



BABSON

Goldlake/Eurocantera

Case Study

2012

Goldlake/Eurocantera Honduras (A)

On a rainy day in New York City Giuseppe Colaiacovo, CEO and board member of Goldlake Investments Ltd. (Goldlake), was waiting for his sister Daniela Colaiacovo, director of communications and board member at Goldlake, at a 5th Avenue restaurant to discuss Goldlake's strategic direction. As he looked outside at the wet 5th Avenue, his mind wandered over the achievements of their company and the challenges they faced. From the beginning mining in Honduras presented a great business opportunity, with its unexploited mineral resources and as a foothold in Central America's natural resources and auxiliary industries, which tied in with Colaiacovo's other interests in Italy. Although this was a daring move - it was a brand new industry for them at a remote location - this decision was not new to them as they had learned from their father, Franco Colaiacovo, to think strategically and act entrepreneurially.

Franco was an entrepreneur, businessman and innovative engineer. With his three brothers (Pasquale, Giovanni and Carlo) he built their cement and concrete production and distribution business, Colacem and Colabeton, into a major holding company, Gruppo Financo. Franco had ownership shares in Gruppo Financo and formed the Gold Group in 1996 (Gold, named after his kids, Giuseppe, Laura and Daniela, and his wife Orietta) for his family with a diverse portfolio of major business sectors, from construction to finance, to mining, and to telecommunications (see Exhibit 1) in less than a decade.¹ The founding purpose of Gold was to coordinate the family's investments in diversified business activities keeping with strongly held, traditional family values. The majority of Gold's business was in Northern Europe, Central America and Far East Asia, though it also had investments in Ukraine, Israel and USA.² Following Franco's vision Gold developed an ability to understand the market evolution; looked for resources, industries, and markets; and innovated fundamentally different business models than their competitors.³

With this mindset Goldlake was founded as an investment company to represent Gold's interests in the gold mining sector (see Exhibit 2 for key players in Goldlake). From the start Giuseppe and Daniela considered an innovative business model. They did not consider commercial viability as the single organizational goal, but regarded the environmental and social consequences – both positive and negative – of their business decisions as central to their success. The Colaiacovos had an intuitive understanding

¹ Franco Colaiacovo Gold: Group. Retrieved September 6, 2011, <http://www.fcgold.it/Holding/Group.aspx>

² Franco Colaiacovo Gold: Markets. Retrieved September 6, 2011, <http://www.fcgold.it/Holding/Markets.aspx>

³ Franco Colaiacovo Gold: Profile. Retrieved September 6, 2011, <http://www.fcgold.it/Holding/Profile.aspx>

This case was prepared by Sinan Erzurumlu, Marty Anderson, and Assheton S Carter as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.. The funding for this case was provided in part by the Lewis Institute Social Innovation Lab at Babson College.

that environmental sustainability, social justice and people's rights were central to the reputation and financial value of their company. "Mining is a long term business", Giuseppe was fond of saying, "and it has to be developed at the pace that allows the people around it and involved in it to prosper from it, and done in a way that does not damage nature, which in the end is the foundation for all our futures". The company's values took on the principles of human and environmental sensitivity. The management team followed a socially responsible management framework to the discovery, extraction, refining, and marketing of gold. Within this framework, they gained collaboration among all members in the demand-supply chain of gold, and assured this chain as socially responsible, environmentally sound, and economically sustainable.

When Giuseppe and Daniela pondered the company's strengths and weaknesses, they would always end up wondering if they could improve and apply Goldlake's strategic model to generate social and commercial value for a larger production scale at other global locations. Although they had been successful in Honduras, this had not been easy and quick. Giuseppe and Daniela were proud of Goldlake's social achievements as well as the commercial success the company had generated; yet, they could not decide whether Goldlake's strategic model was applicable to all other extractive industries such as iron ore and larger mining operations.

The 'Ethical' Jewelry Industry

The global jewelry market was valued between \$150bn and \$180bn annually in 2009.⁴ Although the US was the single biggest market with 40%, the Asia-Pacific region was changing the shape of the industry with rapidly rising demand.⁵ According to the Jewellers of America the largest category of jewelry sales in the US was diamond jewelry (36%), followed by loose gemstones (14%) and karat gold jewelry (9%).⁶ During recent financial crisis the jewelry industry was hit hard with 125 retail jewelers declaring bankruptcy in 2009-10 period, while online jewelers enjoyed an increase in their market share. The global consumption of jewelry started increasing from the lows of 2009. The demand from fast growing and new affluent countries and regions such India, USA, China, Asia-Pacific and the Middle East was stiffening price competition in the jewelry industry.⁷ Yet, the low profit margins and the need to control sourcing and distribution were driving participants of the supply chain to find "personal" economically feasible solutions.

