decisions the Russian management team had made regarding restructuring and employee layoffs, and how to deal with current challenges that lie ahead. Since 2005, Alcoa, Inc. had invested nearly \$750 million in Alcoa Russia. Although the aluminum industry was experiencing a setback, forecasts for future consumption of aluminum, especially in emerging markets like Russia, were very favorable. Oleg Kalinskiy, Vice President of Corporate Affairs, entered the office with transcripts from the previous evening's conference call and they began to review the issues raised by the analysts in the question and answer period

GLOBAL ALUMINUM INDUSTRY

The global aluminum industry value chain consisted of the manufacture of aluminum through bauxite mining, refining and smelting and ended with fabrication and recycling. Industry participants were required to operate globally since the most efficient locations for stages of production were dispersed around the world. Although the industry experienced several years of growth, it was hit hard by the recent economic recession. By market value, the global aluminum industry grew by 6.4% in 2008 and shrank by 43.6% in 2009 to reach values of \$88.9 and \$50.2 billion, respectively. (See Table 1.) In volume, the industry grew by 4% in 2008 at 33.9 million tons and declined 4.5% in 2009 to 32.4 million tons. (See Table 2.) These trends created

significant decreases in prices and an industry surplus. Because the production process required significant amounts of energy, aluminum producers were often located near water sources for hydroelectric power generation.

Table 1. Global Aluminum Industry Value: \$billion, 2005-09

Table 1: G	lobal aluminum industry value: \$ billion, 2005	5–09	
Year	\$ billion	€ billion	% Growth
2005	46.1	33.2	
2006	52.6	37.8	14.1%
2007	83.5	60.0	58.6%
2008	88.9	63.9	6.4%
2009	50.2	36.1	(43.6%)
CAGR: 2005-	-09		2.1%
Source: Data	monitor	DA	TAMONITOR

Table 2. Global Aluminum Industry Volume: million tons, 2005-09

Table 2: Global alumin	um industry volume: million tons, 2005–09	
Year	million tons	% Growth
2005	26.9	
2006	28.7	6.5%
2007	32.6	13.7%
2008	33.9	4.0%
2009	32.4	(4.5%)
CAGR: 2005-09		4.7%
Source: Datamonitor		DATAMONITOR

The commodity nature of aluminum and high industry concentration with oligopolistic tendencies intensified competition in this industry. In 2009, the largest firms and their global market shares were: RusAl (Russia; 12.2%), Rio Tinto Alcan (Australia/Canada; 11.8%), Alcoa (United States; 11%) and Chinalco (China; 8.8%). (See Figure 1) Thus, the four firm concentration ratio was approximately 43.7 percent. RusAl and Chinalco were relatively new entrants due to their emerging market economies and increasing domestic demand for aluminum products. Although there were firms that focus on upstream or downstream operations, vertical integration in all stages of the industry chain was predominant with the major players. As mentioned above, industry value measured \$50.2 billion and growth rate from 2008 to 2009 was 43.6%. The price of aluminum declined from \$3300/metric ton in June, 2008 to \$1261/metric ton

in June, 2009, a drop of 30%. (See Figure 2) Declining demand, industry surplus, lower aluminum prices, little to no buyer switching costs, high exit barriers and lower capacity utilization contributed to intensifying rivalry in the industry in 2009.

Figure 1. Global Aluminum Industry % Market Share by Volume, 2009

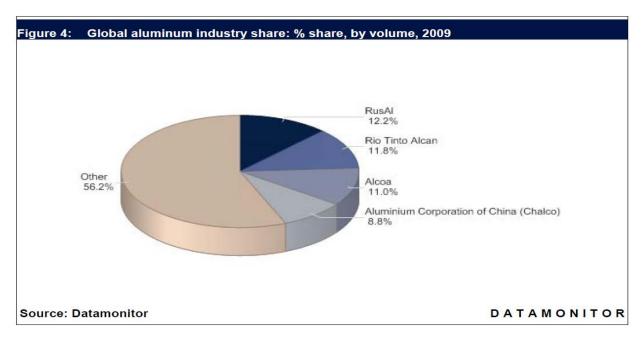
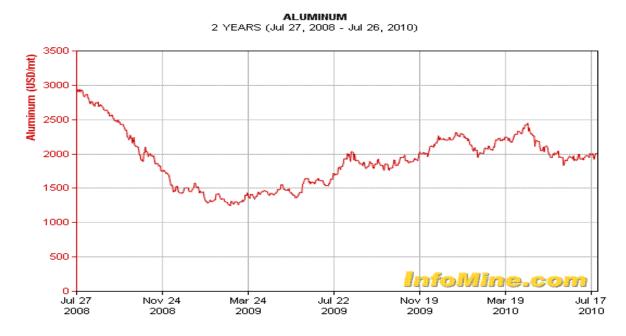


Figure 2. Aluminum Prices, US\$ per metric ton, 2008-2010



A new entrant encountered significant barriers to entry associated with high capital requirements due to a need for vertical integration in order to be competitive, acquiring mining rights, developing the mines, constructing the smelters and a creating a transportation network. Threat of retaliation from industry incumbents is another deterrent to entry. Depending on the geographic location worldwide, new entrants dealt with government regulation and unionized labor as potential entry barriers. Access to industry-specific knowledge associated with mining and smelting could be an entry barrier.

Depending on the end use, substitutes for aluminum were plastic, composite materials, paper and steel. The physical properties of lightness, strength and durability made aluminum particularly attractive for use in aerospace and automotive markets. It was considered to be more productive than copper in the electrical market. However, aluminum was being substituted with plastics in packaging. There were potential high switching costs associated with changing from aluminum to other base metals.

Primary raw materials for the aluminum production process were bauxite, alumina and energy. In 2000, the main producers of bauxite were in Australia, Guiana and Jamaica. Australia, United States, and China were the main producers of alumina in 2000. Key incumbents in the industry employed backward integration into mining to reduce any potential bargaining power of these suppliers. Another key input was electricity. As mentioned earlier, plants were often located near sources of water to obtain hydroelectric energy sources.

Important buyer groups could be categorized by country and by industry sector. For obvious reasons, demand was high in emerging market economies such as China, India, Russia and Brazil. Important end-user markets included aviation, aerospace, various forms of transportation (auto, rail, shipping), and packaging. For some of these customer markets, aluminum was an important raw material for which there were few substitutes. Aluminum was a commodity and there were little to no switching costs incurred by buyers. Buyers may also have some advantage due to large volume purchases. They could develop long-term contracts with industry incumbents; however, this also could create switching costs. Finally, it was unlikely that a buyer will backward integrate since aluminum production requires a different set of competencies.

ALCOA, INC.

Alcoa, Inc. was a global leader in the aluminum industry which generated \$18.4 billion in revenues in 2009 and spans operations across thirty-two countries. Its primary business segments were flat-rolled products (\$6.1 billion or 33.2% of total revenues), primary metals (\$5.3 billion or 28.8% of total revenues), engineered products and solutions (\$4.7 billion or 25.5% of total revenues) and alumina (\$2.2 billion or 1.2% of total revenues). Fifty two percent of revenues were generated in the United States, twenty-seven percent in Europe, fifteen percent in the Pacific and six percent in the Central and South America. The company, founded in Pittsburgh in 1888, was vertically integrated in all stages of the industry chain including technology, bauxite mining, refining, smelting, fabricating, and recycling. Significant end-user markets were aerospace, automotive, heavy truck and trailer, beverage can packaging, commercial building and construction, and industrial gas turbines.

In response to the economic decline, in 2008 Alcoa initiated the Cash Sustainability Program which included seven financial and operational goals that would strengthen the corporate balance sheet, restore liquidity and make the company free-cash-flow neutral by the end of 2009. It also established the 2020 Strategic Framework for Sustainability which was focused on economic gains, respect and protect of employees, respect and protect communities, safe and sustainable products and processes, meet the needs of current and future generations and accountability.

