

# XR-Center

Complex for mass training  
using simulation technologies



# XR-Center

A system for mass training of healthcare professionals using virtual reality technologies.

The complex consists of many XR-Stations located remotely from each other at various educational sites of a medical institution, united into a single Smart system for integrated management and monitoring of the educational process.



## Main advantages

- Rapid adaptation of scenarios according to the recommendations of the WHO and the Ministry of Health of Russian Federation on COVID-19;
- Mass training of medical personnel in a pandemic;
- Practicing skills in emergency situations without risk to patients;
- Effective training in biosafety skills, diagnosis and treatment of COVID-19;
- A high degree of realism of immersion in the simulation environment;
- An innovative system of objective assessment of students' actions;
- Smart system for centralized management, registration and recording of sessions;
- Saving resources of the simulation center;
- Prompt technical support for users 24/7

## The system of automated complex objective assessment during the simulation session (according to the principles of OSCE)

- An automatic assessment is carried out for 5 compulsory blocks:
  - Interview;
  - General examination and objective examination;
  - Additional survey methods;
  - Diagnosis;
  - Treatment;
  - A specialized unit for assessing compliance with sanitary and hygienic standards and safety requirements when working with patients with suspected COVID-19;
- Data adjustment interface to comply with the current recommendations of the local ministry of health;
- Interface for quick adjustment of assessment parameters depending on educational goals and clinical guidelines;
- Cloud database containing a list of drugs, interpretation of examination results, correct sequence of student actions;
- Tracking each student's action and inaction to determine the final result;
- Time limitation of sessions depending on the duration and objectives of the exam



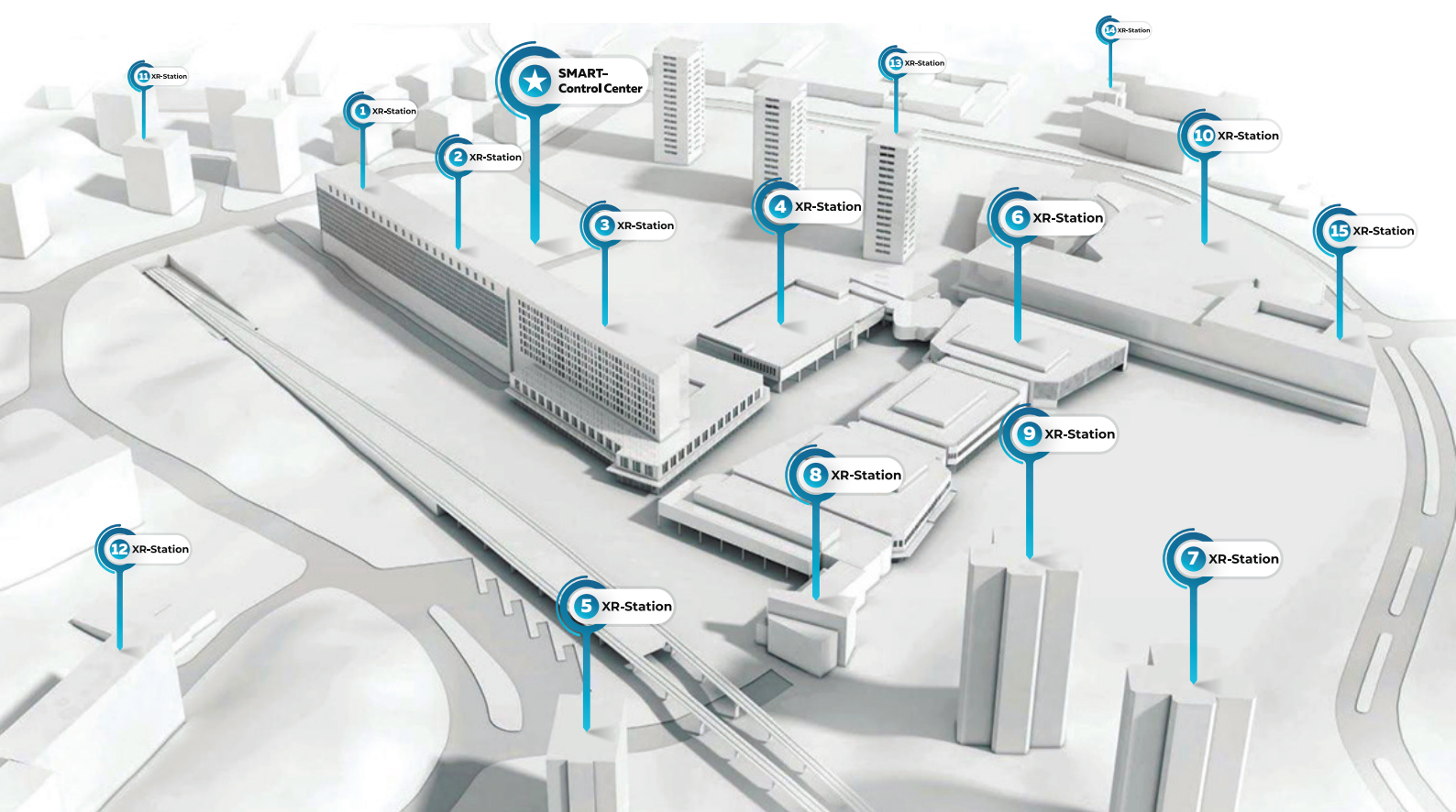
**XR-center** allows to ensure a significant reduction in the risk of infection in the process of training healthcare professionals (students, residents, doctors).

**The XR station** includes a set of highly realistic scenarios in virtual reality for practicing personal safety skills of medical personnel in the context of COVID-19, as well as diagnostics and treatment of patients with COVID-19.

- Physician's biosecurity when working with patients with suspected COVID-19, working with PPE;
- COVID-19 at an outpatient appointment;
- COVID-19 in intensive care;
- COVID-19 hospital;
- Possibility of upgrading / loading add-ons - new cases on topics other than COVID-19;
- Development of new cases for individual requests of medical institutions

### More than 100 clinical cases by specialties

- General medicine;
- Cardiology;
- Surgery;
- Functional diagnostics;
- Gastroenterology;
- Endocrinology;
- General medical practice (family medicine);
- Therapy;
- Pulmonology;
- Infectious diseases



## Smart System for XR Center

- User accounts;
- Storing records of sessions and results;
- Centralized monitoring of XR-station in real time;
- Remote video surveillance;
- System technical support;
- Assessment of the student's actions;
- Multiplayer simulations option;
- Centralized monitoring, management and control;
- Script editing and remote update interface;
- Synchronization with university systems through open APIs

Number of XR-stations being implemented

5, 10, 15

XR-center throughput

2 500 – 5 000 sessions per month

## The functionality of the Smart Center includes

- Display of XR-stations on the map of the university territory;
- Display of the state of the XR-center at a given time;
- Access to the history of the conducted sessions and statistics;
- Access to CCTV cameras in each XR station;
- Centralized access to student accounts

## Monitoring and Session Management System for XR Stations

- Distribution of student flows to reduce the risk of infection during epidemics;
- Automated collection of statistics linked to student accounts;
- Compactness, mobility, equipment hygiene;
- Availability of scenarios for teaching diagnostics and safety when working with patients with suspected COVID-19





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