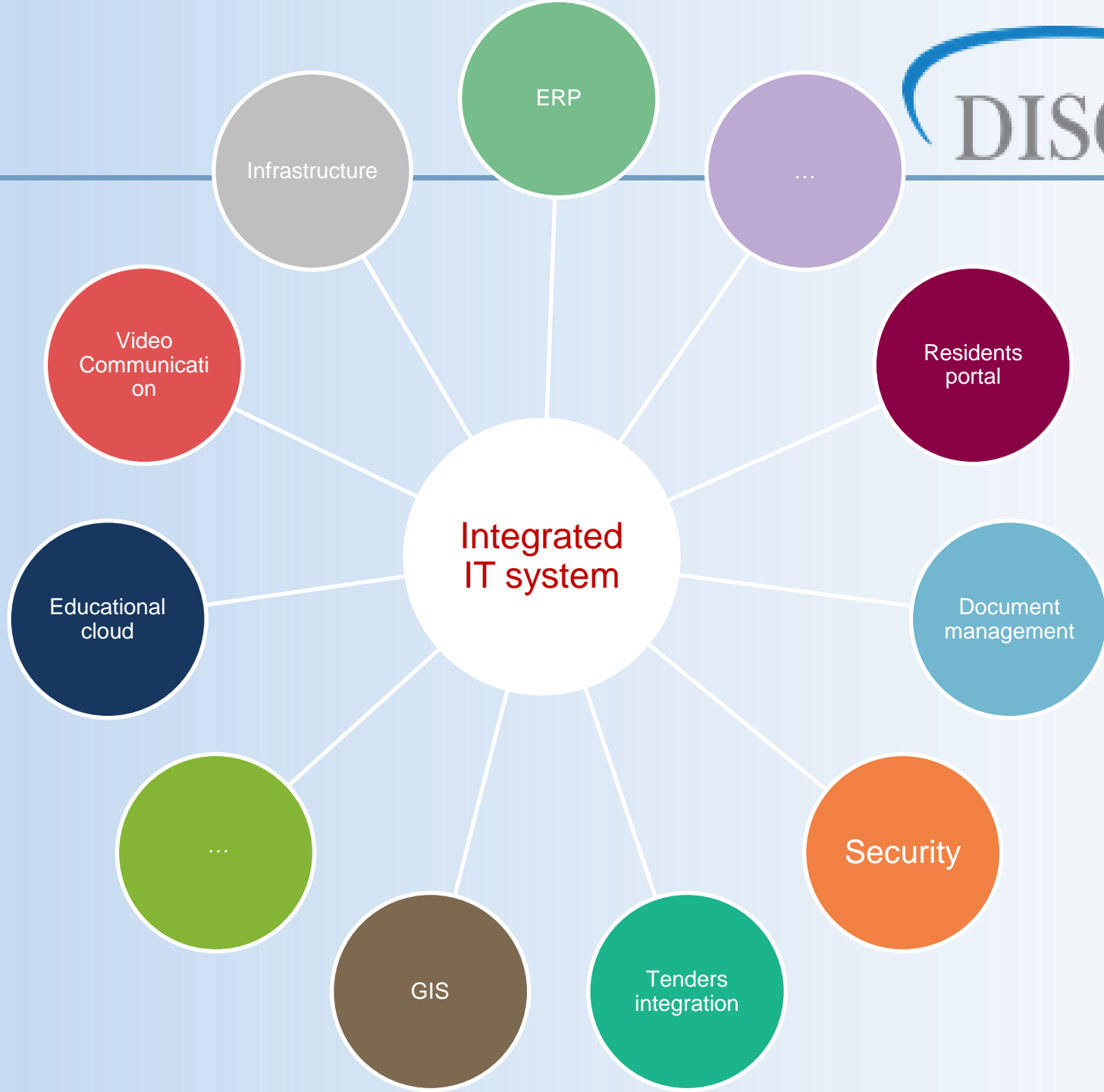


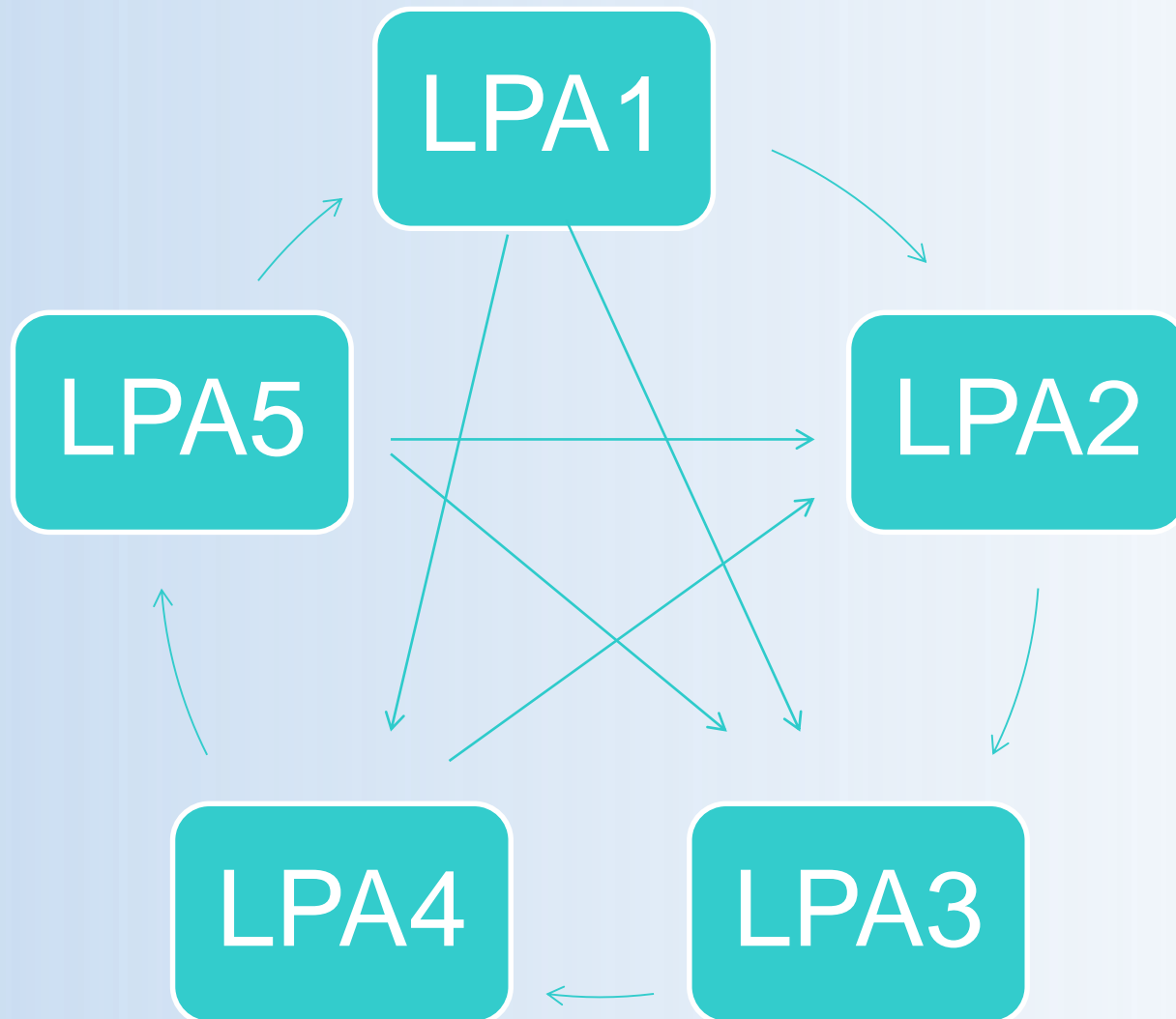
