

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Applications, Societal Challenges and Economic Benefits (5)

Author: Ms. Oksana Grigorieva
JSC Glavkosmos, Russian Federation, oksana.grigorieva@glavkosmos.ru

Mr. Mikhail Serov
JSC Glavkosmos, Russian Federation, mikhail.serov@glavkosmos.ru

NEW COMMERCIAL APPROACH TO MONITORING CONSTRUCTION FACILITIES BY USING
VALUE-ADDED SERVICES BASED ON EARTH OBSERVATION DATA

Abstract

Earth Observation (EO) technologies are an indispensable tool for study and continuous monitoring of our planet, helping to effectively use and manage its resources. Modern development of remote sensing technologies expands the scope of their application, covering all aspects of our lives, work, home and family. Offered by Glavkosmos company the innovative value-added services based on EO data allow to evaluate the business activity of building companies in order to provide an information support to financial and investment enterprises that are taking part in construction of large objects. The information about business activity during construction is used for different purposes: in scoring models of banks, insurance and investment companies to determine insurance rates and investment risks; allows to get an objective assessment of the activities of economic entities; accelerates and simplifies the work of credit institutions operated with land assets and real estate; helps to control the target expenditure of allocated funds; improves the quality of management decisions in investment and lending. Monitoring of business activity of construction companies can be organized with different details and frequency – from preparation stage and excavation to commissioning and maintenance. Using satellites images allows to estimate the volume and pace of work during the construction process, in particular, the amount of concrete reinforcement, levels of drilling excavation, amount of stored materials, how many cranes, excavators, etc are onsite and how active they are. During the pre-project phase of construction, EO data helps to choose the most suitable territory for construction site, taking into account the specified selection parameters. Using actual data from space makes it possible to have up-to-date information about transport hubs and routes often identified not by outdated official maps, but by the latest space images in relation to facilities under construction. Modern workplace of project manager requires all necessary data to be at hand at any time. Our integrated information analysis tool allows to monitor all units which are being built anywhere in the world, providing the actual information on construction stages and readiness of the objects. This vital data is not associated with paper reports and generated automatically by analyzing satellite images. Using innovative methods for monitoring construction facilities based on objective EO data and value-added services is the new commercial approach to rational consumption resources and time spent to the project implementation.