Alcoa's emphasis on decentralized business units gave autonomy, power and flexibility to each unit's President to operate its own entrepreneurial business. Because of this decentralization, each of the four business segments was responsible for profitability as well as being accountable for successes and failures. Business services such as accounting (data centers), procurement, research and development, and information technology were centralized to allow for lower costs through economies of scale.

The Alcoa Business System (ABS), created by former President Alain Belda under Chairman Paul O'Neil, was "an integrated set of principles and tools used to manage Alcoa business". These three principles provided a guiding framework for all organizational processes. The first principle, *Make to Use*, was a customer-based method of producing quality products which were just-in-time rather than inventoried. Its focal point was single-piece production, on demand, defect free, produced safely and at the lowest possible cost. The second principle, *Eliminate Waste*, focused on continuous improvement to address problems and develop immediate solutions to lower costs, improved quality, and faster manufacturing and business processes. The final principle, *People Linchpin the System*, identified Alcoa employees as being integral to the continuous improvement initiatives. Alcoa's information technology systems were standardized and customized for specific business units with Oracle as the primary database system.

Alain Belda, who was the CEO from 2001 to 2008 and employed at Alcoa for forty years, stepped down as Chairman of the Board in 2009 and was replaced by Klaus Kleinfeld. Kleinfeld was CEO of Siemens AG from 2005 to 2007, when he became COO at Alcoa. The leadership style over the years has exhibited traits of being employee-centered. However, in response to the recent economic crisis and industry decline, Kleinfeld implemented several significant initiatives toward cash sustainability that included large reductions in spending and employee layoffs.

Because Alcoa cultivated an entrepreneurial environment, employees were empowered, autonomous and flexible. Due to the large size of the corporation, Alain Belda developed a strategic priority called "parental advantage" which enabled Alcoa to hire the best people. Alcoa supported and trained employees with a variety of ongoing training and development programs. However, due to the economic recession and industry decline, in 2009 the total number of employees worldwide was 59,000, down from 87,000 in 2008 and 107,000 in 2007. The labor force possessed a variety of skills with representation of both skilled workers for the manufacturing process and employees with very high levels of education. As a manufacturing concern, competencies in production and supply chain management related to efficiency, quality, and safety were most important.

The seven core values of Alcoa were integrity; promoting environment, health and safety; customer focus; pursuit of excellence; respect for people; sustainable profitability; and

accountability. (See Figure 2.) These values were aligned with the policies and practices involved in implementing ABS worldwide. Alcoa employees were referred to as "Alcoans." October is designated as Month of Service when Alcoans were encouraged to participate in local community development projects. Much of the community outreach was funded by the Alcoa Foundation. The Foundation contributed over a half a billion dollars since 1952. The 2020 Strategic Framework for Sustainability provided a set of strategic environment, health and safety (EHS) targets for all business units and locations to meet in the next twenty years.

Financial and Non-Financial Performance Evaluation

Financial: Alcoa's global sales fell to \$18.4 billion in 2009, down from \$26.9 in 2008 and \$29.3 billion in 2007. (See Table 3.) Also, the income statement generated a loss of \$1.1 billion. However, in response to the Cash Sustainability Program, in 2009 Alcoa generated \$1.1 million in asset dispositions, \$430 million from dividend reductions, \$1.4 billion in equity-related financings, \$1.9 billion in procurement savings, \$412 million in overhead reductions, \$1.8 billion reduction in capital expenditures, and \$1.3 billion in reduction in working capital. Share price recovered from the low of \$5.22 in March, 2009, to a closing price of \$16.12 on December 31, 2009 – a 209% increase when the Dow increased 57%. (See Figure 3.) Alcoa's corporate portfolio at the end of the year reflected 90 percent of its businesses in #1 or #2 competitive positions in their markets. See Tables 4 and 5 for Alcoa's financial performance.

Table 3. Selected Financial Statistics for Alcoa, 2005-2009

Table 6: Alcoa Inc.: key financials (\$)						
\$ million	2005	2006	2007	2008	2009	
Revenues	25,568.0	30,379.0	29,280.0	26,901.0	18,439.0	
Net income (loss)	1,233.0	2,248.0	2,564.0	(74.0)	(1,151.0)	
Total assets	33,696.0	37,183.0	38,803.0	37,822.0	38,472.0	
Total liabilities	18,958.0	20,752.0	22,787.0	23,490.0	22,912.0	
Employees	129,000	123,000	107,000	87,000	59,000	
Source: company filings DATAMONITOF					ONITOR	



Figure 3. Alcoa Inc. Common Stock Price (3 Year Period), 1/1/2007 – 12/31/2009 Source: finance.yahoo.com

Non-Financial. With safety being one of Alcoa's core values, despite the reductions and economic crisis, it achieved the best-ever safety record measured by lost workday incident rates and the total recordable incident rate. (See Figure 4.) Safety rates improved at 7% in 2009 over 9% in 2008. There were four fatalities worldwide in 2009. By 2009 Alcoa achieved 43 percent reduction in greenhouse gas emissions, well above the targeted level of 25% by 2010. For the eighth straight year, Alcoa was named to the Dow Jones Sustainability Index. It was ranked the number one metals company in Fortune magazine's Most Admired Companies list and also placed first for innovation, social responsibility and product quality. Finally, a record 37 percent of Alcoans participated in 795 Month of Service events across twenty-three countries. In 2009, Alcoans contributed over 650,000 volunteer hours worldwide.

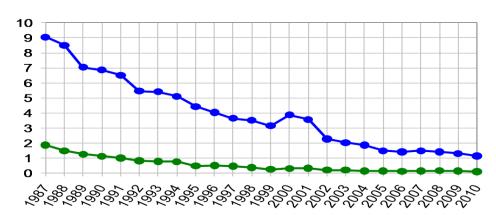


Figure 4. Alcoa's Safety Record: Total Recordable Incidents (blue) and Lost Workdays (green)

THE RUSSIAN ALUMINUM INDUSTRY

After the disintegration of the Union of Soviet Socialist Republics (USSR) and abandonment of the Communist Party in December, 1991, the government under President Boris Yeltsin promulgated radical market reform involving massive privatization of the centrally planned economy and trade liberalization. These changes opened the Russian borders for lucrative investment opportunities amidst chaos and corruption.

Russia, or the Russian Federation as it is also called, was the largest country in the world, extending across thirteen time zones, and was almost twice (1.8 times) the size of the United States. Its population of nearly 140 million showed a literacy rate of 99.4%; however, population growth was declining. Russia was rich in nature resources such as oil, natural gas, minerals and timber; although a formidable climate and terrain prohibited easy access. The Russian economy was still dependent on commodity exports such as steel, oil and natural gas, and aluminum. This made it much more vulnerable to the economic swings associated with global recession. While the Russian markets provided attractive opportunities for growth, difficult challenges included corruption, bureaucracy, a shrinking workforce, and an underdeveloped infrastructure. See Table 5 for a summary of significant statistics for the BRIC (Brazil, Russia, India, China) countries.

In 2007 RUSAL became the world's largest producer of aluminum and alumina when it merged with SUAL (Siberian-Ural Company) and Glencore (Switzerland). The emerging market economy in Russia produced high growth potential in aerospace, construction, automotive, defense and military, and packaging markets. Per capital consumption of aluminum was 5 kg/year in 2006, nearly seven times less than per capital consumption in the United States at 35-40 kg/year. Consumption for followed products increased at 15 percent CAGR from 2000 to 2005 and was predicted to grow at 6 percent from 2006 to 2010. Of course, the global economic recession

adversely impacted those statistics, but still the long-term forecast for aluminum consumption in Russia was very favorable.

