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Este boletín en Español

Number 9
Bogotá, December 9th 2008

Pillars of Colombia's Mining Policy:

1. Mine Resources Management
The Ministry of Mine and Energy seeks to improve the mining institutional effectiveness, in order to be perceived as a stronger and more responsible institution.

2. Improvement in the productivity and competitiveness of the Mining Sector
—Small local scale Mining—.
The Ministry of Mine and Energy, aims for a more profitable, organize and safe mining development. It is working for the harmony and balance of the mining development with nearby communities to the operation area, including ethnic groups. Also, working hand by hand with the environmental authorities inspires the mining development to prevent and minimize the environmental impact.

3. Advertisement of the Mining Country
The Ministry of Mine and Energy, searches to strengthen the bonds of trust with companies, investors and the international and national banks, to facilitate the dialogue with experts on international mining knowledge and create new opportunities for the development of the mining industry in Colombia.

Strengthening the plan of information and communication technologies of the colombian mining sector (2).

As it was explained in the previous bulletin, one of the fundamental strategies to improve the efficiency and effectiveness in the model of response for mining users, is to apply the latest generation information and communication technologies to be able to back up, not only the main mining procedures, but also all Mining Public Policy objectives.

Therefore, the Ministry of Mines and Energy signed in May 2008, a Cooperation Agreement with the Javeriana University's Geophysical Institute to formulate the Strategic Plan of Information and Communication Technologies of the mining sector, which was developed in five (5) stages:

Definition of the technological horizon and profile (1).The requirements and challenges that are faced by the Colombian mining sector and its intention to evaluate integrally its needs in relation to ICTs, contrasts with the accelerated technological changes and all social and economical impacts that generates as a consequence. "ICT's great influence to improve competitiveness and economic wealth needs to be analysed in relation to the public sector's activities".

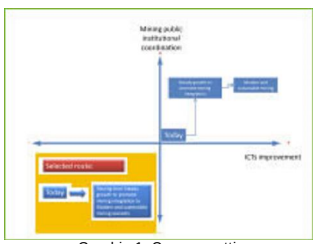
As a result, it is important to point out that "only by strengthening investment in ICTs, looking to redefine concepts effectively, the public sector would be able secure innovation and empower knowledge to increase competitiveness and social and economic wealth".

Selection of desired alternatives and Gap analysis (2). To design the ITCs formulation plan, by applying the methodology of technological foresight and the cross—setting technique, according to the 2009—2013 planning horizon.

All experts who attended the analysis workshop decided consensually two scenarios:

• Steady growth to promote mining integration (2009—2011)
• Sustainable and Modern mining Industry (2012—2013)

Each of these two scenarios is graphical referenced on a Cartesian or cross—settings plan to identify its relative position in relation to two principles, as followed:



Graphic 1: Cross—setting
Source: Javeriana University's Geophysical Institute

The previously mentioned critical route has two fundamental meanings:

1. To move ahead from the scenario "today" to reach the goal defined by 2011 meaning that there is a significant change in respect to: Mining public institutional coordination and an improvement in the appropriation of ICTs.

"One of the sectors in Colombia that attracts more foreign investment is the mining sector"

Hernán Martínez Torres
Minister of Energy and Mines

2. To move ahead from the scenario "Steady Growth to promote mining integration" towards "Sustainable and Modern mining Industry" by 2013, showing that there is an important advance, therefore, a substantial improvement in the appropriation of ICTs.

Once the definition of the technological profile, the technological horizon, the selection of desired alternatives and the Gap analysis are completed, three key conclusions could be drawn:

• Identification of high—priority technologies for Colombian mining institutionality • Identification of key processes for Colombian mining institutionality, and • Construction of the strategic route 2009—2013.

Layout Plan (3). This turns out to be a unique opportunity to build a technology—based initiative for the benefit of the Colombian mining sector, by promoting the acquisition, adoption and use of ICTs to improve Colombian mining institutionality's abilities. It has been forecasted that a time horizon of five (5) years (2009—2013) will be needed to develop a strategic route that will make possible not only to establish a more innovative future development for Colombian mining institutionality, but to go beyond a simple transformation plan; in other words, to achieve a state of rupture with respect to the current situation and in favour of its future state.