⁴ Datamonitor Global Jewelry & Watches Industry Profile. June 2010.

⁵ Building the case for on-line retailing to serve the 'ethical' jewelry market. The Dragonfly Initiative. 2010, p. 4.

⁶ Ibid, p. 4.

⁷ Financial health of U.S. jewelry industry improves in 2010. Retrieved April 12, 2011, http://www.idexonline.com/portal_FullMazalUbracha.asp?id=35247

These economic solutions had not always been ethical practices. Raw materials extracted at conflict mines had a long history of environmental degradation, human rights violations and crimes and found their way into retail supply chain by disguising the origin.⁸ In particular, the mining industry that supplied raw materials like diamonds and gold for the jewelry industry had been criticized for its environmental and social scorecard.⁹ Consumers were increasingly inquiring about the origins of their purchase and if other product attributes met their expectations, they would choose an ‘ethical’ jewelry, involving fair trade, ethical jewelry boutiques, large retailers and luxury brands with transparent and traceable supply chains.¹⁰ On the supply side, the luxury jewelers such as Tiffany and Cartier and boutique jewelers such as Garaveli were responding to the concerns and demand by establishing new ethical policies, practices and business strategies.¹¹ For example, the increasing number of independents acting as an industry group on ethical issues, the growing membership of the Responsible Jewelry Council, an industry association established to respond to criticism of the industry’s practice, and the rising number of supporters from the industry for the No Dirty Gold Campaign.¹²

For most of the industry, however, companies were finding it difficult to launch a coherent response to increasing pressure from stakeholders. Boutique jewelers were highly enthusiastic about putting ‘ethical’ labels on their jewelry as this was aligned with their brand and marketing strategy. For the luxury brands, a line for ‘ethical’ jewelry might cast suspicion on other lines as being ‘unethical’. Retailers, such as Wal-Mart, were not too much concerned about this issue since they did not own any brands and entered into the market with the fully traceable ‘Love,Earth’ line of gold and silver jewelry. The lack of efforts in the jewelry industry was mainly due to the industry’s complex supply chain, making it extremely difficult to know the origin of the materials and to set up direct chains of custody. In addition, the combination of higher commodity prices and the economic crisis deteriorated financial sustainability. The jewelers did not have the flexibility in their budgets to launch sustainability initiatives.¹³

Overview of Goldlake

Goldlake Investments (Goldlake) was established as an investment company to Gold in the gold mining sector, and was headquartered in Gubbio (Italy) and London. The company was a joint venture with a consultant company, Aral, which controlled 20% of Goldlake. Goldlake was strongly involved in the

⁸ Ibid, p. 7.

⁹ Brough, D. Ethical jewelry is making a mark. *The New York Times*, January 9, 2008.

¹⁰ Building the case for on-line retailing to serve the ‘ethical’ jewelry market. The Dragonfly Initiative. 2010, p. 7.

¹¹ King, S. Green is the new gold. *Vanity Fair*, August 2010, p. 28.

¹² Ibid, p. 6.

¹³ Ibid, pp. 9-10.

development of sustainable mining projects with environmentally sustainable extraction technologies. As the first Italian business to invest in the mining industry in Honduras, it started its main operations in Tegucigalpa, Honduras and owned a major stake of three Honduran subsidiaries in central Honduras: Eurocantera S.A. de C.V. (Eurocantera) which had initiated exploration activities in a concession area in the department of Olancho; the Barro Mining Company which owned a concession area in the district of El Paradiso; and Agalteca Mining, which focused on iron ore on the Monte Redondo concession.¹⁴

Founding Concepts and Practices

Goldlake with its origins in Gold shared the same philosophy and family values on which Franco Colaiacovo, the founder of Gold, had built his business: product quality, strong customer relationship and respect for the community and the environment. The founding concepts and practices of Gold were evolved from the cement and concrete business that Gruppo Financo conducted. The production of cement was a simple, but dirty process.¹⁵ Huge pieces of boulder were crushed into the final product of cement in industrial size rotating barrels with the use of large quantities of water. Although limestone quarrying caused less environmental pollution than large sites of mineral mines, it strained relations with the regional community due to dust pollution, increased traffic and noise pollution of the mining site.

The Colaiacovo family saw this inconvenience as an entrepreneurial opportunity and examined the causes of friction with the local community. To get rid of the inefficient and noisy mining process they designed a new and more efficient technology for limestone quarrying. They reduced physical, visual and noise impacts with new operations and improved community relations by looking through a social perspective. Although it seemed that these solutions were easy to implement, it required an open and inquisitive mind with a set of values that put people and employees first while keeping a firm eye on the commercial bottom line. Following the cement and concrete business the Colaiacovo family built a series of strong investment holdings with the same three founding concepts and practices:¹⁶

- Involvement: Each person makes his or her own personal contribution, but is always driven by the team spirit.
- Responsibility and Sustainability: Every initiative and investment must have a strong orientation toward responsibility and sustainability.

