

SYSTEM INTEGRATION:

IT SOLUTIONS FOR EPC



About ITPS in one page



The ITPS Group is one of the Russian market leaders in IT and management consulting, engineering and system integration within the large manufacturing company service provider segment.

> **12** YEARS EXPERIENCE
in successful projects
implementation



> **300** SPECIALISTS
with global
expertise



> **20** COUNTRIES
with project
references



> **400** MAJOR
PROJECTS



Implementation of integrated information systems and business applications (ERP, BI, SRM, ECM)



Implementation and integration of solutions aimed at performance improvement (MES)



Comprehensive industry-specific solutions "digital oil field" ("integrated operations")



Implementation of Enterprise Project Management Systems and Portfolio Management Systems (EPPM)



Management consulting



Design and development of engineering systems (telecommunications, communication systems, security systems, process control systems)

Our Customers



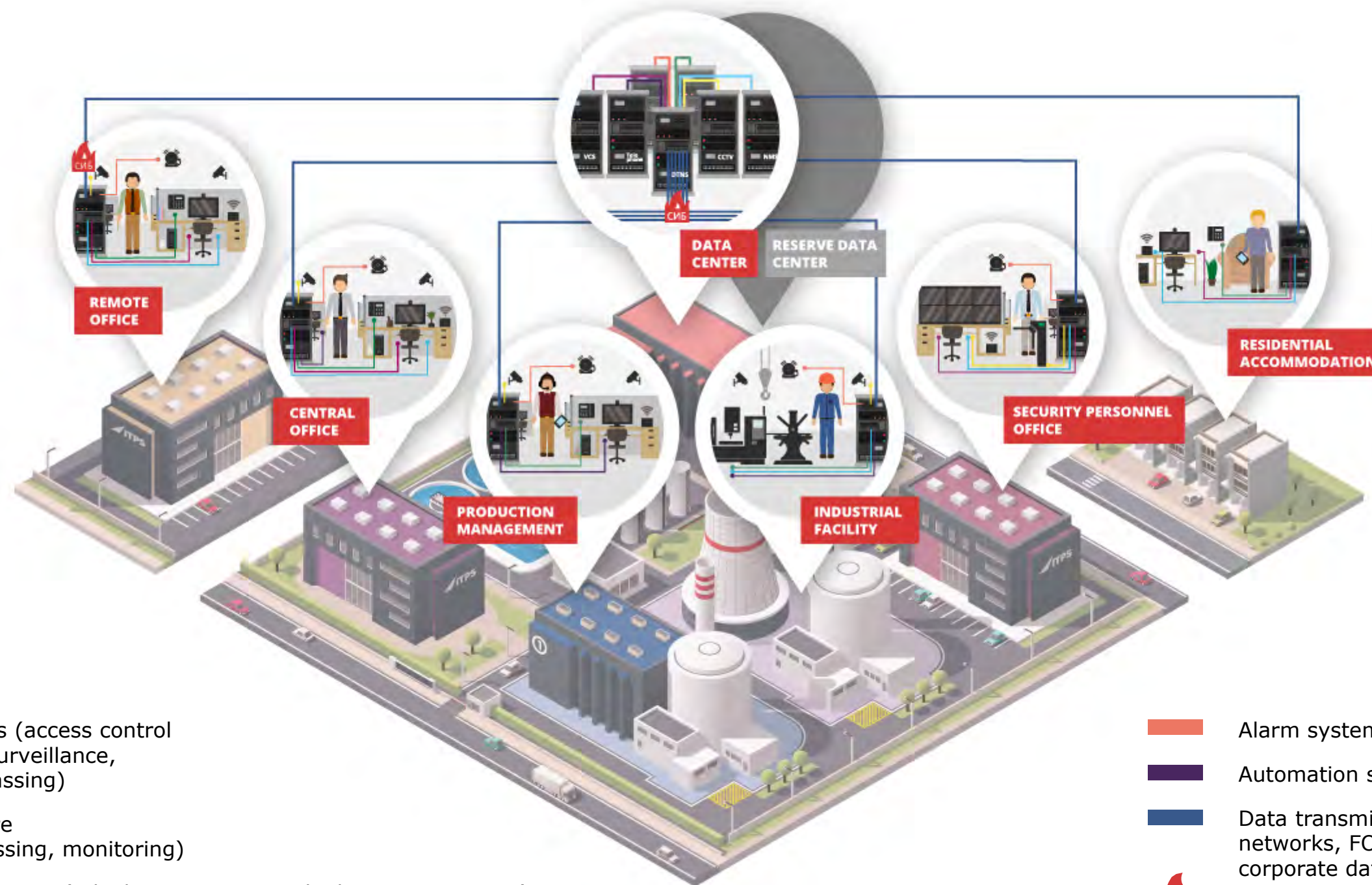
and others

Our Partners



and others

TYPICAL FACILITY STRUCTURE, ITPS SOLUTIONS



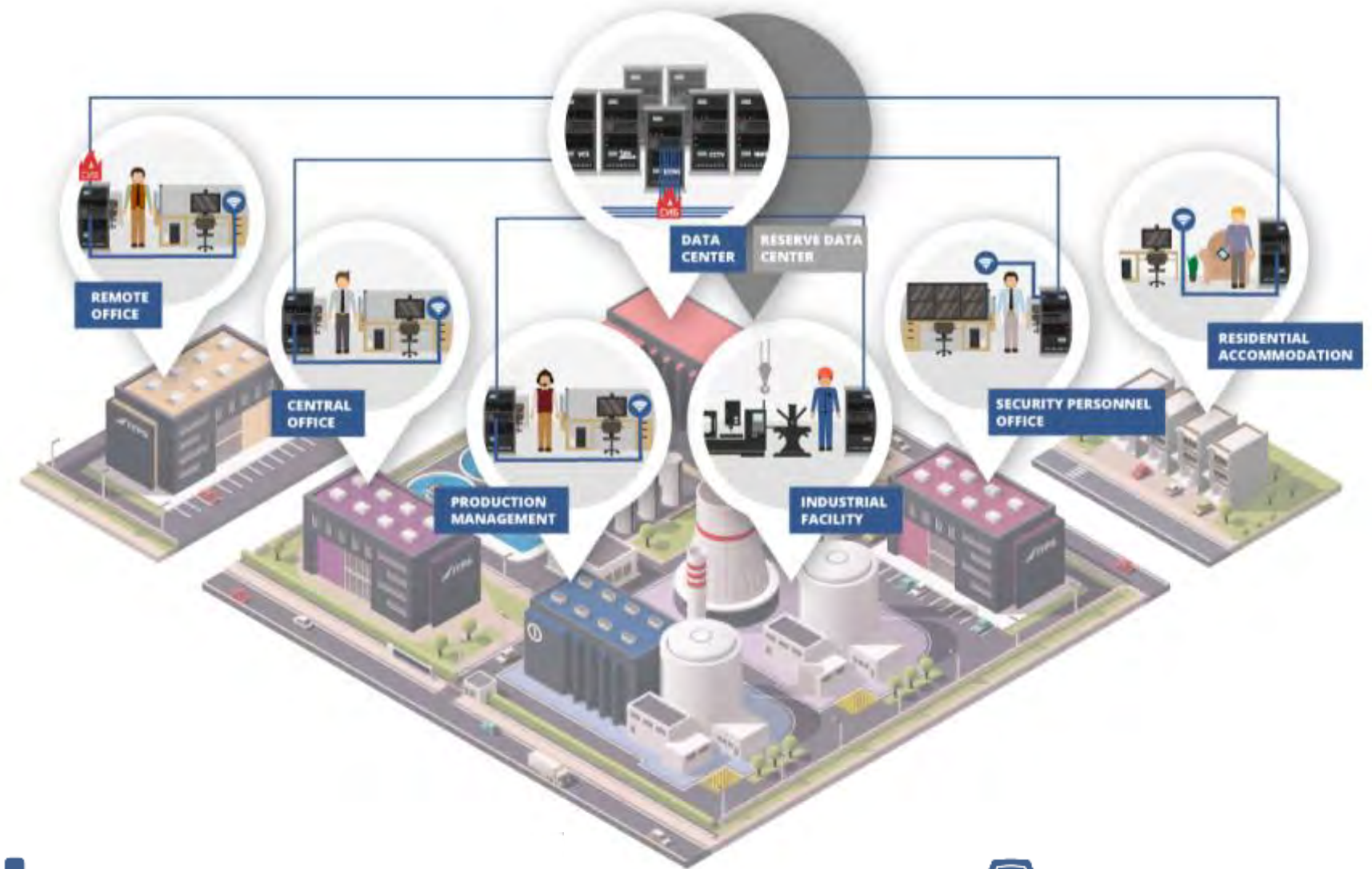
- Physical security systems (access control and registration, video surveillance, protection against trespassing)
- Data center infrastructure (data storage and processing, monitoring)
- Voice communication systems (telephony, DECT, trunked communications)
- Videoconferencing (VCS, Unified communication)