**Exemplary IT
implementation
programme in LPA**

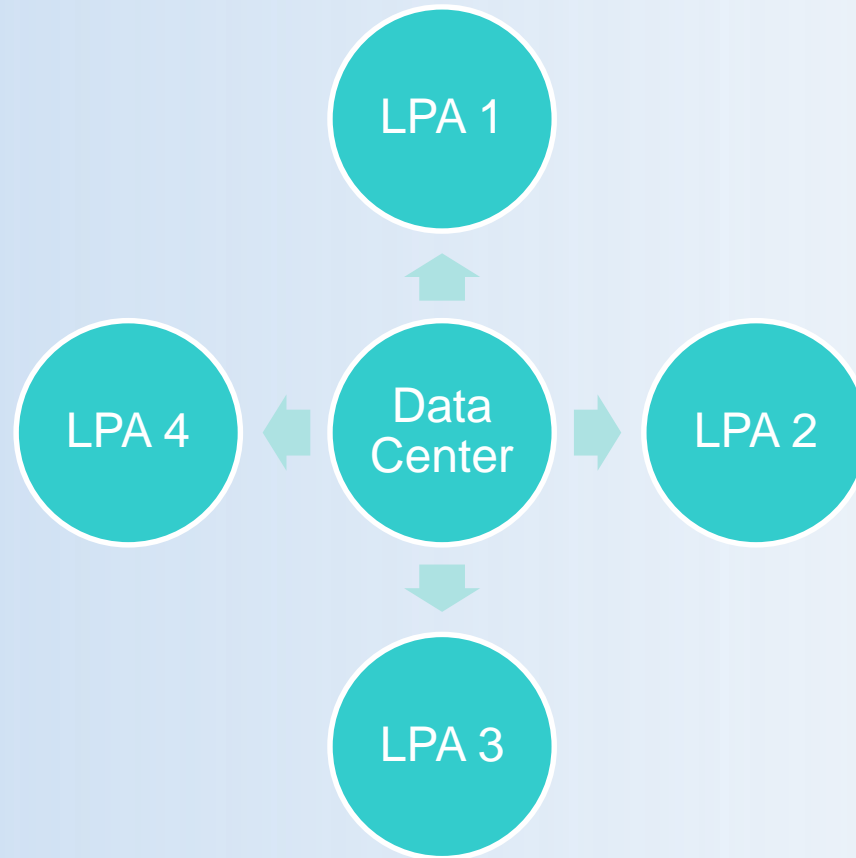