The elaboration of a strategic critical route allows to identify during the planning horizon 2009—2013, the most adequate scenario so that the Colombian mining institutionality will promote sustainable development of the mining activity, the development of competitive and comparative advantages including, the strength of capacities and institutional competences, a greater international visibility and a promotion of new innovative business models for the benefit of the Colombian mining activity, due to the appropriate, adequate, and opportune appropriation of ICTs.

The critical route has been designed as a path demarcated by five periods, that correspond to one of the five years predicted in the planning horizon 2009—2013. These five periods are:

The foundation period has the intentional strategic purpose to create a sufficient and appropriate environment in favour of the development of abilities for the Colombian mining institutionality, aiming to adopt world class modern practices, that will as a consequence produce an effect of "takeoff" set against all current limitations: the availability, advantage and publicity of key processes for the Colombian mining institutionality.

The coordination period, represents an elaboration of structures around critical processes identified for the Colombian mining institutionality, so that its management abilities can be carried out co—ordinately.

The growth period, represents a phase of critical Colombian mining institutionality evolution, because it takes for granted the fulfilment of the missionary objectives, even though today are applied incipiently, due to the lack of opportune and quality information, as well as the precarious number of specialists and workers that are able to attend the users

The consolidation period, represents the Strategic Plan of Information and Communication Technologies' intention, to capitalize all the achievements fulfil during the previous periods of evolution, as it goes beyond the needs, developing new abilities, due to the coordination already achieved; evidencing a scenario of medium maturity to promote the conditions for the appropriate management of knowledge, innovation and even a better assertiveness in the decision making process, due to the appropriation of solid managerial information systems.

The fifth and last phase called expansion, according to the Strategic Plan of Information and Communication Technologies, shows the progress in the adoption of new abilities by the Colombian mining institutionality. Hence the excellent use of the latest information and communication technologies allowing them to integrate to the global market. As well as to adopt better and greater abilities be able to face the challenges and future demands of the Colombian mining sector, due to the efficient use of information and knowledge.

The foundation, coordination and growth periods correspond to the first segment of the Strategic Plan of Information and Communication Technologies' critical route, which is essential to achieve the scenario ÒSteady growth to promote mining integrationÓ where its central

principles of development emphasise the importance of reinforce coordination between the Colombian mining institutions. This could only be achieved if substantial improvements are made in order to adopt new information and communication technologies. In a metaphorically way, it could be compared to an airplane fight, where the development strategic phase propose by the Plan of Information and Communication Technologies, represents the taking off of the airplane (with a clearly define flight plan), counting with the ideal conditions during the takeoff and initial ascent, allowing the plane to reached the necessary conditions to face the most advisable challenges considered in the critical route established on the Plan of Information and Communication Technologies. This obviously signifies that the Colombian mining institutionality must go beyond the limits of a mediocre development or a mere transformation.

The other phases: consolidation and expansion are part of the second segment of the critical route established on the Plan of Information and Communication Technologies will allow achieving the scenario "Sustainable and Modern mining Industry" where its central principals of development refers to the appropriate adoption of the latest advantages in information and communication technologies. This is possible, due to the execution of a previous phase of development that as a consequence has improved the coordination between Colombian mining institutions, gaining a greater capacity of manoeuvrability to improve the use of the ICTs, increasing the abilities and performances in each of the dimensions and missionary objectives of the Colombian mining institutions. To express it metaphorically, we are taking back the example of the airplane flight mention earlier, witch after achieving the ascent to a convenient height; it will continue flying at cruising speed, which means that it would have to fly at a faster constant speed during the following years of development propose, to follow the strategic critical route proposed by the Plan of Information and Communication Technologies. The result after five years of vertiginous improvement guarantee that Colombian mining institutionality will achieve a future scenario of rupture set against the realities that characterize its present situation.

(1) Strategic Plan of Information and Communications Technologies for the Colombian Mining Sector — Javeriana University's Geophysical Institute — September 2008.
(2) IDEM
(3) IDEM

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