- Alarm system
- Automation systems (SCADA, MES, ESD)
- Data transmission systems (LAN/WAN networks, FOCL, satellite channels, corporate data transmission systems, Wi-Fi)
- Information security systems

DATA TRANSFER SYSTEM



Combination of co-operative devices for fast data transfer through communication channels using various physical media. New generation wireless networks for IoT and IIoT solutions.



Key IT system providing a medium for data transfer to all other systems



High availability hardware and software transfer media (software and hardware redundancy, selection of scalable and sustainable solutions)



Extensive list of supported network equipment producers



Highly scalable data transfer network



Highly productive systems of corporate information protection, encryption of data transferred via public data networks



DATA TRANSFER SYSTEMS BUILDING SOLUTIONS



Hardware and software complex
IoT and LORAWAN protocol-TECHNOLOGY of Internet of Things for industrial facilities

- Continuous monitoring and management of any type of device;
- Indications adjustment on the level of sensors and controllers;
- Collection and management of a large number of parameters;
- Ability to significantly reduce IT infrastructure costs and shifting to IaaS model;



Hardware and software complex
VSS (VIRTUAL SWITCHING SYSTEM)

- Increase of data transfer network fault tolerance;
- Increase of data transfer channels capacity;
- Hardware backup of central equipment and data transfer channels for shutdown-free maintenance



Hardware and software complex
CISCO PRIME MONITORING MANAGEMENT SYSTEM

- Centralized and effective management of wireless local area networks;
- Calculation and monitoring of wireless network coverage;
- Centralized system of user identification in wireless networks;
- Centralized protection system guarding against unauthorized connection to wireless network;



Technologies of
FIREWALL, ENCRYPTED VPN CHANNELS

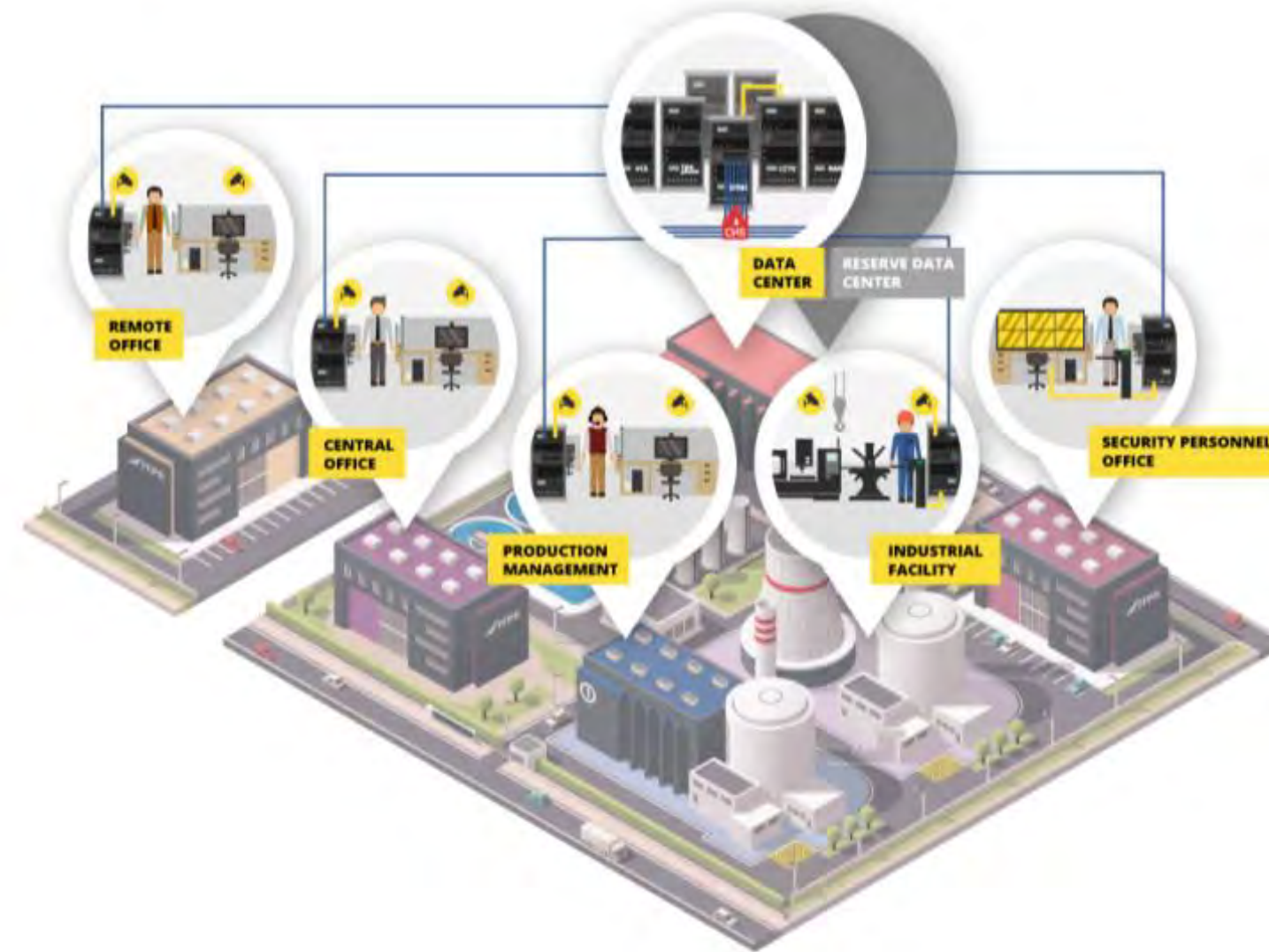
- Reliable protection of corporate workstations from malicious software;
- Safe transfer of corporate information through external (third-party) data transfer channels and via the Internet;
- Delineated access to corporate resources;
- Protection from unauthorized copying and transfer of corporate information;