¹⁴ Information in this section derives partially from <http://www.goldlake.co.uk>.

¹⁵ Oggioni G., R. Riccardi, R. Toninelli. Eco-efficiency of the world cement industry: A data envelopment analysis. *Energy Policy* **39**(5) 2842-2854.

¹⁶ Franco Colaiacovo Gold: Values. Retrieved August 29, 2011, <http://www.fcgold.it/Holding/Identity/Values.aspx>

- Integration: Projects and investments should be closely integrated into the local community as a point of competitive differentiation.

The Management Culture

The Colaiacovos' business strategy reflected an entrepreneurial tradition and the defining characteristics of the family values. Goldlake was no exception to this tradition of doing equal, fair, transparent and inclusive business (see Exhibit 3 for a Charter of 10 Values). Giuseppe and Daniela believed that Goldlake should not be satisfied with only offering high quality mining products. They operated with the firm conviction that Goldlake was not only a commercial enterprise with a purpose of generating operating profits, but also a corporate citizen to operate responsibly with respect to the interests of all stakeholders, whether employees, investors, communities and host governments. For Goldlake, responsible management meant to catalyze positive change for the neighboring communities and protecting the environment around the area of their operations. Giuseppe strongly advocated that Goldlake should serve with social consciousness, particularly in a field like mining which could cause environmental degradation and detrimental social consequences with controversial mining processes.

In Honduras Goldlake's goal was to establish an investment strategy on the opportunities in emerging growth sectors and territories in accordance with the family values. The company not only continuously searched for technical and management solutions to improve the business processes and products, but also considered investment in social value generation critical to the long-term success of the business. As Giuseppe described:

“Mining is a ‘long term business’, which comes to the same thing inter-generational sustainable development, because you have to give it time to build local relations and incorporate people into the process; you have a longer time horizon than short term profit maximizers.”

Goldlake closely integrated with local communities from the early start-up stage of their business to build trust in working relationship with the neighboring communities. This was central to Goldlake's commitment to social and environmental sustainability. The company strived to maintain open working relationships and trust with all stakeholders (community, government, employees, partners and investors) by communicating freely and keeping a transparent ethical frame of reference in all activities conducted by the company.¹⁷

¹⁷ Dall'estrazione al gioiello, Goldlake conia l'oro etico. *Il Sole 24 Ore*, May 12, 2009.

Mining in Honduras

The Guayape River

The Guayape River flows through the interior Honduran department of Olancho. Historically the river has always been famous for its quality and quantity of alluvial gold extracted in Honduras and has been the symbol of nuggets and legends about the yellow metal. The first exploiters of gold in the area were Spaniards during the colonial period. They built a number of gold deposits, some of which are still productive today. During the dry season of Central America, local Honduran artisans search for gold in much of the Guayape River, including the mountainous regions of the Patuca River (into which the Guayape feeds). The rises and dips of the valley and mountain system that cross Honduras from northwest to southeast pronounce the topography of the area. The rivers flowing down from the mountains to the sea are heavily rich in alluvia and feed the agriculture and fishing industries in the region.

Eurocantera S.A. de C.V. and Barro Mining Company

In 2003 Gold was looking for alternative sites to expand its cement and concrete business. Honduras emerged as a candidate site for its resources, location, infrastructure for transportation, and financial advantage. Gold later decided that it would take too much time and resources to break into the highly structured cement industry and achieve financial breakeven of the Honduran project. The market and country analysis had been fruitful, however, since Gold recognized other entrepreneurial opportunities in Honduras. The company realized that the iron ore mining was a good fit for Gold's interests and capabilities. To diversify their investments and utilize their fixed assets in Honduras, Gold entered into gold mining in Honduras with the foundation of the mining subsidiaries: Eurocantera and Barro Mining Company (see Exhibit 4 for the location of the mining sites).

With the constitution of Eurocantera Goldlake started its activities to perform research, exploration, and exploitation authorized in 10,500 acres along the Guayape River in the municipality of Juticalpa, in the department of Olancho. Goldlake appointed Alessandro Murrone as the regional area and Eurocantera manager and started exploration in November 2003. In parallel to Eurocantera's activities, Goldlake considered the Barro concessions that were counted with a long mining history as another potential site for exploration. In 2003 Goldlake purchased the Barro concessions and started Barro Mining Company to perform authorized exploration for 9,400 acres in the municipality of Danli in the district of El Paradiso. Later Goldlake would focus on the Guayape River and Eurocantera's operations.

To fund its exploration and later exploitation in Honduras, Goldlake opened headquarters in London, UK to seek financing from UK banks since the Italian government had no direct trade legislation with Honduras. The UK office could build these relations steadily under UK-Honduras international trade laws.

