Education. Russia’s Answer to Big Challenges

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SUMMARY

Big challenges are the set of the problems, threats and opportunities, the complexity and scope of which do not allow them to be effectively handled exclusively by increasing input of resources. The big challenges are identified in the Strategy for the Scientific and Technological Development of...
the Russian Federation. The answer to big challenges implies development and introduction of new approaches and methods in such technological areas as cognitive technologies, unmanned vehicles, logistics systems, smart city, big data, etc. The capability of a university to make a significant contribution to overcoming big challenges is due to the following components: a high level of training quality, availability of advanced facilities, application of modern educational technologies, integration with the real economy, and international cooperation. The capabilities of Russian education in the field of geodesy and geo-spatial sciences are shown by the example of Siberian State University of Geosystems and Technologies. The achievements of the university in educating students from different countries, establishment of international cooperation are presented. Special emphasis was placed on integration with the real economy. Different projects performed by the personnel and students of the university are presented. They cover such topics as infrastructure development of GNSS, laser scanning, photogrammetry and remote sensing, 3D and 4D modelling, development of geographic information systems, etc.