Kazakhstan Canada Business Council

Қазақстан - Канада Іскерлік Кеңесі

Kazakhstan Canada Business Council 4th Meeting
Report of the
Aerospace and Transportation Working Group, November 9, 2020

The transportation and aerospace working group opened the IV Kazakhstan Canada Business Council on the 12th of November. The meeting was co-chaired by Amanat Umbetbayev, Head of International relation's department, Aerospace committee, Ministry of Digital Development, Innovation and Aerospace Industry of the Republic of Kazakhstan and Yana Lukasheh, Manager, Government Affairs, Bombardier.

The Kazakhstani and Canadian space sector were represented by the following entities and businesses:
Aerospace committee, Ministry of Digital Development, Innovation and Aerospace Industry of the Republic of Kazakhstan, JSC "Kazakhstan Gharysh Sapary" National Company", JSC "National Center for Space Exploration and Technologies", Canadian Space Agency, MDA Corporation, GHGSat, Downsview Aerospace Innovation & Research (DAIR) and Kuehne+Nagel Inc.

The Kazakhstani and Canadian aviation sector were represented by the following entities and businesses:
EBRD, ICAO-IAC Project Implementation Commission and Cooperation with International Organizations Interstate Aviation Committee, Civil Aviation Committee, Ministry of Industry and Infrastructure Development, Department of Transit Development and Transport Logistic, Ministry of Industry and Infrastructure Development of the Republic of Kazakhstan, JSC "Aviation Administration of Kazakhstan", JSC "Aircraft maintenance plant No. 405", JSC "Nursultan Nazarbayev International Airport", JSC "Academy of Civil Aviation", Bombardier MDS Aero Support Corporation, AEM Corporation, Kehne+Nagel Inc, Huys Industries Limited, Centennial College, McGill University, Cursir, Sparrow Electronics.

1. Industry Sub Sectors: an overview of presentations by private or public sector

Kazakhstan continues to capitalize on its geographical position between the East and the West, its vast territory and aims to integrate into the international "One Belt" initiative. Though, there are certain roadblocks confronting smooth development of the transportation sector and highlighting investment needs. These are the most considerable:

- Weak sector regulation constraining the quality-of-service provision.
- Difficult geography limits economies of scale,
- Lack of user charges increases the pressure on state and regional budgets,
- Dominance of state-owned enterprises and limited private sector participation limits commercialization and leads to lack of investment,

- Underdeveloped operational and maintenance planning results in deterioration of even newly built assets.

EBRD's transport sector strategy in Kazakhstan for the period of 2019-2024 can be taken as a prerequisite to advancing further collaboration between Canada and Kazakhstan in the transportation and aviation sectors. The strategy is comprised of the following priorities:

- Decarburization and reduced vulnerability to climate change
- Promote private sector participation
- EBRD Project related reform to support market–based transport
- Improved innovation and penetration of new technologies
- Improved quality and connectivity of network infrastructure
- Electrification and use of cleaner fuels
- Improved capacity to address environmental, social and safety challenges
- Increased inclusion and equal access to transport infrastructure and services.

Within the working group, space and aviation sectors got the most attention. The discussions covered the following topics:

Space sector

- General overview of space development of Kazakhstan.
- Earth remote sensing system of Kazakhstan.
- Cooperation in Scientific technological direction with Kazakhstan.
- Canadian space companies and their global market expansion plans.

Aviation sector

- How to ignite the aviation cluster based on the Canadian experience.
- Certification of aircrafts in Kazakhstan.
- Human resources development programs in the aviation.
- Regulations applicable to the use of unmanned vehicles and drones.

2. Opportunities: Highlights of potential interest or cooperation

Space sector

On behalf of Kazakhstan, the following fields were proposed for cooperation:

- Realization of the signed Memorandum of understanding.
- Enhancing the practice of sharing experience in the field of scientific space research.
- Cooperation on using the possibility of the Assembly and test complex of spacecraft in the city of Nur-Sultan.
- Collaboration on the Missile Technology Control Regime (MTCR) issues.

On behalf of Canada, the following companies demonstrated an interest to expand their operations in Kazakhstan: MDA Corporation, GHGSat, Downsview Aerospace Innovation & Research (DAIR), Kuehne+Nagel Inc. and GHGSat Inc. The range of their products and services includes advanced surveillance and intelligence solutions, radar geospatial imagery, space robotics, satellite antennas, and communication subsystems, logistics solutions for major industries, innovation and research in space.