Dr Krzysztof Atlasiewicz

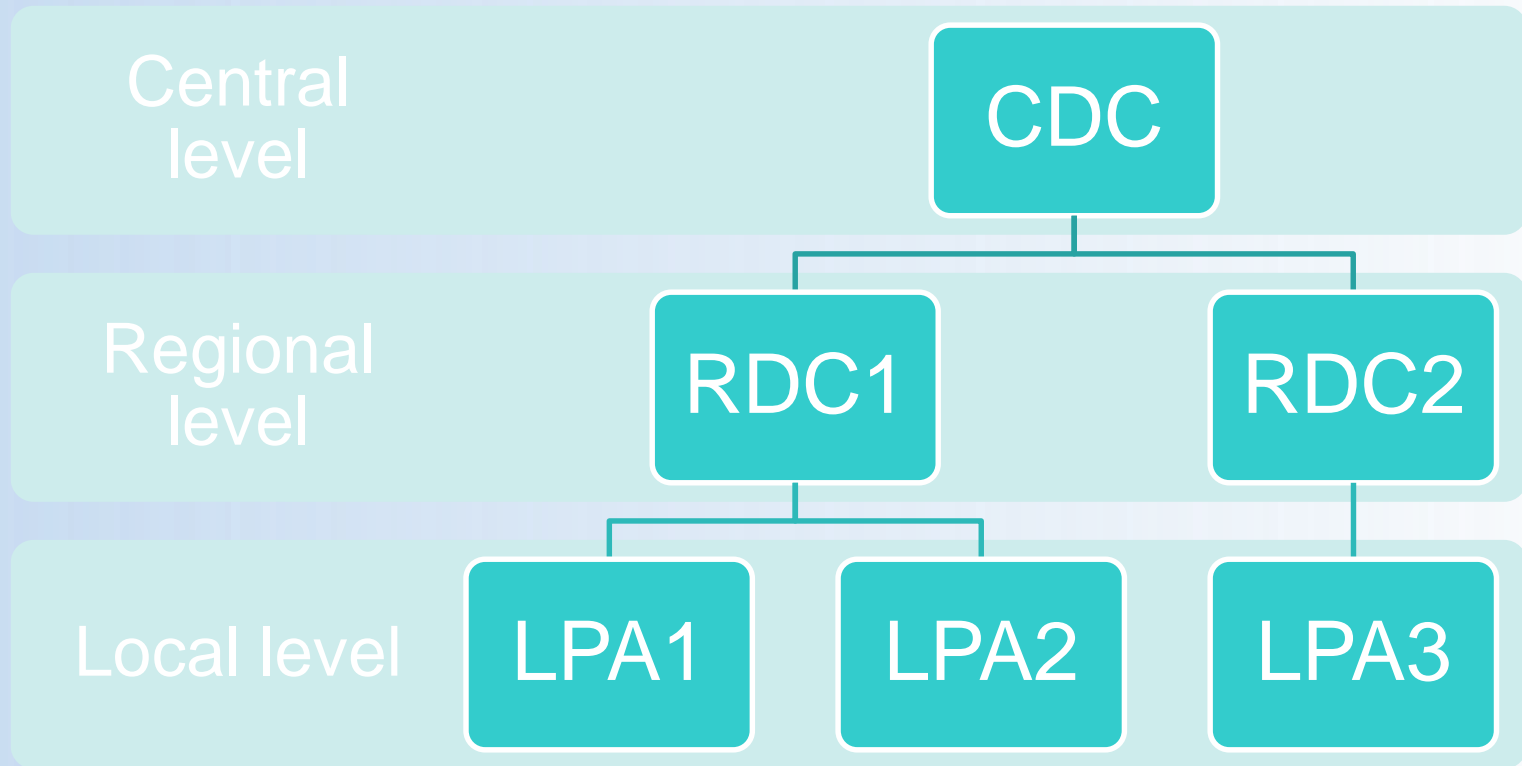