Table 5. Key Statistics for BRIC Countries

	Russia	China	India	Brazil
Population (2010 est)	139.4 mil.	1.330 bil.	1.173 bil.	201.1 mil
Pop. Growth (2010 est.)		.494%	1.375%	1.166%
Literacy rate*	99.2%	90.9%	61.0%	88.6%
Life expectancy years	66.16	74.51	66.46	72.26
Median age	38.5	35.2	25.9	28.9
% pop. 15-64 years	71.7%	17.9%	64.6%	66.9%
Real GDP growth (2009 estimated)	-7.9%	8.7%	6.5%	-0.2%
GDP/capital (2009 estimated)	\$15,100	\$6,600	\$3,100	\$10,200
GDP (PPP, 2009 est. trillion)	\$2.116	\$8.789	\$3.560	\$2.025

^{*}over 15 can read and write

Source: https://www.cia.gov/library/publications/the-world-factbook/

ALCOA RUSSIA

Alcoa has had a presence in Russia since 1993 but increased its interest in 2005 with the acquisitions of two Russian plants, Samara Metallurgical (JSC SMZ) and Belaya Kalitva Metallurgical (JSC AMR) from Russky Aluminy (RUSAL) for \$257.5 million. Subsequently, it invested approximately \$490 million into the badly dilapidated plants for updating equipment and technology, health and safety improvements, ABS implementation and employee training and development (Alcoa Russia: Figures and Facts.) The company's corporate headquarters was located in Moscow with SMZ in Samara, the administrative center of the Province of Samara, and AMR in Belaya Kalitva, a town in the Rostov Province. (See Figure 5.)

JSC SMZ was a huge production plant built in the 1950's and covering 1,380,000 square meters of land. Samara was one of Russia's largest industrial cities (population approx. 1.1 million) and ws located 500 miles southeast of Moscow on the east bank of the Volga River. JSC SMZ was Russia's largest producer of fabricated aluminum with almost 40 percent market share in mill products. It had four business units: cast house, extrusions, mill products and forgings. The plant had one of the world's largest extrusion and forging presses. JSC SMZ manufactured a

wide variety of flat-rolled, extruded and forged products including coils, sheet, profiles, panels, tubes, etc. Production capacity was 250,000 tons and in 2006 it had nearly 6,000 employees. The plant's production and quality systems have been ISO 9001/9002 certified and its environmental management system was ISO 14001:1996 certified.

JSC AMR was built in the early 1960's and was located Belaya Kalitva (population 47,000) in the Rostov Province 500 miles south of Moscow. It covered 861,500 square meters of land and employed 4,043 people in 2006. JSC AMR controlled 10% market share in mill products and also had business units in cast house, extrusions, mill products and forgings. Production capacity was 50,000 tons.

Because of a scarcity of good management talent in Russia in the early years of the acquisition, Alcoa Russia's first President was William O'Rourke, Alcoa's Vice President for Environmental, Health and Safety. In 2006 expatriates held 48 managerial and specialist positions but the plan was to decrease this number to 15 by the end of 2007. In November 2008, Andrey Donets became President and by 2009 eight of the nine senior executives were Russian.

Implementing ABS in Alcoa Russia

After the acquisition, in January, 2006, twelve engineers were sent to the United States for five months for ABS training. The initial stage of ABS includes "seven stability tools" that are interrelated. They are described in Table 6. Total Productive Maintenance (TPM), Kaizen, Daily Management, Suggestion System and Problem Solving focused on improving production performance. Reward and Recognition and Communication focused on employee training and development. The extrusions business unit had launched TPM earlier and other tools were used in other parts of the plants, but the first company-wide ABS plan was implemented in 2007. Yuri Anurov, ABS Manager, described the launch as follows:

Most of these tools were new for us and we had to learn by doing. Most of us started with TPM because it was the most urgent and visible, but one by one we started to do other things.... Kaizen, then data management boards at the equipment level. Every single ABS engineer had to launch at least one data management board.

In 2008 the Samara Metallurgical plant opened the Center for Excellence to provide training courses in ABS stability methodologies. The first course lasted for four days and focused on the theoretical foundations of six of the seven ABS stability tools. After its completion employees were eligible to take the second course involving experiential application of the tools learned in the first course. In March, 2009, the Center for Excellence launched a Kaizen course to better enable employees to eliminate waste and identify opportunities for innovation in business and manufacturing processes. The implementation of ABS into Alcoa Russia involved a significant cultural shift from past practices that required employees to change their behavior. The cultural change was described by Alcoa Russia's President, Andrey Donets, as follows:

The main change is about culture. It didn't happen immediately; it took quite a long time. Alcoa spent a great deal of effort on this. When the culture changes, it means that people change their behavior. They clearly understand the targets, the

corporate standards. It involves changing manufacturing culture, operational culture, and the culture of managers who are the ambassadors of the change effort. We have good support from ethical representatives from Alcoa who monitor and support our employees with appropriate training and education. Everyone in the company participates in a monthly training program that is usually online.

Make to Use: The Make to Use principle emphasized efficiency, quality and safety. Prior to the acquisitions, little attention was paid to workplace safety at either plant and product quality did not match the standards of Western countries. Employees did not wear protective clothing or footwear and there was a high incidence of intoxication on the job. Consequently, in an industry already known for hazardous workplace conditions, the plants averaged five fatalities per year for nearly fifty years. Environment, health and safety (EHS) issues at the plants became a priority for Alcoa Russia's management team as it was for Alcoa worldwide. Outdated technology was replaced with newer manufacturing equipment imported from Australia. The remaining technology was updated and facilities were cleaned and modernized. Twenty-three thousand tons of scrap were removed. A total of about \$75.9 million was invested in Alcoa Russia in 2006.

Employees were required to wear personal protective equipment (PPE) and were encouraged to be responsible for their own safety. Every meeting at all levels of the organization began with a report of EHS issues. Safety policies were developed and enforced with noncompliance violations leading to extensive discussion and persuasion for changing behavior, bonus reductions or possible dismissal. In 2006, one year after the acquisition, Alcoa Russia recorded its first zero fatality year in history. However, in 2008, Alcoa, Inc. commissioned independent consultants to evaluate its global fatality records from 2004 to 2008. The report concluded that more than 50 percent of fatalities occurred during September and October; contractors represented a disproportionate number; transportation and delivery activities appeared to have more fatalities; and fatality records vary by geographic regions. Although Alcoa Russia represented 7 percent of Alcoa's total hours, it contributed to 36 percent of the fatalities. While 2009 was fatality free for Alcoa Russia during the first eleven months, one fatality occurred at the end of December when a 52-year-old employee suffered fatal injuries after falling into a sludge tank. Alcoa, Inc. and Alcoa Russia continued to strive for the zero fatality target included in the 2020 Strategic Framework for Sustainability

Russian Alcoans adopted the slogan "Do What's Right" and violations involving intoxication and absenteeism were reduced by 25 percent from 2005 to 2006. In 2006 Alcoa Samara employees worked three million hours without a Lost Working Day while employees at Belaya Kalitva worked over 5 million hours without a Lost Working Day! Zero lost workdays was another strategic target in the 2020 Strategic Framework for Sustainability.

Alcoa Russia held more than 300 TMP events on major operational equipment with over 7,000 employees participating. Six thousand failures were identified and 4,700 were eliminated. Seventy percent of identified critical machines and equipment achieved Level 1 TPM in 2006. There were Kaizen events and Daily Management Meetings in all business units. In both plants, the number of internal rejects declined significantly indicating an overall improvement in quality. The Samara plant had a BSI certificate on quality management system ISO 9001 and AS 9100 and ISO/TS 16949. The Belaya Kalitva plant was awarded the BSI certificate on quality management system BS/EN9100:2003, ISO 9001:2000 and EN 9104:P1 as an aerospace supplier.

"Stop Losing! Program" A research project conducted by the McKinsey consulting group suggested that employee productivity in Russia was 25 percent of productivity in North America. Inefficient company structures and employees who added no value to the organization were pervasive and presented a formidable challenge for change management at Alcoa Russia. To establish an incentive system, the "Stop Losing! Program" was developed in 2008 to create a reward and recognition process for innovative suggestions about waste management, safety improvement, cost reduction, quality improvement, and time or efforts decreases. Employees provided suggestions to their direct bosses who decided whether they should be submitted to the ABS system. If a suggestion is implemented, administration contributed 50 rubles to the Barrel of Honey. (See Figure 6.) Before the economic crisis, the amount was 100 rubles. After the collection amount in the Barrel of Honey reached 500,000 rubles, the money was spent on community needs or the needs of employees in the plants. For instance, funds from the First Barrel were used to purchase equipment for a school for children with special needs; the Second Barrel was spent on kitchen appliances for the office and production employees to improve working conditions; and in 2009 employees chose to help a school for children with hearing impairments.

