



Press Release ‘Sunflower’

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The Aviation Administration of Kazakhstan (CAAKZ), BusinessOptix, and gluonNet launch seminal aviation-tracking application called ‘Sunflower’

In collaboration with the Aviation Administration of Kazakhstan (CAAKZ) and BusinessOptix, gluonNet is developing a first-of-its-kind digital regulation system for the aviation industry. The aim of this innovative system called ‘Sunflower’ is to allow better management of aviation-related issues that require regulatory oversight, such as quickly verifying information, speeding up approval procedures, and stopping actions that are illegal or deceptive. An international and multidisciplinary team of experts conceptualised the system, taking best practices, risk management, and operational data into account. Using cutting-edge data-analysis methods, ‘Sunflower’ delivers the CAAKZ information about an aircraft’s position, flight task, and charterer. Altogether, the ‘Sunflower’ regulation system will help the Kazakh aviation authorities in monitoring aircraft and national airspace, investigating incidents, and preventing illegal activities, eventually making aviation safer and more transparent.

At gluonNet, data scientists and software engineers develop the aviation-tracking application up from scratch, including user interface, algorithms, satellite data decoding, and data visualisation. The integrated data-analysis technology, which is based on the latest insights from large-scale particle-physics research, constitutes the backbone of the new regulation system; it allows the processing, contextual analysis, and visualisation of vast amounts of aviation data. As proof of concept, the software processed 4 billion sets of civil aircraft location-data per month that were recorded via satellites in April 2019. Working closely with CAAKZ analysts, gluonNet tailored the software to their needs in terms of interactivity, customizability, and standalone usage.

In addition, BusinessOptix is creating a digital twin of the in Kazakhstan registered aircraft on their risk and performance management-platform, which will be implemented into the ‘Sunflower’ application in the following months.

gluoNNet is looking forward to continuing the fruitful collaboration and its efforts to develop and enhance the project even further.

A detailed video presentation of the ‘Sunflower’ project can be found [here](#).
The Aviation Administration of Kazakhstan's press release can be found [here](#).

gluoNNet is a big-data enterprise start-up founded by CERN physicists and finance experts. gluoNNet works across both nonprofit social enterprise and commercial sectors, providing tools that generate evidence-based analysis in order to facilitate effective and efficient decision-making.

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