PHYSICAL SECURITY SYSTEMS



Combination of hardware and software designed for various safety functions



AMCS subsystem designed to ensure sanctioned entry to premises and guarded areas and maintain access logs



Surveillance subsystem (CCTV) enables control over the situation and real-time event registration for prompt decision-making



Subsystem, which ensures protection against trespassing (systems of radars and detectors) designed to monitor potential threats and prevent intrusions



Construction progress monitoring subsystem (UAV) designed for operational control of compliance to actually implemented plan



PHYSICAL SECURITY SYSTEMS



Hardware and software complex
VIDEO SURVEILLANCE SYSTEMS

- CCTV camera placement in explosion-hazardous areas or higher risk production areas
- Cameras operation under all kinds of extreme conditions
- High definition footage in any weather conditions with a 360° visual angle
- Secure storage of event log
- Enabling access to all production and administrative premises via access cards
- Flexible setting of access levels (senior management level, mid-level management, engineers, specialists, etc.)



Hardware and software complex
ACCOUNTING AND ACCESS CONTROL SYSTEM

- Data storage on all premises that have been broken into
- Immediate reporting to on-call operators on trespassing
- Keeping the system running even when power is out through back-up power sources



Hardware and software complex
PROTECTION SYSTEM AGAINST TRESPASSING

- Potential threat monitoring max. 2 km away from the facility's outer perimeter
- Control over every meter of the protected perimeter
- Detection of masked perpetrators in the infrared spectrum
- Quick detection of target/threat through integration of thermal cameras and radar systems



Hardware and software complex
CONSTRUCTION PROCESS MONITORING SYSTEM

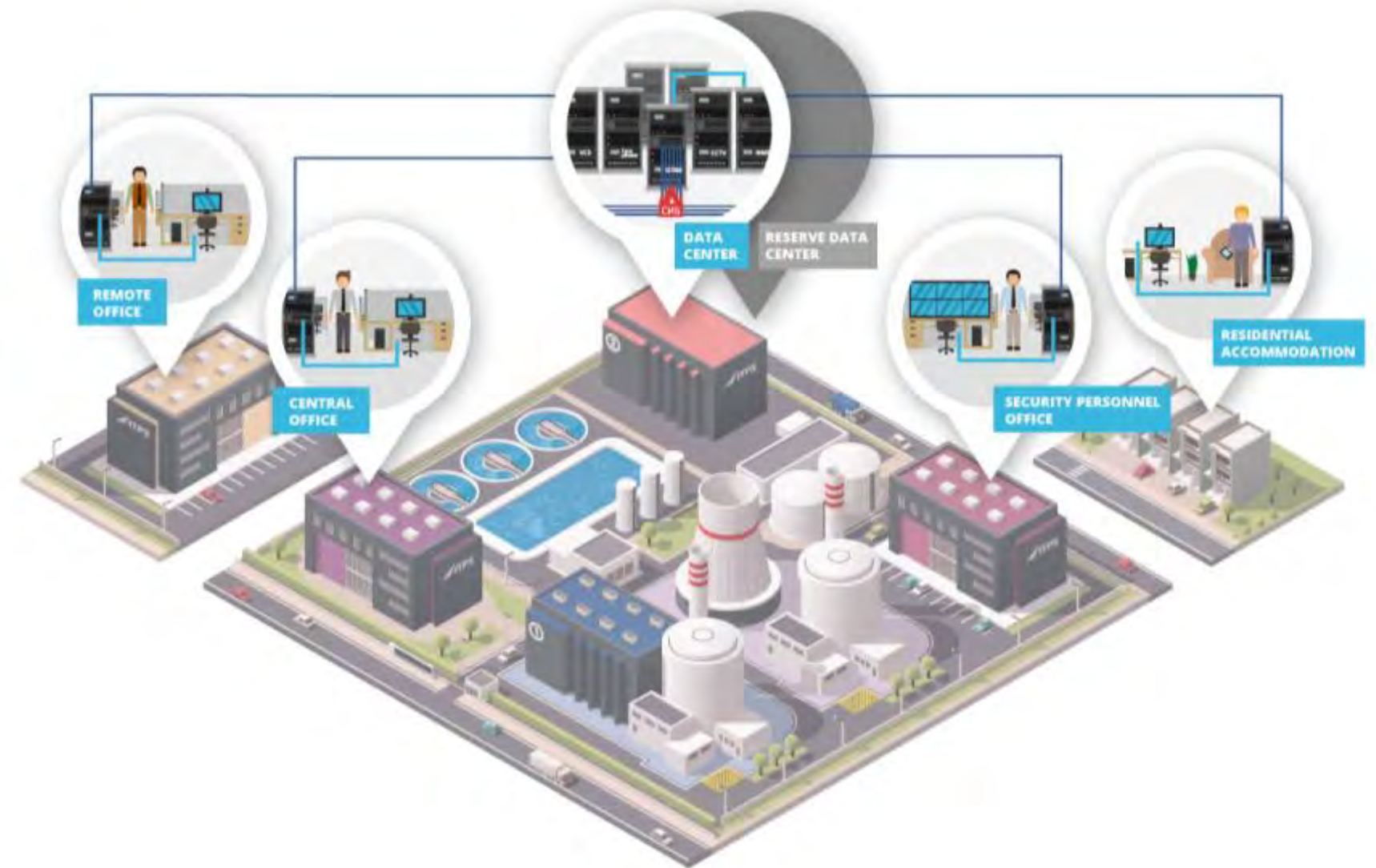
- Rapid measurement of distance, areas and volumes with a geodetic precision;
- Matching of the general plan, ground works plan, floor plan with the actual situation for evaluating progress;
- Observation of the changes occurred on the construction site for any time interval;
- Producing data at all stages of object's life cycle: design, construction, operation.



DATA PROCESSING CENTER INFRASTRUCTURE



Combination of hardware and software designed for data storage, processing and management. At the stage of construction of a large industrial facility it is often wise to use mobile data center, which on completion of construction transformed into a backup data center for the facility.