A second part of this program involved projects to eliminate waste or improve quality which the employees implement themselves. Individuals or teams of individuals from all departments submitted proposals for improvements which were then evaluated by an ABS special committee. Thousands of proposals may come in from just the Samara plant alone. In October, 2009, the ABS team and plant director evaluated 30 proposals which provided the most significant cost savings. One team suggested a cold mill kaizen project that would save \$900,000 over a six month period. Another performed kaizen and evaluated how to make the cold mill production process more efficient. After creating a diagram of the production process and assessing what every employee does, the team proposed that one person could be removed from the shift. This suggestion was made by the employees themselves and not the shop supervisor.

After the best proposals were determined, a formal recognition ceremony occurred and awards were given for gold, silver and bronze projects. The General Director and all other directors of the plant attended this ceremony and listened to the project presentations. Team members who won the gold prize received 3,000 rubles each. Those who won the silver received 2,000 each and those who won the bronze prize received 1,000 each. Winners were also given plaques which they could hang somewhere in the plant or at home. These award ceremonies occurred twice a year in the spring and fall. Since 2008 the Samara plant has saved over 253 million rubles (\$8,550,000) through Stop Losing! improvement projects.

Environmental Sustainability: Because of the abundance of natural resources in Russia, environmental sustainability was not a serious concern in the plants historically. However, in 2006 the Alcoa Samara plant's environmental management system was ISO 14011:1996 certified. Alcoa Belaya Kalitva's environmental management system was in the process of receiving ISOS 1401:1996 certification. Regarding environmental management, Managing Director of the Samara plant, Mikhail Spichak stated:

We start with training in our work teams because in most cases the ecology is being attacked by people and not processes or equipment. We work within our plant and within the community. Alcoa Russia has invested in technological processes that

are ecologically safe. Everything that leaves the plant is examined for environmental impact. We have regular audits and passed the last one.

Alcoa Russia's sustainability efforts are guided by its parent corporation's 2020 Strategic Framework for Sustainability requiring sustainability initiatives to be integrated into all aspects of daily operations over time.

People Linchpin the System: The last principle of the ABS framework emphasized the importance of employees as the linchpin of the system. Alcoa Russia employed approximately 1,000 degreed engineers in 2006. The company engaged in selective hiring that, in most cases, involved multiple interviews at all levels of the organization. Lyudmila Petryahina, HR Director of Alcoa SMZ, and Learning and Development, Business Based HR, Shared People Services Director, Alcoa Russia, stated the following about the hiring process:

In terms of hiring, we select first on the business need. A lot depends on the type of professional skills needed. That's how we start the search and we usually meet many candidates who fill this initial search criterion. Then we look at personality or attitude.... It is easy to evaluate professional skills in terms of background, experience and certifications. It is very difficult to make a decision based on the soft skills. That's why we have many interviews.

As described earlier, the ABS Center of Excellence was the core training and development program for Alcoa Russia employees in all three locations, Samara, Belaya Kalitva and Moscow. Although currently located in Samara, a second Center of Excellence was being planned for Belaya Kalitva in 2010. By the end of 2009 most employees completed the first level of ABS training and progressed to the second. Importantly, ABS training was for *all* employees; even human resource employees have completed the first level of ABS training. The Training and Development Department in Human Resources offered all other types of skills training. However, because of the economic crisis, training in soft skills, English language and all non-professional skills were stopped. Training and development efforts were dedicated only to critical skills directly related to improve organizational performance while non-critical skills were temporarily discontinued.

In terms of employee compensation and benefits, all companies in Russia must conform first to Russian national labor laws which tended to be very employee-centered. Government regulations covered minimum hourly wages, minimum days of vacation (four weeks), sick time, medical insurance, pensions and maternity leave. For instance, if a woman had a maternity leave, she could not be fired and was guaranteed to keep her job for three years, even if there was a performance issue after she returned to work. Canteens for food storage and breaks were typically provided but not required by law. Petryahina commented, "In terms of benefits, Alcoa is one of the best companies in Russia."

The economic crisis which adversely affected the parent company and the mandates from the Cash Sustainability Program likewise influenced Alcoa Russia's operations. In mid-2009, company-wide restructuring involved increased centralization, consolidations, shutdowns and employee layoffs. The number of Alcoans in Russia declined from 15,000 in 2005 to 6,600 in 2009. In light of the increase in employee layoffs, the Redeployment and Retraining Center (RRC)

provided psychological counseling and retraining for future employment outside of Alcoa. Since many employees have never worked anywhere other than Alcoa Russia or its former plant facilities, loss of employment could be a traumatic event. The RRC tried to provide psychological assistance in emphasizing that "Life does not stop. Don't worry. We will help you." Specific services included individual program development, soft skills training, retraining/technical skills, and possible employment. Since May 2009, 565 employees received individual consultations and 425 employees found new jobs through the program. One third of the employees who left Alcoa Russia were on pension and retired willingly without interest in redeployment. Petryahina explained:

"We treat the needs of each released employee individually. For this purpose Alcoa involved experts with excellent reputation in the human resources area. It was important for us to provide real assistance to the people who had dedicated their efforts and time to our company and who we have to part with".

Social Sustainability: Since 2005, the Alcoa Foundation and Alcoa Russia have invested nearly \$3.2 million in regional communities of Samara, Rostov and Moscow. Oleg Kalinskiy, Vice President of Corporate Affairs, described the mindset shared by Alcoa Russia and its parent company as follows:

One of the basic values of Alcoa, Inc. is to be a good neighbor in the community in which you operate. So we not only focus on customers, on the delivery of products and making a profit, but also we give a lot of attention on developing the community in which we operate. For us the connection is very simple. Take care of the place where you work and it gives back to you.

There are several programs that Alcoa Russia developed relating to social sustainability. The first dealt with promoting conservation and sustainability in secondary schools. During the Soviet times, the key objective for all companies was to maximize production without any concern for the environment. Alcoa Russia tried to dispel the myth or stereotype that all participants in the metal industry engaged in practices that destroy the environment. The major activities of this program included: developing seminars for teachers and students; providing grants for implementing community projects involving conservation; supporting ecological camps, involvement in an all-Russia network of young ecologists, and on-line resources exchanging information with other regions of Russia. Twelve school projects in Samara and Belaya Kalitva in the amount of 1,265,710 rubles (\$41,316 US) were awarded grants as part of the "We are in charge of the Future" program in spring of 2009.

The second program involved raising levels of technical education. The Alcoa Foundation and Alcoa Russia provided grants and scholarships for some of the best students in vocational schools, or colleges, to help them succeed in careers where they work with their hands, such as machinists, blacksmiths, gardeners, etc. This type of educational assistance addressed the shortage in Russia of individuals who choose vocational careers because historically students became economists, lawyers, engineers – people in the professions. The intent of this program was that students who receive the scholarships will go on to work in their vocational area and help to address the shortage as the older works retire. The Acquiring Talent Program was launched in 2008 in the Samara plant, but was intended to be extended to the Belaya Kalitva plant. In this

program they selected the best students, put them on the shop floor, and assigned mentors from the most experienced personnel with the intention of retaining them for future employment.