Eurocantera Gold and Sustainable Mining

Goldlake contemplated design for sustainable mining in the working plans of Eurocantera. From the very early stages of exploration Eurocantera's strategy for sustainable mining was to instill environmental and social consciousness with the core of mine development. However, the concessioned areas counted with little geological information and a base line to plan an eco-sustainable industrial project; therefore, while Eurocantera was mapping the mineralized zones, taking samples in flourishing zones and trenches, building internal access roads and drilling to determine the depth of the mineralized body, it prepared an environmental impact study and monitoring plan and completed a technical and socioeconomic feasibility study of the project. With the environmental impact studies, Eurocantera established traps for sediment control in the exploration stage.

In parallel to geological site selection process Eurocantera's social feasibility study on the mining communities considered the socioeconomic factors of the mine. The company reached out to local communities and started observing and learning about the existing efforts of gold dredging from the independent local artisanal miners that operated inside the company's concessions. The Eurocantera management determined beforehand the likely effects of development on normal evolutionary processes within the community (the way of life, relationships, behavior, and social resilience); the likely participation of local people in the mine project; and the potential project benefits to and any negative impacts on the community. The community involvement was essential to Eurocantera to build trust and a common goal for the growth of the mine.

While large mining companies invoked macro-economic benefits from mining in the region, the 'traditional' profit maximizing behavior determined a rapid and resource-inefficient extraction method of the mineral deposit that conflicted with the environmental and societal imperative of Goldlake's approach.¹⁸ As a junior and private mining venture, Eurocantera not only complied with all applicable laws and regulations in Honduras, but also realized that the license to operate depended on their concern for the welfare of the local communities in and near its operations. To demonstrate their commitment

¹⁸ Caceres, M. Mining is no model for Honduras. *Honduras Weekly* August 18, 2011.

Eurocantera appointed managers to become a part of the communities they served, not annual reporters of good deeds.

Mining in the Guayape River

In 2006 on its arrival to the department of Olancho, Eurocantera found in its concessions, groups of artisanal miners who, with much difficulty and few results, extracted gold with rudimentary tools to secure a meager living. In the traditional extraction process, the miners filled a wooden pan with a shovel of alluvial river deposit and cleaned with river water to wash away the sand and, hopefully, reveal a glistening nugget or flake of gold (see Exhibit 6.a). Many workers spent hours a day in the water with a wooden pan and searched for gold, except in the rainy season, as long as there was daylight. This traditional process was inherently very labor intensive with low productivity. In addition, uncontrolled and invasive extraction by dredges had left the river without much gold free on the surface and consequently the local community with a low salary. Upon collecting the gold particles, the workers with no representation haggled over price with a local merchant. Because many lacked the production size, they usually could not negotiate effectively with the local mediators and did not receive a fair price for their work.

After a thorough investigation and cooperation with the groups and institutions such as Honduras' mining regulatory authority, Defomin, and the municipality of Juticalpa, Eurocantera considered a community-inclusive business model empowering local workers. An artisanal mining cooperative was established to legalize and improve the production of the gold workers. The cooperative provided the workers with negotiation rights on their working conditions and trade price. Pedro Castillo, site manager, served as the mediator between Eurocantera and the cooperative at the mining site. Through these negotiations the company agreed on a fixed purchase price with the cooperative management. This way, the miners were able to commercialize their products without mediators and obtain all the necessary permits requested by government and local laws.

With an organized workforce Eurocantera operated on the Guayape River. The Eurocantera's extraction process on the Guayape River was simple and natural (Exhibit 5). Eurocantera mimicked the traditional alluvial gold search process of the local artisans who had been using pans and water for many years (Exhibit 6). The cooperative's input was labor, knowledge and expertise of extraction sites. Eurocantera scaled the production methods of the local artisans with technology. The capacity could be increased easily by fitting as many workers as possible along the Guayape River within Eurocantera's concession; however, the traditional gold search with a pan was not efficient. To improve operational

efficiency and productivity Eurocantera introduced adaptable process improvements that easily fit in with the current extraction process of the local artisans.

Some of the technological improvements were simple, yet highly effective, and built from observing how the miners worked for ease-of-use and adaptability (Exhibit 6). First, Eurocantera introduced the use of mats and channels, which trapped heavy particles, to replace their panning technique and also to keep the workers out of the water as much as possible (Exhibit 6.b). Secondly, Eurocantera developed a Heavy Particle Concentration (HPC-10 ExtracTec) mineral separation technology and built a machine that allowed a cost-effective gravity separation of materials of differing densities (Exhibit 6.d). The machine was used with artisans working alongside the river. Lastly, the company purchased an excavator for the local workers. The artisans had been mostly searching the surface of the river because they could not dig deep into the river bed, where the alluvial gold had been settled for years. The excavator could easily dig out the earth and the artisans could filter the soil with river water (Exhibit 6.e). Eurocantera trained local workforce to operate the machinery. The cooperative was not charged for this service and if bad weather stopped operations, machines' unused hours were on Eurocantera's expense (Exhibit 7). Only the maintenance and diesel fuel costs were reduced from the cooperative's earnings.