Data storage system ensures secure storage of all Customer's data resources



Combination of high performance server platforms and advanced software allows structuring and boosting data resources to ensure maximum efficiency



Management and monitoring system enables informative real time high quality monitoring of all integrated systems, and centralized management of databases across all branches in different parts of the world

DATA PROCESSING CENTER INFRASTRUCTURE



Hardware and software complex **DATA STORAGE SYSTEM**

- High speed access to data sources;
- Easy and unlimited scaling of data storage capacity;
- High level reliability of data storage (RAID);
- Geographically distributed storage systems;



Hardware and software complex **BLADE SERVER PLATFORMS**

- High productivity of corporate resource access system;
- Reduction of system's hardware physical dimensions;
- Maximum utilization of common hardware resources for every server platform;
- Stationary and mobile work stations for employees;
- Maintenance without access denial to corporate services;



Hardware and software complex **MANAGEMENT AND MONITORING SYSTEMS**

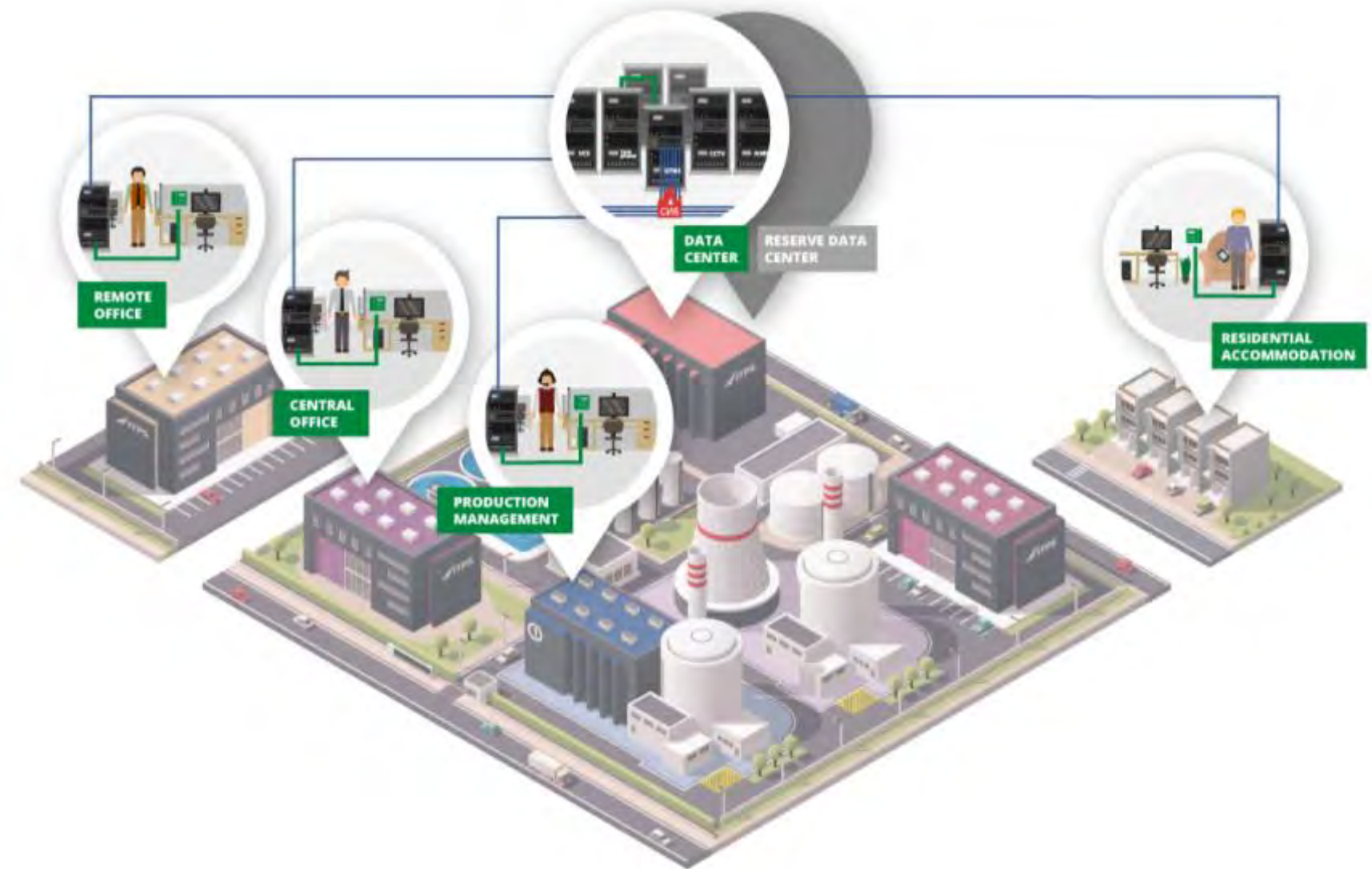
- Comprehensive management of all IT and production systems and their monitoring;
- Integration with existing monitoring systems;
- Effective IT-resource and production management;



VOICE COMMUNICATION SYSTEMS



Combination of hardware and software designed to transfer voice and video data across various physical media



Corporate telephone communication system ensures quick interactive communication between all corporation employees, leading to better performance



Audio and video conference systems enable holding on-the-spot executive meetings at the main office and on-site management meetings

