



Multi-vendor Integration Enables Flexibility in Moscow's Tallest Modern Building

The JSC "Russian Railways" is a commercial enterprise constituted by the Russian Federation. Its new headquarters spans more than 53,500 m² (approx. 480,000 square feet), consisting of two towers of 18 and 28 floors. At a height of more than 110 meters, the new 28-floor building is the tallest commercial construction in Moscow.

Comfort Without Compromising Energy Efficiency

The Russian railway company wanted the building to be technically advanced and energy-efficient. A high level of user comfort, guaranteeing safety through incorporating the fire system into the BAS, the reduction of equipment maintenance costs, and system flexibility and expandability, were also high on the agenda.

Total Integration

The task of creating this technically advanced and energy-efficient building was entrusted to the ARMOGroup. The ARMO-Group is a member of LONMARK International and is specialized in providing engineering solutions for high-rise and large scale buildings, with a particular emphasis on total integration of all building systems within a Building Management System.

"After analyzing the customer's requirements, we had to weigh up different technological solutions relating to state-of-the-art intelligent building systems in order to opt for the most suitable solution. It was clear that only LONWORKS could provide the high level of flexibility, functionality and reliability required for a project of such scale", says Andrey Abramov, Technical Director of ARMO-GROUP.

Multi-Vendor

The Russian railway company building has been equipped with the most progressive building automation equipment from the world's leading manufacturers. Key sub-systems that have been integrated across the LONWORKS network include room control, HVAC, and automatic doors. To enhance user comfort, all rooms in

the building are installed with multifunctional control panels which allow all HVAC, sunblind and lighting conditions to be monitored and controlled.

The LONWORKS based weather station, installed on the roof, transmits data relating to air temperature, wind speed and direction, atmospheric precipitation presence and type, and outside brightness levels to the Building Management

System. This data is used to control the position of the blinds and adjust the heating and cooling conditions automatically on the VIP floors and in all conference rooms. LONWORKS based automatic doors are permanently controlled and monitored via the Building Management System. Furthermore, in all entrance areas, additional hot air is released when the automatic doors are opened.

This results in significant energy savings, as additional heating is only supplied when needed. This, in turn, also leads to a significant reduction in building maintenance costs. Another aspect of the building's energy saving strategy lies in electricity savings, with lighting and fan coils being automatically turned off when rooms are unoccupied. This has been achieved by connecting all light and fan coil controllers via LONWORKS to the Building Management System.

In order to detect occupancy, the Building Management System receives data from the access control system which, in turn, sends a command across the LONWORKS network to switch the room lighting on or off as appropriate.

This system integration and interaction has allowed energy consumption in the Russian railway company building to be reduced by as much as 25



percent. The ARMO-Group is especially proud of this installation, it being the first LONWORKS project of such scale implemented in Russia.

Key Benefits

- Energy efficiency based on outside weather conditions and occupancy
- High levels of user comfort
- Future-proofing and the ability to integrate other LONWORKS based services into the network

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