The new technology and organized workforce improved the efficiency of the gold extraction remarkably by better utilizing each work area on the river bed by investments in cooperatives. The mining activity started generating revenues up to ten times higher than the national average, and the Eurocantera's agreement with the cooperative enabled the mining groups to manage the revenue from the sales of gold and minimized risks for them. Thus, the cooperative integrated the local workforce with the mine's production system and productivity targets. In case of low production Eurocantera absorbed expenses without charging cooperatives. The extraction process built by Goldlake for the cooperative reached a daily capacity of 100 grams. The local miners who operated inside the mine's concessions supplied almost one third of Goldlake's daily gold output of 450 grams.

Murcielago Industrial Plant

The remaining 350 grams of Goldlake's daily gold output were obtained from the excavation process on the peninsula, which used to be the river bed until the Guayape River changed its course over the years. The alluvial terrestrial deposit soil from the peninsula was carried to nearby Murcielago gold production plant. The plant had the mechanized separation, sorting and chemical-free washing stages, with their purpose similar to the operations at the river (Exhibit 8). Through these stages gold was separated by a combination of water and the relative weight of different materials. This natural extraction of gold

avoided any use of chemical substances (cyanide and mercury) although the process could be certified by ISO 14001.

The gravimetric concentration filtered with water at the end of these processes consisted of sand and gold particles (Exhibit 8.c). The process also generated gravel, sand, and small rocks as waste (Exhibit 8.d). Although these waste products could be considered as byproducts since they also had commercial value, the accumulated size was minimal for commercial sale. In line with its environmental sustainability thinking Eurocantera searched for a later use for every single material generated on the production grounds. Thus, the company donated these byproducts to the local villages for the construction of roads and buildings. This, in return, helped the company with its target of zero waste from the mine and its processing facilities.

The gold mining required high volume of water in different stages of the production process. The gold production at the Murcielago plant was no different. It demanded high volume of water for natural separation and cleaning at different stages. To reduce the water usage Eurocantera engineered a closed loop water system. In this closed loop system the water was pumped from a nearby water reservoir with pipes to the plant, and some of which flowed back to the reservoir in pipes at the end of production to reduce any potential erosion caused by water transportation. Some of the remaining water was diverted to the nearby farms in irrigation projects, which had no access to the reservoir. This zero-discharge water management system prevented the contamination of the local water supplies.¹⁹

The Refinery Process

Refining is an industrial process that transforms impure precious metals – chemically, physically, or by other means – to high purity precious metals. It adds great value to the raw materials and increases the profits from mining operations, but it requires investment in technology. This investment was not possible for the local miners, but Goldlake operated the Precious Metal Refinery, a joint venture with Italtrezioli Arezzo of Italy. With this experience for gold refinery the company invested in a precious gold refinery in Honduras. Consequently, this improved the final value of the gold extracted from the mining sites in Honduras.

All material entering the Eurocantera refinery was screened to ensure conformance with a strict set of quality criteria and its statement of provenance. The refinery used the “Aqua Regia” - a mixture of hydrochloric and nitric acid - to purify gold to a quality required by luxury jewellers. The average gold

¹⁹ Kaye, L. Jewellery manufacturers and retailers confronting water issues. Retrieved August 31, 2011 from <http://www.guardian.co.uk/sustainable-business/jewellery-manufacturers-water-issues-gold-mining>

bars by Eurocantera's refinery process consisted of 70% gold and 30% silver. In addition, the byproduct of the refinery process had silica that contained gold dust. This was still valuable to Eurocantera, so the silica pieces were smashed into tiny particles and sent back to the Murcielago plant to extract the remaining gold dust. Although the regulations in Honduras were not as strict as EU regulations, the refinery met all relevant European health, safety and environmental certifications and was under evaluation to be certified by Responsible Jewelry Council in 2011.

Environmental and Social Responsibility

In line with its efforts to generate a lasting positive impact on the environment and local community Eurocantera focused on community involvement, health, and environmental protection.

Community Involvement. Akin to its on-going relations with the local community Eurocantera appointed Miguel Izaguirre to develop, monitor and sustain close relations with the community. Miguel was well involved with the community affairs, and managed community relations by addressing the infrastructure, health and education needs of the regional community. As a result of these interactions Eurocantera worked with the local municipalities, invested in infrastructure to improve the living and working conditions of the community, e.g. the construction of rural roads and sinking wells for potable water, and delivered various social projects, e.g. opening a new chapel in the village of El Encinal, adult learning classes and youth literacy campaigns to reduce the level of illiteracy, the organization of annual festivals for kids, and celebration of miners' day.