Alcoa Russia developed partnerships with several universities including: 1) Moscow State University for Steel and Alloys, a leading metals education institution recognized internationally; 2) Samara State Aerospace University for aerospace engineers (SSAU); 3) Don State Polytechnic Institute in Rostov; and 4) the New Economics School (NES), a leading scientific and educational institution for Russian economists. Through the Alcoa Foundation Technical Education Program, scholarships were awarded to thirty students and five young faculty engaged in aerospace research at SSAU in spring of 2009. Faculty from the New Economics School who received scholarships may later teach classes in Samara and Belaya Kalitva. In March, 2009, NES faculty held game theory workshops at the SSAU. These initiatives attempted to improve standardization of scholarship between city and rural regions in Russia.

The third initiative of social sustainability involved the Month of Service which was implemented in Alcoa, Inc. worldwide every October. During the month of October, Russian Alcoans volunteered many hours of their time to help the elderly, children, veterans, young people, the disabled, etc. Community service projects have included English language summer campus, EarthWatch, assistance to the Center of Special Education for children with special needs, refurbishment and landscaping in the Metallug district. As part of the Alcoa Ten Million Trees program, Alcoa Russia employees have planted about 6,000 trees. In October, 2009, at the end of the Month of Service, young people provided musical entertainment for the Concert in Honor of the Elderly and Veterans.

The Economic Value of Core Values

As Donets and Kalinskiy waited patiently for the call, they wondered whether the Wall Street analysts would consider the whole picture in evaluating the company's recent performance. In the midst of an economic downturn, Alcoa, Inc. had made significant progress in cutting costs related to asset dispositions, procurement savings and overhead reductions. Although revenues and profits were down, the Cash Sustainability Program seemed to be a success. Also, Alcoa was able to adhere to its core values with the best-ever safety record and maintained its listing on the Dow Jones Sustainability Index for the eighth year in a row. Likewise, Alcoa Russia, while still not profitable four years after the acquisition, had made significant strides in revenue growth and cost savings. Moreover, there were considerable improvements in plant modernization, implementation of ABS principles, quality, workplace safety and sustainability that created a revolutionary change in corporate culture. But would Wall Street acknowledge these other non-financial performance indices which, they believed, determine the long-term viability of the corporation?

Figure 2. Alcoa's Vision and Core Values

At Alcoa, our vision is to be the best company in the world.

At Alcoa, our vision is to be the best company in the world--in the eyes of our customers, shareholders, communities and people. We expect and demand the best we have to offer by always keeping Alcoa's values top of mind:

Integrity

Alcoa's foundation is our integrity. We are open, honest and trustworthy in dealing with customers, suppliers, coworkers, shareholders and the communities where we have an impact.

Environment, Health and Safety

We work safely in a manner that protects and promotes the health and well-being of the individual and the environment.

Customer

We support our customers' success by creating exceptional value through innovative product and service solutions.

Excellence

We relentlessly pursue excellence in everything we do, every day.

People

We work in an inclusive environment that embraces change, new ideas, respect for the individual and equal opportunity to succeed.

Profitability

We earn sustainable financial results that enable profitable growth and superior shareholder value.

Accountability

We are accountable – individually and in teams – for our behaviors, actions and results.

We live our Values and measure our success by the success of our customers, shareholders, communities and people.

[REF: http://www.alcoa.com/global/en/about_alcoa/vision_and_values.asp]

Figure 5. Map of Alcoa Russia

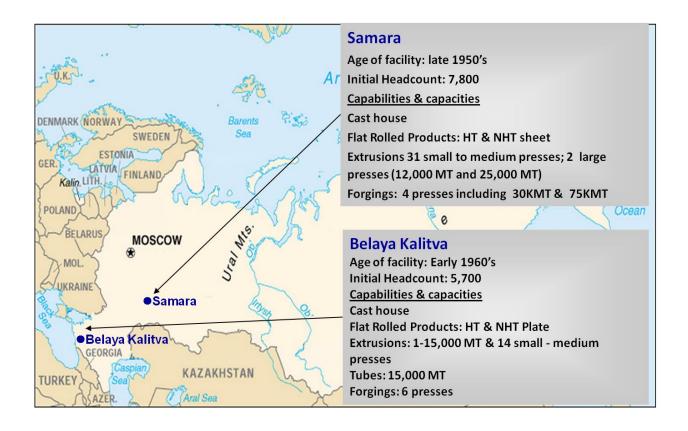


Table 6. ABS "Seven Stability Tools"

TPM - *Total Productive Maintenance*. According to this principle each employee should take care about his workplace. The rules are simple: do not avoid preventive visual checks; no need to wait until an equipment unit breaks down or until maintenance people arrive especially in case you can solve this issue at an early stage; do not throw trash around your workplace.

Problem Solving provides employees with a single action scheme in any difficult situation during the production process.

Kaizen ("Continuous improvement" in Japanese) – directs each employee to team work in their continuous search for improvement solutions and their implementation. Kaizen suggestions target both productivity increase and improvement of working conditions and safety.

Daily Management prescribes to each manager to conduct daily meetings with his or her team to inform the personnel about current objectives of the BU and the company as a whole. Thus, the people start seeing their objective as part of the common business and feeling like they are part of the team.

Communication is an information transfer via any channel with emphasis on personal "face-to-face" communication. Exchange of ideas and issues with colleagues, managers and leaders in real-time mode helps us to understand the business better and contribute to its improvement.

Suggestion System allows each employee to offer some improvement. The innovation can deal with labor safety, cost reduction, material savings, elimination of faults, improvement of communications.

Reward & Recognition is based on the idea of rewarding employees for their success in a short term, during a month. In this case an employee can see a direct connection of performance and reward. The form of material reward can be different – bonuses, souvenirs with the corporate trademark., etc.

Source: http://alcoa.com/russia/en/news/releases/AMR_opens_COE.asp

Figure 6. Barrel of Honey



Table 4. Alcoa Inc. Income Statement 2007-2009

Alcoa and subsidiaries Statement of Consolidated Operations (in millions, except per-share amounts)

For the year ended December 31,	2009	2008	2007
Sales (Q)	\$18,439	\$26,901	\$29,280
Cost of goods sold (exclusive of expenses below)	16,902	22,175	22,803
Selling, general administrative, and other expenses	1,009	1,167	1,444
Research and development expenses	169	246	238
Provision for depreciation, depletion, and amortization	1,311	1,234	1,244
Restructuring and other charges (D)	237	939	268
Interest expense (V)	470	407	401
Other income, net (O)	(161)	(59)	(1,920)
Total costs and expenses	19,937	26,109	24,478
(Loss) income from continuing operations before income taxes	(1,498)	792	4,802
(Benefit) provision for income taxes (T)	(574)	342	1,623
(Loss) income from continuing operations	(924)	450	3,179
Loss from discontinued operations (B)	(166)	(303)	(250)
Net (loss) income	(1,090)	147	2,929
Less: Net income attributable to noncontrolling interests	61	221	365
Net (Loss) Income Attributable to Alcoa	\$(1,151)	\$ (74)	\$ 2,564
Amounts Attributable to Alcoa Common Shareholders			
(Loss) income from continuing operations	\$ (985)	\$ 229	\$ 2,814
Loss from discontinued operations	(166)	(303)	(250)
Net (loss) income	\$(1,151)	\$ (74)	\$ 2,564
Earnings per Share Attributable to Alcoa Common Shareholders (S) Basic:			
(Loss) income from continuing operations	\$ (1.06)	\$ 0.27	\$ 3.24
Loss from discontinued operations	(0.17)	(0.37)	(0.29)
Net (loss) income	\$ (1.23)	\$ (0.10)	\$ 2.95
Diluted:			<u> </u>
(Loss) income from continuing operations	\$ (1.06)	\$ 0.27	\$ 3.22
Loss from discontinued operations	(0.17)	(0.37)	(0.28)
Net (loss) income	\$ (1.23)	\$ (0.10)	\$ 2.94

Alcoa and subsidiaries Consolidated Balance Sheet (in millions)