Aviation sector

The aviation sector-working group had objective to identify avenues of collaborations stemming from the growing industry in Kazakhstan. While it is progression and reform are under way to bring the industry to global standards and away from reliance on Russian technologies and minor manufacturing work of the Antonov 148 aircrafts, challenges remain.

Representatives of the Ministry of Digital Development, Innovation and Aerospace Industry of the Republic of Kazakhstan were represented and spoke to the current status of some of the projects on-going including ICAO, EASA, FAA Category 1 order and UK CAAi certification standards, operational for 2022. In lead up to this important milestone, the working group managed to identify areas of possible collaboration between local stakeholders and their Canadian counterparts. Below are technical, research and development opportunities areas identified for development:

Centennial College, McGill University and JSC "Academy of Civil Aviation" have all expressed interests in possible collaborations in the areas of education and learning within the aviation sector as a means for future growth. Training on simulation systems engineering, aircraft maintenance and skills training as a means to develop a generation of aerospace workers as a means to develop local capacity to a future industry will be key. Training and academic institutions can develop partnerships to further increase this local potential. For example, McGill University offered collaborations and capacity in management development transitioning into aviation for management positions through joint ventures to upgrade skills within the civil aviation institutions. Centennial College, through its Canadian experiences, can collaborate on providing aircraft maintenance training.

JSC "Aircraft Repair Plant №405" welcomes Canadian companies to collaborate on the field of helicopter modernization and maintenance including overhaul, repair, warranty, integrated logistics support and other services.

In addition, research and development opportunities were discussed for drone technology development. Although drone regulations remain a serious challenge in Kazakhstan, there is consensus to develop a joint project on evaluation the regulations that would be needed for future implementation in Kazakhstan. Issues of enforcement remain a challenge however for the Civil Aviation Authorities.

There is also an interest to pursue discussions into other areas including how the aviation cluster can leverage the Financial Centre in Astana as a means to attract competition into the country and create an innovation hub.

3. Road Map.

Further bilateral developments between Kazakhstan and Canada in the transportation and aerospace sectors will take place in various forms - match-making and consulting sessions, joint venues, business missions to Canada and to Kazakhstan, round tables, internship programs, forums, conversations, research sessions, focus groups, trade-shows, etc.

Transport sector

- Enhancing inter-regional connectivity and international integration of Kazakhstan.
- Decarburization of transport sector of Kazakhstan and reduced vulnerability to climate change.
- Innovation of transportation system of Kazakhstan and Canada. Penetration of new technologies.

- Transition to green economy: electrification of transport and use of cleaner fuels.
- Improved capacity to address environmental, social and safety challenges.
- Increased inclusion in the transportation sectors of Kazakhstan ad Canada. Equal access to transport infrastructure and services.
- Underdeveloped operational and maintenance planning results in deterioration of even newly built assets: best practices and human resources development in transportation industry.

Space sector

- Investments Realization of the signed Memorandum of understanding.
- Enhancing the practice of sharing experience in the field of scientific space research.
- Cooperation on the assembly and test complex of spacecraft in the city of Nur-Sultan.
- Collaboration on the Missile Technology Control Regime (MTCR) issues.
- Development of SCS «KAZSAT-2R».
- Creation of Kazakhstan's earth sensing satellites and high-precision satellite navigation system.
- Development of technology of reception, archiving, processing and remote sensing data.
- Set up of ground-space geodynamical and geophysical monitoring of Kazakhstan's Earth crust system, and also forecasting systems of mineral deposits.
- Development of the scientific-technological support of setting up the space- rocket techniques and space technologies in the Republic of Kazakhstan.
- Creation of Kazakhstani multilevel system of space weather monitoring and forecasting.
- Development of scientific and experimental base of astrophysical research.

Aviation sector

- Partnership development between Centennial College, McGill University and JSC "Academy of Civil Aviation": Training on simulation systems engineering, aircraft maintenance and skills training.
- Development of aviation cluster of Kazakhstan and leverage of the Financial Centre in Astana as a means to attract competition into the country and create an innovation hub.
- Better practices in operation and maintenance of aircrafts and helicopters: technologies reducing the cost, digitalization, data analytics and software development.
- Artificial intelligence, machine learning, cyber security, and cyber resilience in aviation.
- Regulations applicable to the use of unmanned vehicles and drones in Canada. Evaluation of regulations that would be needed for future implementation in Kazakhstan. Issues of enforcement for the Civil Aviation Authorities.