Health. As a part of its labor responsibility, Eurocantera established a health clinic with a permanent doctor to provide medical assistance for the employees as well as all of the members of the surrounding local communities. The regional community, regardless of working for Eurocantera, had full access to the company's health clinic. In addition, Eurocantera participated in the prevention of the tropical fatal disease, chagas, by organizing a fumigation program with the Honduran Ministry of Health.

Environmental Protection. During the excavation phase Eurocantera approached the environment with great care to reduce the impact of the mining operations. The company continuously searched for improvements towards new goals for mitigation of disturbance to ecosystems and natural habitats. These involved a careful planning of collecting nutritious top soil from the mining area for future reforestation efforts, cutting down trees only if it was crucially required and in the path of excavation team, and planning for the landscape and forest rehabilitation after the completion of mining operations. Eurocantera's *practical plans for closure* involved recovering the tropical forest with local endemic plants

and trees and turning the mining site into a vacation resort. The company set up nurseries to have tropical plants ready at the closure of the excavation sites and planned for the future land use.

Goldlake/Eurocantera Honduras (B)

Mine-to-Market: Gold Supply Chain

Giuseppe envisioned Goldlake's business to create value and to positively contribute to Honduras economy, which could become the base for future investments. To build and breed an entrepreneurial business in the mining industry, Giuseppe used modern technologies to protect the environment in Honduras and complied with the "best practice" in corporate responsibility. This created Goldlake's production of alluvial gold while protecting the environment and sustaining local communities.

Amidst competitive market different stakeholders of the jewelry supply chain were showing the first reactions and the willingness to comply with the new trends. Also, sustainable consumerism could be carried to ensure compliance with ethical and sustainable rules and procedures as long as consumers were made aware of the issues behind their purchase. For example, a study, conducted by GfK, one of the world's largest independent research agencies, in the United States indicated that 88% of the jewelers surveyed had either asked for or received guarantees from their suppliers that all the diamonds they purchased from those companies were conflict-free. Further, the survey proved that educational efforts had played a role in helping to eradicate conflict diamonds from the legitimate diamond pipeline.

As focus shifted from price competition to social responsibility, manufacturers and major mining companies took initiatives for "No Dirty Gold". Major mining companies (e.g. AngloGold Ashanti, Newmont Mining, Placer Dome) started their "social responsibility" initiatives by defining a number of principles to address issues of social and environmental responsibility. Council for responsible jewelry was established in 2005 with the purpose of setting up an independent system to improve "ethical standards" in the industry. The council including large mining companies, refiners (e.g. Argo-Heraus, Metalor), manufacturers, wholesalers (e.g. Robert Coin), and retail (e.g. Tiffany, Zale, Cartier) created the "Golden rules" of social, human rights, and environmental criteria for more responsible gold mining.

However, in the competitive gold industry the gold supply chain from mine to retail was very fragmented and involved many stakeholders which made the achievement of a fully sustainable supply chain a difficult task. As the gold industry and consumer's valuation of products and services were changing, Giuseppe and Daniela were aware of the need of a chain of custody in gold. They targeted to turn Goldlake into a leader in the industry of alluvial mining through the development of sustainable projects based on "No Dirty Gold" concept. The social identity of a company was now a major market

differentiator and a source of reputational and financial value. They were presented opportunities to create a gold supply chain of custody. Their thinking was on how to design and use the Goldlake's supply chain as an enabler for a more competitive position.

Goldlake/Eurocantera Honduras (C)

The Argentina Decision

Giuseppe and Daniela envisioned Goldlake's business to create value and to positively contribute to Honduras economy, which could become the base for future investments. Goldlake produced alluvial gold while protecting the environment and sustaining local communities. After Goldlake's mining business in Honduras with the purpose of social and commercial value creation, the management is now considering to develop other community-centered mining sites that will demonstrate innovative problem solving for sustainable development.

The project on Giuseppe and Daniela's table was a gold exploration site in Argentina, Soltera mining. Giuseppe and Daniela wanted to apply their experience with Honduras to Argentina. The management team followed Franco's vision in Honduras and realized that the Goldlake success would not only depend on the technological know-how and the supply chain, but also on the human aspect of their business. As much as they were happy with their achievements in Honduras, the Goldlake management was skeptical if they could repeat their success in South America. It had not been easy to diffuse into Honduran culture and adapt local workers to follow a strict work schedule with shifts. Argentina could pose different cultural problems for their operations as well since Gold had not initiated any ventures in South America.