Current assets:	December 31,	2009	2008
Cash and cash equivalents (X) \$ 1,481 \$ 1,299 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,031 2,328 3,7 3,7 2,328 3,3 3,7 1,031 1,	Assets		
Receivables from customers, less allowances of \$70 in 2009 and \$65 in 2008 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,529 1,529 3,2328 3,633 1,529 3,2328 3,722 8,82 3,2328 3,722 3,2328 3,722 8,82 1,031 1,031 1,031 1,031 1,031 1,031 1,031 1,031 1,031 1,051 4,000 1,051 4,000 1,051 <	Current assets:		
Other receivables Inventories (G) 653 Inventories (G) 7022 Inventories (G) 88 Inventories (G) 88 Inventories (G) 88 Inventories (G) 88 Inventories (G) 19828 Inventories (G) 106 Inventories (G) 106 Inventories (G) 4 Investories (G) 4 Investories (G) 4 Investories (G) 4 Investories (G) 4 Inventories (G) 5 Inventories (G) 4 Inventories (G)<	Cash and cash equivalents (X)	\$ 1,481	\$ 762
Inventories (G)	Receivables from customers, less allowances of \$70 in 2009 and \$65 in 2008	1,529	1,883
Fair value of hedged aluminum 1,031 Prepaid expenses and other current assets 7,022 8, Properties, plants, and equipment, net (H) 19,828 17, Goodwill (E) 5,051 4, Investments (I) 2,958 2, Other income taxes (T) 2,958 2, Other noncurrent assets (J) 2,419 2, Assets held for sale (B) 133 1 Total Assets 38,472 337, Liabilities Current liabilities: Short-term borrowings (K and X) 5 17 \$ Commercial paper (K and X) 5 17 \$ \$ Accounts payable, trade 1,954 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, 4 2, <td>Other receivables</td> <td>653</td> <td>708</td>	Other receivables	653	708
Prepaid expenses and other current assets 1,031 Total current assets 7,022 8, Properties, plants, and equipment, net (H) 19,828 17, Goodwill (E) 5,051 4, Investments (I) 1,061 1, Deferred income taxes (T) 2,958 2, Other noncurrent assets (J) 2,419 2, Assets held for sale (B) 133	Inventories (G)	2,328	3,238
Total current assets	Fair value of hedged aluminum	-	586
Properties, plants, and equipment, net (H) 19,828 17, Goodwill (E) 5,051 4, Investments (I) 1,061 1, 1,061 1,061 1,061 1,061 1,061 1,061 2,958 2, 2,00ther oncourrent assets (I) 2,958 2, 2,419 2, Assets held for sale (B) 133 338,472 \$37, \$37, \$37, \$38,472 \$37,	Prepaid expenses and other current assets	1,031	973
Properties, plants, and equipment, net (H) 19,828 17, Goodwill (E) 5,051 4, Investments (I) 1,061 1, 1,061 1,061 1,061 1,061 1,061 1,061 2,958 2, 2,00ther oncourrent assets (I) 2,958 2, 2,419 2, Assets held for sale (B) 133 338,472 \$37, \$37, \$37, \$38,472 \$37,	Total current assets	7.022	8,150
Goodwill (É) 5,051 4, Investments (I) 1,061 1, 1,061 1, 1,061 1, 1,061 1, 2,958 2, 2,958 2, 2,058 2, 2,419 2, 2,419 2, 4,19 2, 4,19 2, 4,19 2, 4,19 2, 2,58 2,			17,455
Investments (I)			4,981
Deferred income taxes (T) 2,958 2, Other noncurrent assets (J) 2,419 2, Assets held for sale (B) 133 ****37, Total Assets \$38,472 \$37, Liabilities Current liabilities: Short-term borrowings (K and X) \$ 176 \$ Commercial paper (K and X) \$ 176 \$ Commercial paper (K and X) \$ 1,54 2, Accrued compensation and retirement costs 925 1 Taxes, including income taxes 345 \$ Fair value of derivative contracts 127 \$ Other current liabilities 1,218 \$ Long-term debt due within one year (K and X) 669 \$ Total current liabilities 5,414 7, Accrued pension benefits (W) 3,163 2, Accrued pension benefits (W) 2,696 2, Other noncurrent liabilities and deferred credits (L) 2,695 1, Liabilities of operations held for sale (B) <td></td> <td></td> <td>1.915</td>			1.915
Other noncurrent assets (J) 2,419 2, Assets held for sale (B) 133 33,472 \$37. Total Assets \$38,472 \$37. Liabilities Current liabilities: Short-term borrowings (K and X) \$176 \$ Commercial paper (K and X) \$- 1,954 2, Accounts payable, trade 1,954 2, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,			2,688
Assets held for sale (B) 133 38,472 \$37, \$38,472 \$38,472		0.000	2,386
Liabilities Current liabilities: \$ 176 \$ Commercial paper (K and X) - 1, 1, Accounts payable, trade 1,954 2, Accrued compensation and retirement costs 925 345 5 Taxes, including income taxes 345 5 127 Other current liabilities 1,218	Assets held for sale (B)	0.000	247
Current liabilities: Short-term borrowings (K and X) \$ 176 \$ Commercial paper (K and X) - 1, Accounts payable, trade 1,954 2, Accrued compensation and retirement costs 925 Taxes, including income taxes 345 Fair value of derivative contracts 127 Other current liabilities 1,218 Long-term debt due within one year (K and X) 669 Total current liabilities 5,414 7, Long-term debt, less amount due within one year (K and X) 8,974 8, Accrued pension benefits (W) 3,163 2, Accrued postretirement benefits (W) 2,696 2, Other noncurrent liabilities and deferred credits (L) 2,605 1, Liabilities of operations held for sale (B) 60 Total liabilities 22,912 23, Commitments and contingencies (N) 40 Equity Alcoa shareholders' equity: 55 Common stock (R) 5,007 Additional capital 6,608 5, Retained earnings 11,020 12, Accidence 1,007 Additional capital 6,608 5, Retained earnings 11,020 12, Accidence 1,007 Additional capital 6,608 5, Retained earnings 11,020 12, Accidence 1,007 Additional capital 6,608 5, Retained earnings 11,020 12, Accidence 1,007 Additional capital 6,608 5, Retained earnings 11,020 12, Accidence 1,007 Additional capital 6,608 5, Accidence 1,007	Total Assets	\$38,472	\$37,822
Short-term borrowings (K and X) \$ 176 \$ Commercial paper (K and X) - 1, 1,954 2, Accounts payable, trade 1,954 2, Accrued compensation and retirement costs 925 345 Taxes, including income taxes 345 127 Other current liabilities 1,218 1,218 Long-term debt due within one year (K and X) 669 669 Total current liabilities 5,414 7, Long-term debt, less amount due within one year (K and X) 8,974 8, Accrued pension benefits (W) 3,163 2, Accrued postretirement benefits (W) 2,696 2, Other noncurrent liabilities and deferred credits (L) 2,695 1, Liabilities of operations held for sale (B) 60 60 Total liabilities 22,912 23, Commitments and contingencies (N) 40 Comment stock (R) 55 Common stock (R) 55 Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Liabilities		
Commercial paper (K and X)	Current liabilities:		
Commercial paper (K and X)	Short-term borrowings (K and X)	\$ 176	\$ 478
Accrued compensation and retirement costs		-	1,535
Taxes, including income taxes 345 Fair value of derivative contracts 127 Other current liabilities 1,218 Long-term debt due within one year (K and X) 669 Total current liabilities 5,414 7, Long-term debt, less amount due within one year (K and X) 8,974 8, Accrued pension benefits (W) 3,163 2, Accrued postretirement benefits (W) 2,696 2, Other noncurrent liabilities and deferred credits (L) 2,605 1, Liabilities of operations held for sale (B) 60 60 Total liabilities 22,912 23, Commitments and contingencies (N) 40 Convertible securities of subsidiary (I) 40 Equity 55 Alcoa shareholders' equity: 55 Preferred stock (R) 55 Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Accounts payable, trade	1,954	2,518
Fair value of derivative contracts	Accrued compensation and retirement costs	925	866
Other current liabilities 1,218 Long-term debt due within one year (K and X) 669 Total current liabilities 5,414 7, Long-term debt, less amount due within one year (K and X) 8,974 8, Accrued pension benefits (W) 3,163 2, Accrued postretirement benefits (W) 2,696 2, Other noncurrent liabilities and deferred credits (L) 2,695 1, Liabilities of operations held for sale (B) 60 1 Total liabilities 22,912 23, Commitments and contingencies (N) 40 2 Convertible securities of subsidiary (I) 40 40 Equity 5 5 Common stock (R) 5 5 Common stock (R) 1,097 4 Additional capital 6,608 5, Retained earnings 11,020 12,	Taxes, including income taxes	345	378
Long-term debt due within one year (K and X) 569 Total current liabilities 5,414 7, Long-term debt, less amount due within one year (K and X) 8,974 8, Accrued pension benefits (W) 3,163 2, Accrued postretirement benefits (W) 2,696 2, Other noncurrent liabilities and deferred credits (L) 2,605 1, Liabilities of operations held for sale (B) 60 Total liabilities 22,912 23, Commitments and contingencies (N) 40 Equity Alcoa shareholders' equity: Freferred stock (R) 55 Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12, Retained earnings 11,020 12, Retained earnings 11,020 12, Retained earnings 11,020 12, Additional capital 1,020 12, Additional capital 1,020 12, Common stock (R) 1,097 Additional capital 1,020 12, Additional capital 1,020 12, Common stock (R) 1,097 Common stock (R	Fair value of derivative contracts	127	461
Total current liabilities	Other current liabilities	1,218	987
Long-term debt, less amount due within one year (K and X) 8,974 8, Accrued pension benefits (W) 3,163 2, Accrued pension benefits (W) 2,696 2, Other noncurrent liabilities and deferred credits (L) 2,605 1, Liabilities of operations held for sale (B) 60 Total liabilities 22,912 23, Commitments and contingencies (N) 40 Equity	Long-term debt due within one year (K and X)	669	56
Accrued pension benefits (W) 3,163 2, Accrued postretirement benefits (W) 2,696 2, Other noncurrent liabilities and deferred credits (L) 2,605 1, Liabilities of operations held for sale (B) 60 Total liabilities 22,912 23, Commitments and contingencies (N) 40 Convertible securities of subsidiary (I) 40 Equity 40 Alcoa shareholders' equity: 55 Preferred stock (R) 55 Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Total current liabilities	5,414	7,279
Accrued pension benefits (W) 3,163 2, Accrued postretirement benefits (W) 2,696 2, Other noncurrent liabilities and deferred credits (L) 2,605 1, Liabilities of operations held for sale (B) 60 Total liabilities 22,912 23, Commitments and contingencies (N) 40 Convertible securities of subsidiary (I) 40 Equity 40 Alcoa shareholders' equity: 55 Preferred stock (R) 55 Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Long-term debt, less amount due within one year (K and X)	8,974	8,509
Other noncurrent liabilities and deferred credits (L) 2,605 1, Liabilities of operations held for sale (B) 60 2,912 23, Commitments and contingencies (N) Convertible securities of subsidiary (I) 40 Equity Alcoa shareholders' equity: 55 5 6 6 6 5 6 6 6 6 5 6 6 6 6 5 6 6 6 6 6 6 6 8 5 7 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 8 8 9 9 9 8 9	Accrued pension benefits (W)	3,163	2,941
Liabilities of operations held for sale (B) 60 Total liabilities 22,912 23, Commitments and contingencies (N) 40 Convertible securities of subsidiary (I) 40 Equity Alcoa shareholders' equity: Preferred stock (R) 55 Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Accrued postretirement benefits (W)	2,696	2,730
Liabilities of operations held for sale (B) 60 Total liabilities 22,912 23, Commitments and contingencies (N) 40 Equity 40 Alcoa shareholders' equity: 55 Preferred stock (R) 55 Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Other noncurrent liabilities and deferred credits (L)	2,605	1,901
Commitments and contingencies (N)	Liabilities of operations held for sale (B)	60	130
Convertible securities of subsidiary (I) 40 Equity Standard S	Total liabilities	22,912	23,490
Equity Alcoa shareholders' equity: 55 Preferred stock (R) 55 Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Commitments and contingencies (N)		
Alcoa shareholders' equity: 55 Preferred stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Convertible securities of subsidiary (I)	40	-
Preferred stock (R) 55 Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Equity		
Common stock (R) 1,097 Additional capital 6,608 5, Retained earnings 11,020 12,	Alcoa shareholders' equity:		
Additional capital 6,608 5, Retained earnings 11,020 12,	Preferred stock (R)	55	55
Retained earnings 11,020 12,	Common stock (R)	1,097	925
Retained earnings 11,020 12,	Additional capital	6,608	5,850
Treasury stock, at cost (4.268) (4.	Retained earnings	11,020	12,400
	Treasury stock, at cost	(4,268)	(4,326
Accumulated other comprehensive loss (2,092) (3,	Accumulated other comprehensive loss	(2,092)	(3,169
Total Alcoa shareholders' equity 12,420 11,	Total Alcoa shareholders' equity	12,420	11,735
Noncontrolling interests 3,100 2,	Noncontrolling interests	3,100	2,597
Total equity 15,520 14,	Total equity	15,520	14,332
Total Liabilities and Equity \$38,472 \$37,	Total Liabilities and Equity	\$38,472	\$37,822