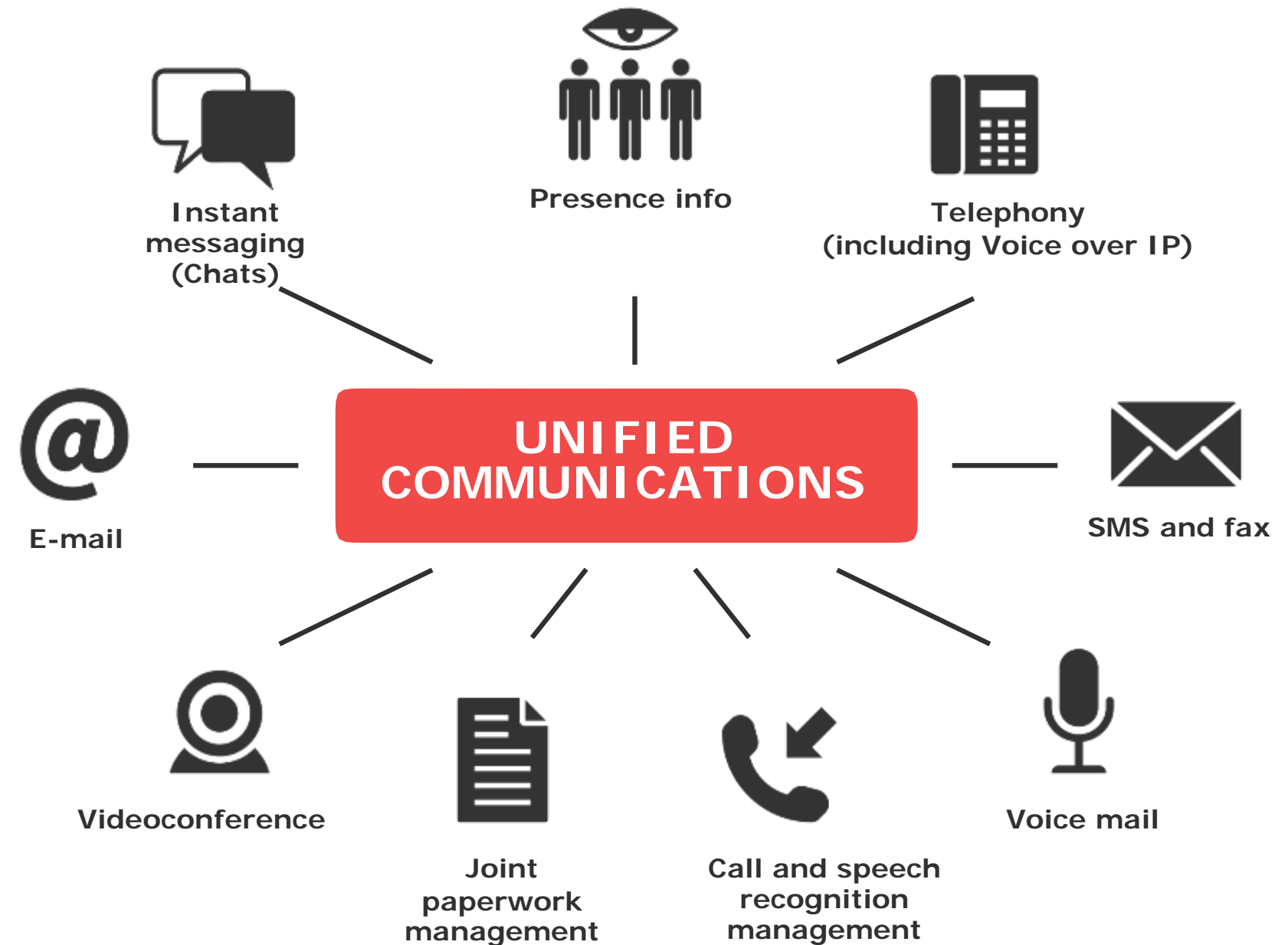


Trunked communication systems ensure on-site personnel mobility at production site and provide communication in employees' transport

VOICE COMMUNICATION SYSTEMS



Uniform communications increase productivity while simultaneously reducing IT costs for the organization. IP server integration into a single entity allows users to easily make calls, send messages, or join an audio/video conference.





VOICE COMMUNICATION SYSTEMS



Hardware and software complex
VoIce over IP

- Quick set-up of telephone network within organization
- Building a flexible and scalable telephone network
- Cost reduction on laying of communications (data transfer system used as transport medium)



Hardware and software complex
TETRA

- Personnel mobility assurance outside the coverage of ordinary phones and in production zone
- Reliable wireless communication for road transport across a large territory



Hardware and software complex
DECT

- Personnel accessibility assurance away from the workplace and inside the administrative complex
- Personnel performance improvement



Hardware and software complex
VIDEO AND AUDIO CONFERENCE SYSTEM

- Quick transmission of important voice and video messages
- On-the-spot management meetings at the main office and on-site management meetings without workflow disruption

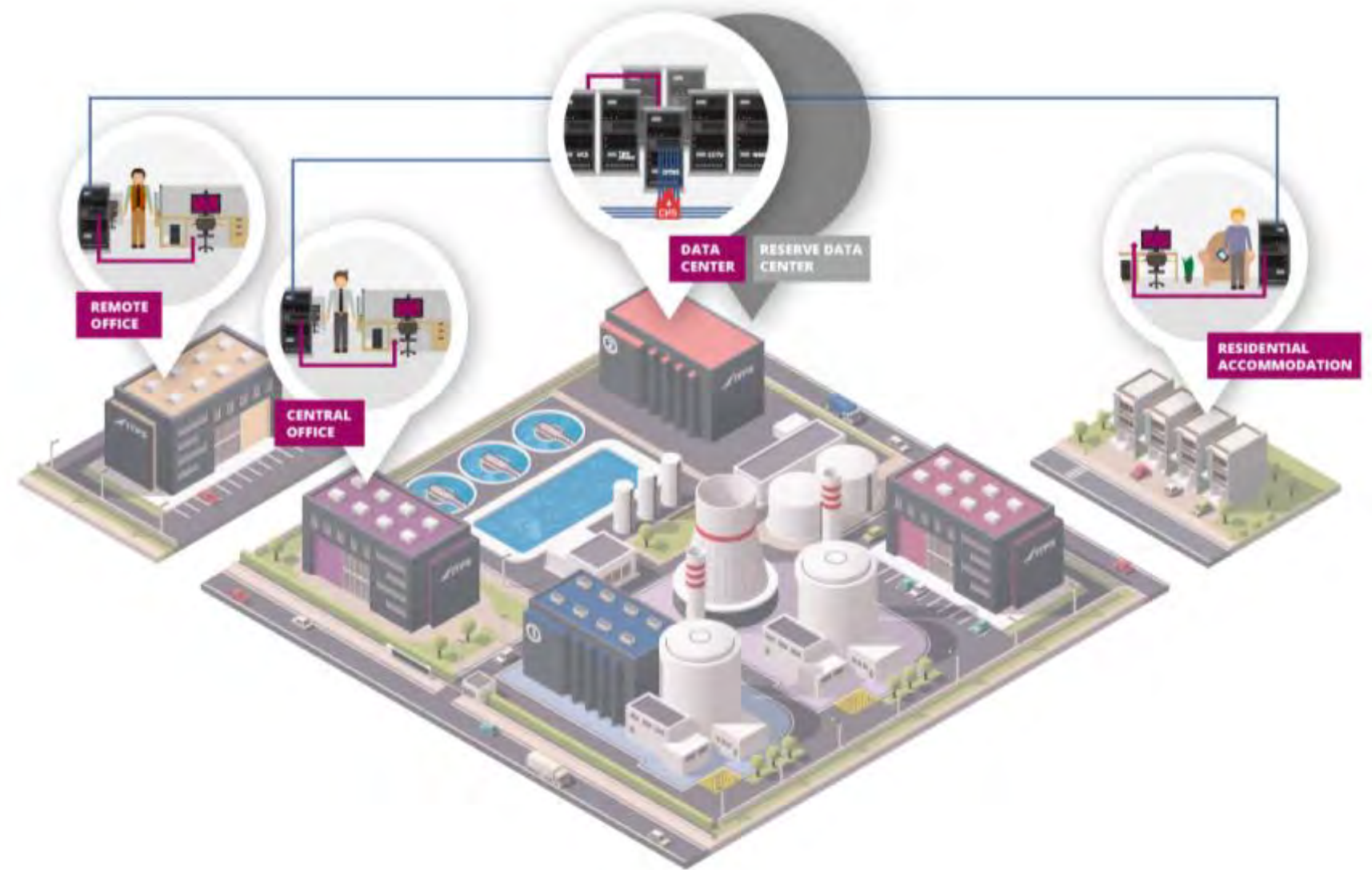




VIDEO CONFERENCING



Software and hardware complex developed to perform TV broadcasting related to corporate activities



Corporate TV system uses DTN to broadcast TV signal to offices, canteens and private premises



The system can be used to send video messages from the management, broadcast corporate events or satellite channels