Giuseppe was more curious about the human aspect of sustainability in Honduras. They did treat the local community well, but they did not have any formal procedure, rather followed their father's entrepreneurial vision and the family values of community involvement. However, competition in the gold industry was forcing them to scale their production immediately and Goldlake might not have much time to develop community relations in the Argentinean site. As Goldlake was getting ready to scale up its operations, Giuseppe thought about the founding principles of Goldlake (Involvement, Responsibility and Sustainability, and Integration). He wondered whether the social and commercial value a business could generate equally had its own limits. On one hand, they need to consider the operational/engineering part of mine development and design the Argentinean site with the human and environment aspects in the center of their design. On the other hand, he was thinking about how the sustainability would affect the company growth. He knew that they were on to a new and challenging opportunity. He looked at his watch and decided that when Daniela arrived, he would bring this up for discussion.

Exhibit 1. The Major Business Areas of the Gold Group.

<p>Finance: Gruppo Financo, which Gold had 25% stakes, controlled a relevant stake of Unicredit, the Italian banking and financial services group. Gold also controlled 50% of Nextrend, a holding company that owned 3.25% of Charme Investments, an investment fund which included Poltrona Frau and 50% of Axon Finance with stake in Ambienta Sgr.</p>	<p>Telecommunications: Gold owned WAVEMAX, a telecommunication company, broadband Wimax licensed Italian operator. The company also operated in the interconnection between operators, in particular in Wholesale. Gold also controlled Italia INNOVA, an operation that developed solutions for company services and process management, under the Italian Minister of R&D.</p>
<p>Construction: Gold controlled 25% of Gruppo Financo, the holding company of Colacem - the third largest cement and concrete producer in Italy. Gold also owned Sirci Gresintex S.p.A, one of the leaders in the production of PVC pipes in the Italian market. Sirci was a particularly dynamic enterprise that had been among the first in Europe to develop new and innovative technologies in a typically traditional sector. Gold also collaborated with Rigel, a company operating in the area of plant engineering, specialising in water and gas pipelines.</p>	<p>Mining: Gold controlled Goldlake Group, an investment company in the gold mining sector, headquartered in Italy and in London, which owned the major stake of three junior mining companies in Honduras: Eurocantera, Barro Mining Company, and Agalteca Mining.</p>

Source: Company.

Exhibit 2. Key players for Goldlake Group.

GOLD	Goldlake Group	Eurocantera	Precious Metal Refinery	Cartier	Catholic Church, Honduras
Family holding company of Franco Colaiacovo, founder of Colacem – the 3 rd largest cement company in Italy - and majority owner of Goldlake.	Joint venture between GOLD and ARAL (consultant company that owns a stake of 20%)	Gold mining subsidiary of Goldlake Group (Goldlake also owns an iron ore mine [Agalteca Mining, Honduras], and an exploration gold project in Argentina [Soltera mining]).	Joint venture between Goldlake Group and Italtrepreziosi Arezzo, Italy.	Paris based global uber-luxury jeweler	Supported Goldlake to the Eurocantera opportunity of development
Franco Colaiacovo (entrepreneur, businessman and innovative engineer)	Giuseppe Colaiacovo (CEO and board member; entrepreneur)	Alessandro Murroni (Regional Area and Eurocantera manager)	Daniela Colaiacovo (Board of Directors)	Bernard Fornas (CEO of Cartier)	Oscar Rodriguez Maradiaga, Cardinal and Archbishop, Tegucigalpa
	Daniela Colaiacovo (MD and Board of Directors)			Pamela Caillens (head of sustainable development)	
	Arnaldo Massini (Board Member)			Hacine Nawal (current head of sustainability; not involved in original story)	

Source: Company.

Exhibit 3. 10 Charter of Values.

1. Respect for fundamental human rights

To guarantee every employee and partner a common platform of rights so that all can prosper equally.

2. Transparency

In all working relationships, so as to deliver projects and relationships of based on mutual trust.

3. Correctness

In all actions and activities of the Group so as to deliver relationships based on respect.

4. Inclusiveness

Active and open dialogue in the way in which activities are conducted so as to make all company objectives shared mutually pursued.

5. Distribution

Fair and appropriate sharing of the successes of the enterprises of the Group with all partners and shareholders.

6. Environmental Protection

A commitment to support appropriate initiatives which contribute towards sustainable development.

7. Ongoing Training and Education

Through constructive spirit professionalism and competencies are submitted to everyone.

8. Innovation

Continual search for solutions and opportunities to continually of improve processes and products.

9. Quality

A cultural commitment by all involved, at any level in the Group's activities, to deliver the best.

10. Internationalization

To deliver, in any market, activities for the benefit of the Group in-line with the company culture and values.