Instructor's Manual

Alcoa Russia

Case Synopsis:

Alcoa CEO Alain Belda commented that 2009 was the toughest year in the aluminum industry that he has seen in forty years in the business. Alcoa was a major player in the global aluminum industry with \$18.4 billion in revenues and 11% market share. The global recession decreased demand in its major markets including automotive, packaging, aerospace and construction causing decreased aluminum prices and oversupply. The Alcoa Business System (ABS) was an integrated set of business principles that are the foundation of all business processes. In addition, the company culture was strongly influenced by the following seven core principles of Alcoa: promoting environment, health and safety, customer focus, pursuit of excellence, respect for people; sustainable profitability and accountability. In 2005 Alcoa acquired two Russian plants, Samara Metallurgical and Belaya Kalitva for \$257.5 million. The plants were old and dilapidated with poor employee productivity and high incidence of industry accidents. The parent company invested approximately \$490 million to modernize the plants and improve the safety record. A priority of the management team, which initially was comprised of expatriates, was to implant the core values of the corporation as well as business processes consistent with the Alcoa Business System. In 2010 Andrey Donets, Alcoa Russia's President, and Oleg Kalinskiy, Vice President of Corporate Affairs, review the progress that has been made and the challenges that lie ahead as the 2009 Fourth Quarter Earnings Conference Call with Alcoa's new President, Klaus Keinfeld, was about to begin.

Courses and Levels for Which Case Is Intended

This case is intended for courses in strategic management and international business. It can also be used for courses related to sustainability and business and society. The case is most appropriate for senior-level undergraduates and graduate students in business. Because the case provides an opportunity to apply a variety of analytic techniques, it is best positioned toward the end of the semester.

Teaching Objectives

- 1) To illustrate how a global company incorporates principles of sustainability and humanism as an integral part of its competitive advantage
- 2) To give students practice in analyzing competition in the global aluminum industry;
- 3) Cause students to consider the complexity of incorporating parent company core values into a subsidiary in an emerging market economy
- 4) To provide an opportunity to discuss the merit of non-financial performance indices that influence long-term viability but may not be obvious in financial reporting

Research Methods

The case was developed through a variety of data collection sources. Field research in which the case author traveled to the Alcoa Russia corporate headquarters in Moscow and the aluminum plant in Samara, Russia, provided primary data. Interviews were conducted with key decision makers including the President of Alcoa Russia, the Vice President of Public Relations, the Managing Director of the Samara plant, an ABS manager and a human resource manager. Several interviews with the former President of Alcoa Russia in the Alcoa corporate office in Pittsburgh, were also conducted. Content analysis of the company website and internal company documents provided detailed information about Alcoa's corporate values. Intensive library research of secondary publications and government reports provided the data about the economic trends in the global aluminum industry.