VIDEOCONFERENCING



Hardware and software complex
IP TV

- Video transmission via DTN
- Cheaper implementation of the corporate TV system
- Integration with alarm systems



Hardware and software complex
SATELLITE TV

- Broad choice of channels in different languages
- High quality of the received signal



TV sets
LCD, LED, FULLHD, ULTRAHD

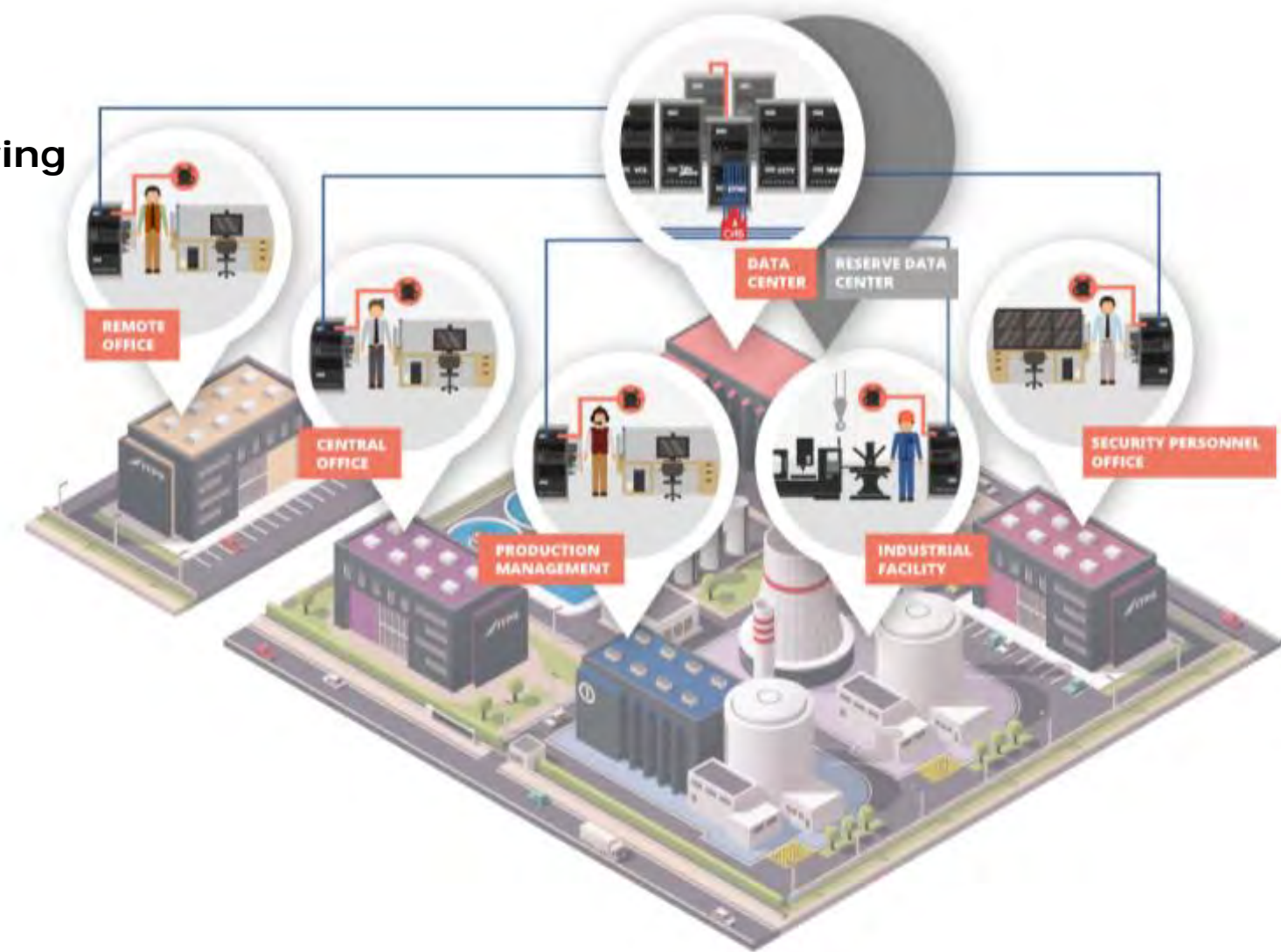
- HD image quality
- Natural color rendering and color correction



ALARM SYSTEMS



Hardware and software complex, which performs automated production management and its monitoring as well as sounds an alarm in case of emergency



SCADA (Supervisory Control And Data Acquisition) software and hardware complex used for acquiring data and performing supervisory control



Emergency Shut Down (ESD) allows to perform real-time monitoring of electrical equipment power supply and manage it in case of emergency



Fire and Gas systems perform monitoring and management of potentially explosive production machines



PA/GA systems (alarm systems) are responsible for a common alarm in case of receiving emergency signals from any APCS systems or directly from the operator's desk