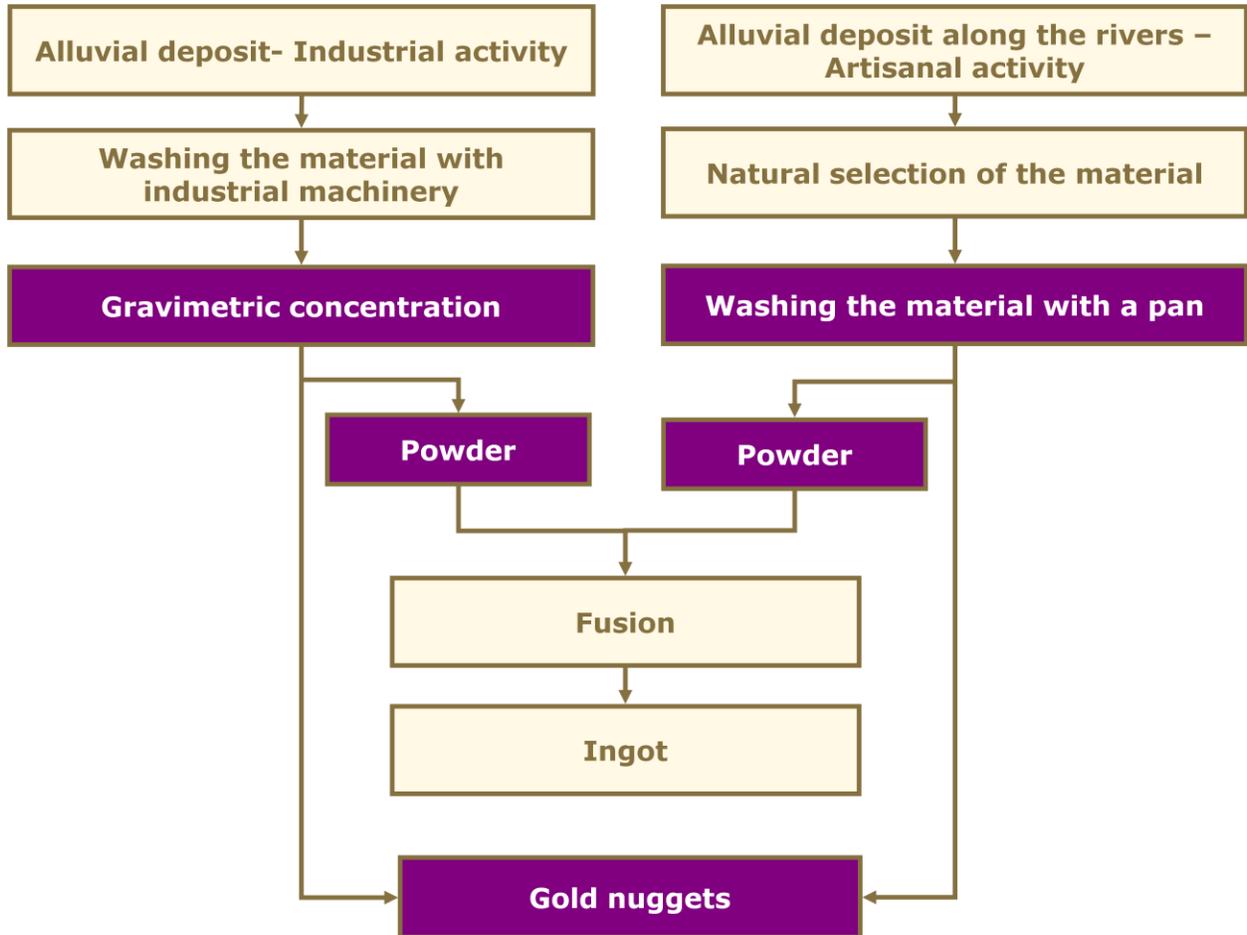
Source: Company.

Exhibit 4. Eurocantera and Barro Mining sites.



Source: Company.

Exhibit 5. Natural Gold Production Process.



Source: Company.

Exhibit 6. Mining in the Guayape River



a. Panning in the river.



b. River mats and channels.



c. Mining site on the Guayape River.



d. HPC-10 ExtracTec.



e. Excavator at work.



f. Excavator digging out the river bed.

Exhibit 7. Eurocantera's Technology and Equipment Investments

Cooperatives		Murcielago Production Plant	
HPC-10 ExtracTec	\$34,825.57	Machinery and equipment	\$1,355,473
Excavator	\$53/hr	Electrical Equipment	\$148,854
Channels and mats	\$500	Transport Equipment	\$543,809
Pick Up Vehicle	\$25,000		

Source: Company.

Exhibit 8. Muricelago Production Plant



a. Digging the alluvial terrestrial deposit soil.



b. Prevention of deforestation.



c. Washing the alluvial soil with machinery.



d. Production byproducts of sand and gravel.



e. Filtering the alluvial concentration.



f. Final product of gold dust with sand.

Pictures: © Sinan Erzurumlu.