Discussion Questions

1) What is Alcoa, Inc.'s corporate-level strategy? Describe the key elements of this strategy.

Alcoa, Inc. was a fully integrated company involved in all stages of the industry supply chain including: bauxite mining, refining and smelting, fabrication, and recycling. The company's competitive scope was global operating in thirty-two countries worldwide. Its primary markets were beverage can packaging, automotive, commercial building and construction, aerospace and industrial gas turbines.

2) How well is this strategy working? Conduct a financial ratio analysis using the information provided in Tables 4 and 5.

Alcoa, Inc. controlled 11 percent of the global market share in the aluminum industry. Since the industry appeared to be experiencing intense competition due to the recent global recession, the financial condition of the company deteriorated in the past two years. Although the liquidity ratios were acceptable, rising inventories kept the quick ratio under one. The profitability ratios showed significant losses during the past two years. Although high, leverage decreased. The stock price, as shown in Figure 6 decreased significantly with a slight rebound at the end of 2009.

	2009	2008	2007	2006	2005
Current Ratio	1.3	1.12			
Quick Ratio	0.87	0.67			
Net Profit Margin	-6.24%	-0.28%	8.76%	7.4%	4.82%
Gross Profit Margin	8%	18%	22%		

Return on Investment	-2.99%	2%	6.61%	6/05%	3.66%
Return on Equity	-9.27%	63%			
Debt to Asset	59.56%	62.11%	58.72%	55.81%	56.26%
Debt to Equity	184.48%	200.17%			

3) Describe competition in the global aluminum industry using Porters five forces model? What were the driving forces for change in the industry?

The economic recession decreased demand in all global markets for aluminum resulting in oversupply, low capacity utilization and decreased prices. Analysis of competition according to Michael Porter's five competitive forces is shown in IM-Figure 1.

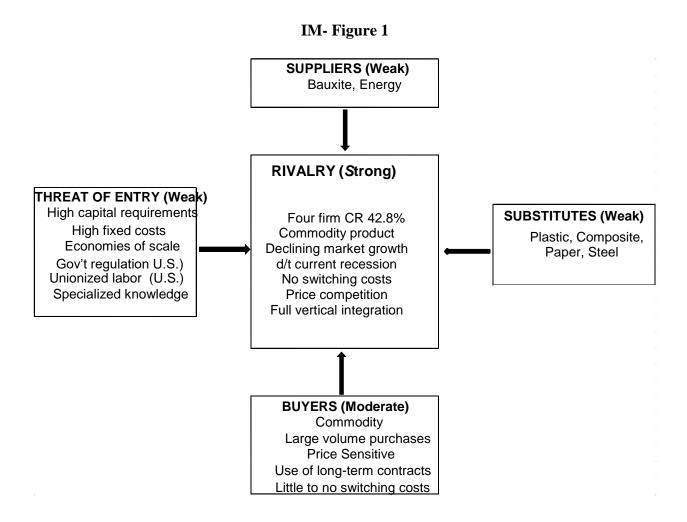
Threat of entry was weak due to low profitability, economies of scale and high capital requirements associated with bauxite acquisition, manufacturing and distribution.

Suppliers of bauxite had little bargaining power due to the backward integration strategies of the incumbents but energy suppliers may have had some bargaining power. Rivals often located plants near water sources for a convenient and cheaper source of energy.

Some substitutes for aluminum as a basic raw material for manufacturing existed but its physical properties often made it a more attractive alternative. Substitutes were durable plastics, steel, paper and composite materials.

Buyers had some bargaining power due to large volume purchases, low switching costs and price sensitivity.

The strongest competitive force in the aluminum industry was rivalry. Little product differentiation, decreased demand, price competition, low switching costs, decreased capacity utilization and aggressive strategic moves by global competitors resulted in fierce competition among rivals.



Despite the economic recession and subsequent increase in competitive forces, the long-term forecast for the aluminum industry was less pessimistic. Per capital consumption of aluminum in emerging market economics was lower than in the developed countries and was expected to grow. Also, new applications and uses for aluminum continued to developed through technological innovation.

4) Describe Alcoa's commitment to sustainability? How do these values influence the operations of the company?

The seven core values, Alcoa Business System (ABS) and the 2020 Strategic Framework for Sustainability established the foundation for business process and corporate culture. The core values, displayed in Figure 2, were publicly displayed and openly communicated in all parts of the organization. The three ABS principles, Make

to Use, Eliminate Waste and People Linchpin the System, determined all operational processes and emphasized continuous improvement, quality, safety and efficiency.

The 2020 Framework for Sustainability identified very aggressive targets for energy conservation, environmental protection, and workplace safety. The Month of Service in October which Alcoa, Inc. scheduled in all locations worldwide provided an opportunity for community service and corporate philanthropy. These practices were deeply embedded in the company's business model and guided all aspects of corporate life.

5) What challenges did Alcoa's corporate office face with regard to doing business in Russia? How did it overcome them?

With low per capita consumption, a highly educated labor force and optimistic demand forecasts, Russia was expected to be a lucrative market in which to enter. However, as with many emerging market economies, there were significant challenges associated with corruption, low employee productivity, poor infrastructure, and sociocultural problems. The plants Alcoa, Inc. acquired very old and dilapidated with poor workplace safety records. Andrey Donets described the 'corporate glasnost' where a major cultural change was necessary to change employee practices, attitudes and behavior.

Communication of corporate values and implementation of ABS principles were major contributors to the change effort. Russian managers were sent to the United States for ABS training. Corporate policies regarding alcohol consumption, lost workdays and workplace safety were strictly enforced. Although initially the top management team was comprised of expatriates, Russian managers were quickly recruited and hired to take their places. The 'Stop Losing! Program' increased employee empowerment, commitment and accountability. It also created a reward and compensation program to provide incentives for desired employee behavior. Continuous emphasis on social and environmental sustainability helped inculcate corporate values. The reference of employees as 'Alcoans' helped instill a sense of belonging and commitment.

6) What types of non-financial performance metrics might be a better predictor of a company's long-term viability than short term financial reporting? Is it acceptable for companies to embed social and environmental sustainability initiatives into their business models while not generating immediate financial returns?

There is a host of measures that are employed by companies these days. The websites of companies such as Walmart (http://www.walmartstores.com/Sustainability/7951.aspx) and Ford (http://corporate.ford.com/microsites/sustainability-report-2011-12/blueprint) provide interesting examples of measures, with an emphasis on environmental and social sustainability. The economic impact of embedding practices of social responsibility in companies' business models is made by several academics and practitioners. A recent article by Porter and Kramer (Michael E. Porter and Mark R. Kramer, "Creating Shared Value," Harvard Business Review, January-February 2011, pp. 62 – 77) makes a strong

argument tying economic value synergistically with societal value. Another article by Myer and Kirby (Christopher Meyer and Julia Kirby, "Leadership in the Age of Transparency," <u>Harvard Business Review</u>, April 2010, pp. 56 – 65) describes the increasing awareness and measurement of what have long been considered to be externalities. Also Bach and Allen (David Bach and David Bruce Allen, <u>Sloan Management Review</u>, Spring 2010, Vol. 51, No. 3, pp. 41 – 48) advocate "tackling social, political and environmental issues as part of a corporate strategy." It may be worthwhile noting that in an interview in Rotman Magazine (Fall 2009, available at: http://ssrn.com/abstract=1511274) Michael Jensen, who is known for enlarging on and fleshing out the case for Milton Friedman's contention that the sole and ethically sound purpose of business is to increase shareholder value, has made a compelling case for "integrity" as "a necessary condition for maximum performance."

Finally, related directly to the specific context of the case, another article "Just Say No to Wall Street: Putting a Stop to the Earnings Game" by Joseph Fuller and Michael Jensen (http://papers.ssrn.com/abstract=297156) offers an interesting and unconventional perspective and response to the pressures created by Wall Street's focus on quarterly EPS reports.