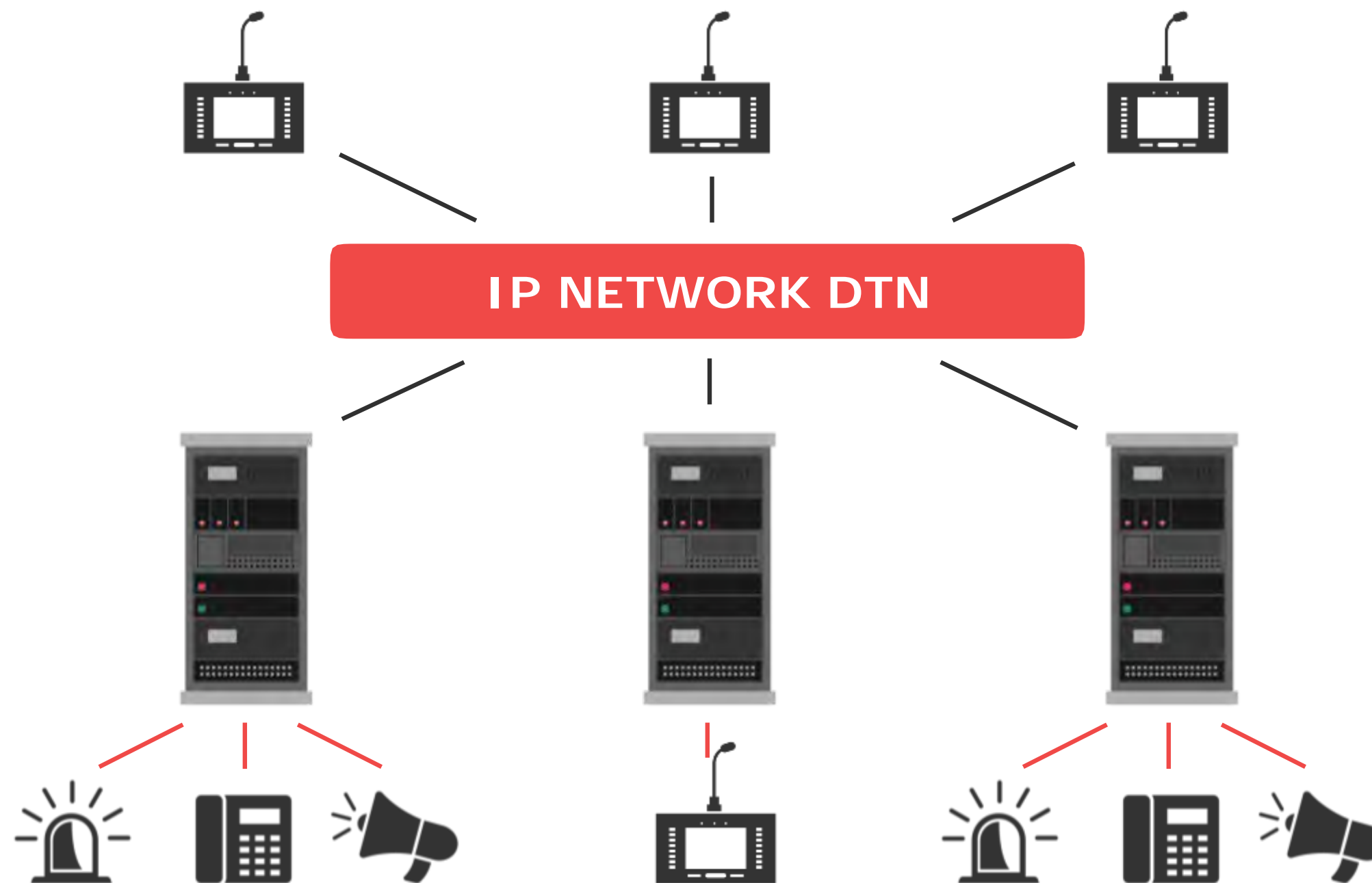
ALARM SYSTEMS



Alarm system uses data transmission network as a basic network for combining central communication nodes with operators' desks and communication equipment

Software and hardware complex
INTRON-D SYSTEM

- Internal communication organization (Intercom)
- Integration with all production systems
- Simple and flexible alert management
- Individual system architecture for each implementation object





ITPS FOOTPRINT



Europe

- France
- Belgium
- Italy
- Czech Republic
- Slovakia
- Hungary
- Romania
- Serbia

Africa

- Egypt
- Ivory Coast

Latin America

- Columbia
- Venezuela

Middle East

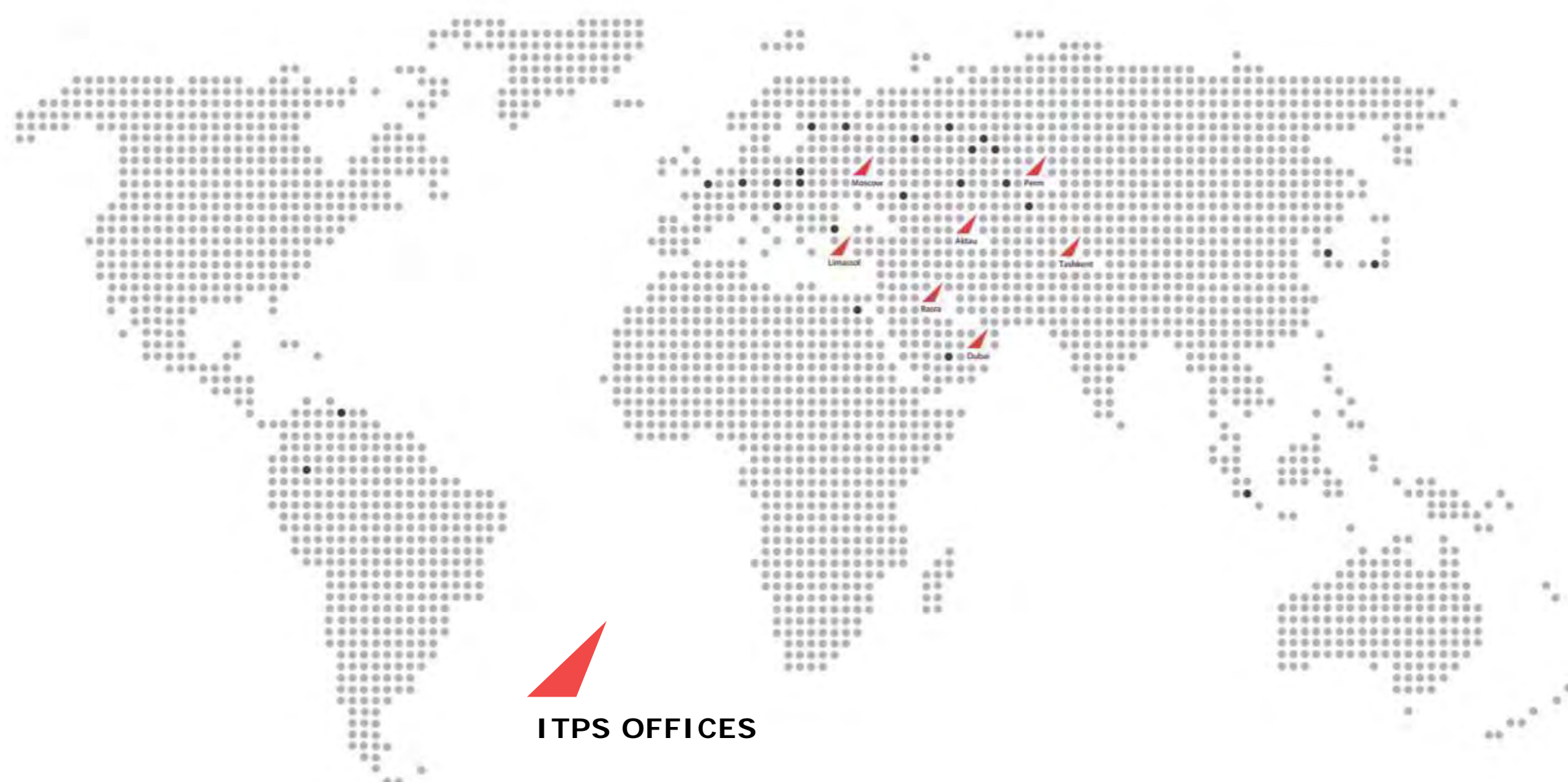
- UAE
- Iraq

Asia

- South Korea
- Japan

South-East Asia

- Malaysia



ITPS OFFICES

Russia

- Volgograd
- Yekaterinburg
- Izhevsk
- Kazan
- Kaliningrad
- Kogalym
- Krasnoyarsk
- Langepas
- Moscow
- Naryan-Mar
- Nefteyugansk
- Perm
- Pechora
- Pokachi
- Salekhard
- Saint-Petersburg
- Surgut
- Usinsk
- Urai
- Ukhta

Kazakhstan

- Aktau
- Astana
- Kyzylorda

Uzbekistan

- Tashkent
- Bukhara

IMPLEMENTED PROJECTS



Development of a major oil field infrastructure

450,000 th tonns Plant capacity per day

1,500 users Number of IT-infrastructure users

12 IT-systems, namely:

- Data transmission system (FOCL, SCS, active quipment, ISS, Wi-Fi)
- Physical security system (CCTV, radar system, perimeter security, AMCS)
- Data processing center infrastructure (DSS, modular server chassis, software solutions)
- Voice communication systems (phone system, trunked communication, DECT)
- Videoconferencing (special-purpose rooms, communication equipment)
- Alarm systems (PAGA, integration with other systems)

> USD 10,000,000 IT project total budget

Samsung Engineering Client

Gas turbine power plant

126 Mwatt Capacity

200 users Number of IT-infrastructure users

10 IT-systems, namely:

- Data transmission system (FOCL, SCS, active equipment, ISS, Wi-Fi);
- Physical security system (CCTV, radar system, perimeter security, AMCS);
- Data processing center infrastructure (local servers, software solutions);
- Voice communication systems (phone system, DECT);
- Videoconferencing (communication equipment, software solutions);
- Alarm systems (PAGA).

> USD 2,000,000 IT project total budget

ENKA Client



IMPLEMENTED PROJECTS



Export pipeline

80 km Length

40 users Number of IT-infrastructure users

8 IT-systems, such as:

- Data transmission system (FOCL, SCS, active equipment, radio relay links);
- Physical security system (CCTV, radar system, perimeter control, AMCS);
- Data processing center infrastructure (work stations, software solutions);
- Voice communication systems (phone system);

USD 6,000,000 IT project total budget

TECHNO Engineering Client

Rotational village

1,000 users Scaled to fit

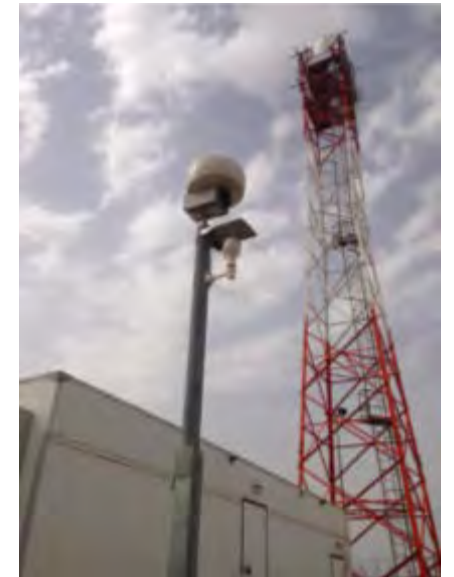
1,000 users Number of IT-infrastructure users

11 IT-systems, such as:

- Data transmission system (FOCL, SCS, active equipment, ISS, Wi-Fi);
- Physical security system (CCTV, radar system, perimeter control, AMCS);
- Data processing center infrastructure (DSS, modular server chassis, software solutions, DPC reserve);
- Voice communication systems (phone system, trunked communication, DECT);
- Videoconferencing (special-purpose rooms, communication equipment).

USD 3,000,000 IT project total budget

Samsung Engineering Client



IMPLEMENTED PROJECTS



Development of a gas field group

6,000,000 m³ PGPT per day
Plant capacity

300 users Number of
IT-infrastructure users

10 IT-systems, namely:

- Data transmission system (FOCL, SCS, active equipment, ISS);
- Physical security system (CCTV, perimeter control, AMCS);
- Data processing center infrastructure (DSS, modular server chassis, software solutions);
- Voice communication systems (phone system, trunked communication, DECT);
- Alarm systems (PAGA, integration with other systems).

> USD 8,000,000 IT project total
budget

Enter Engineering Client

Field support base

300 users Scaled to fit

200 users Number of
IT-infrastructure users

11 IT-systems, namely:

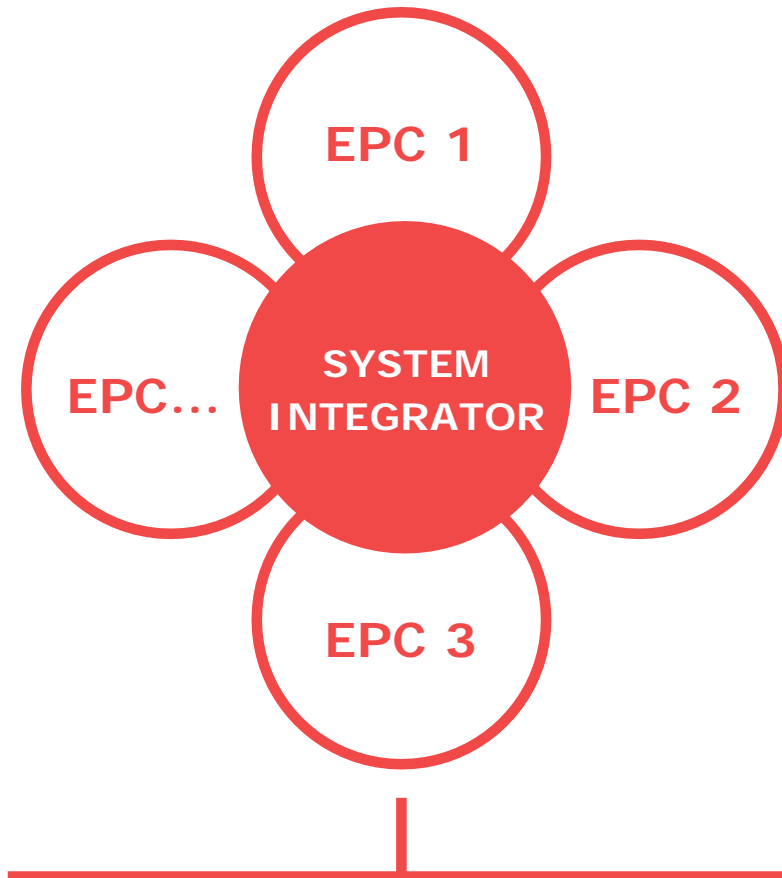
- Data transmission system (FOCL, SCS, active equipment, ISS, Wi-Fi);
- Physical security system (CCTV, AMCS);
- Data processing center infrastructure (DSS, modular server chassis, software solutions);
- Voice communication systems (phone system, trunked communication, DECT);
- Videoconferencing (special-purpose rooms, communication equipment);
- Alarm systems (PAGA, integration with other systems).

> USD 5,500,000 IT project total
budget

Enter Engineering Client



HOW WE WORK



- Single point of responsibility for integrated solution
- Integration via multiple subprojects as one
- Unified and standardized solutions
- Participation in projects from early stages
- Single price policy within the project in general



- IT and communication
- Manufacturing Execution System (MES)
- Security systems
- ERP, BI, PDMS



- Contract management
- Coordination
- Integration
- Risk management
- Supervision
- Standards and best practices



- Coordination support
- Project management support
- IT-support

- Wide experience in project management
- Vendor-independent approach
- Modern IT-support (CAD, EPPM, PDMS, Portals)
- Close collaboration with clients

- Unified architecture
- Multidisciplinary resources
- Solutions that meet the purposes

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THANK YOU FOR YOUR ATTENTION!