Infrastructure





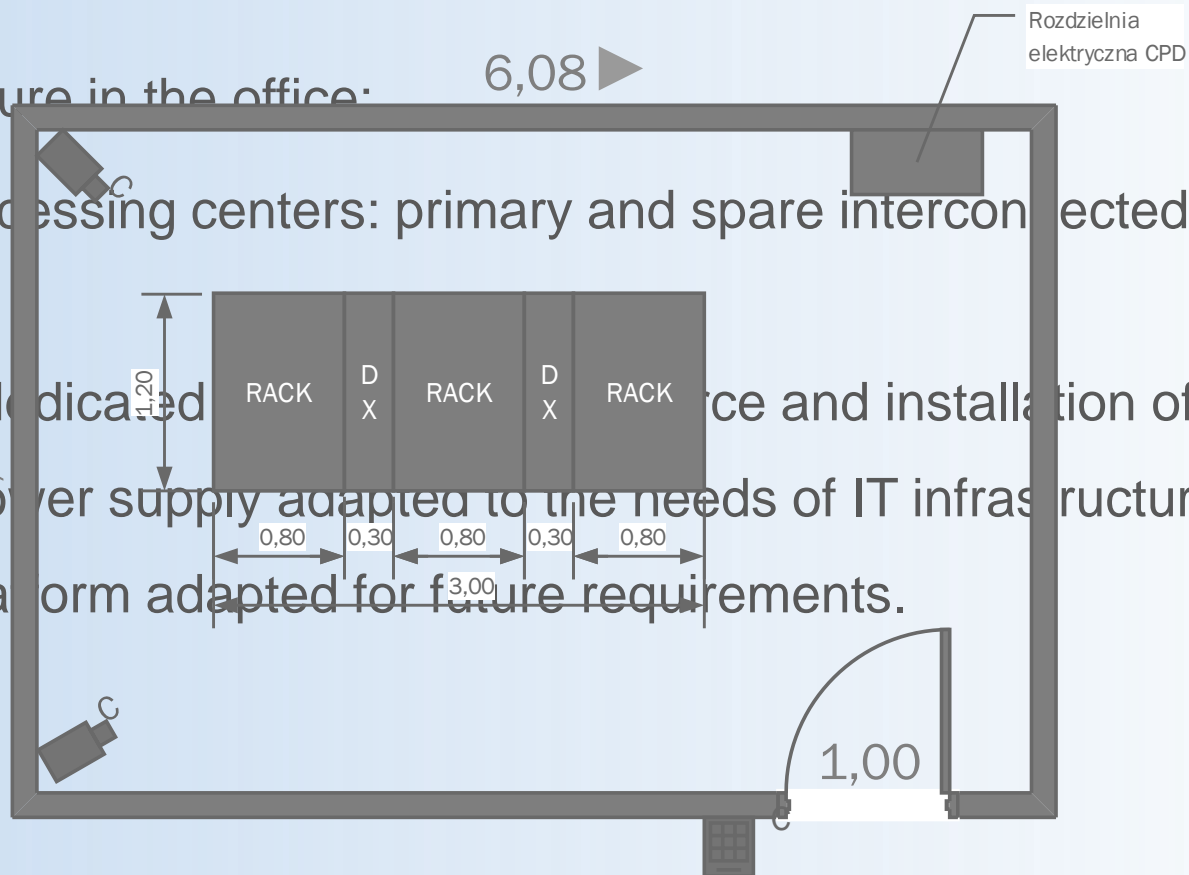
Models of IT infrastructure



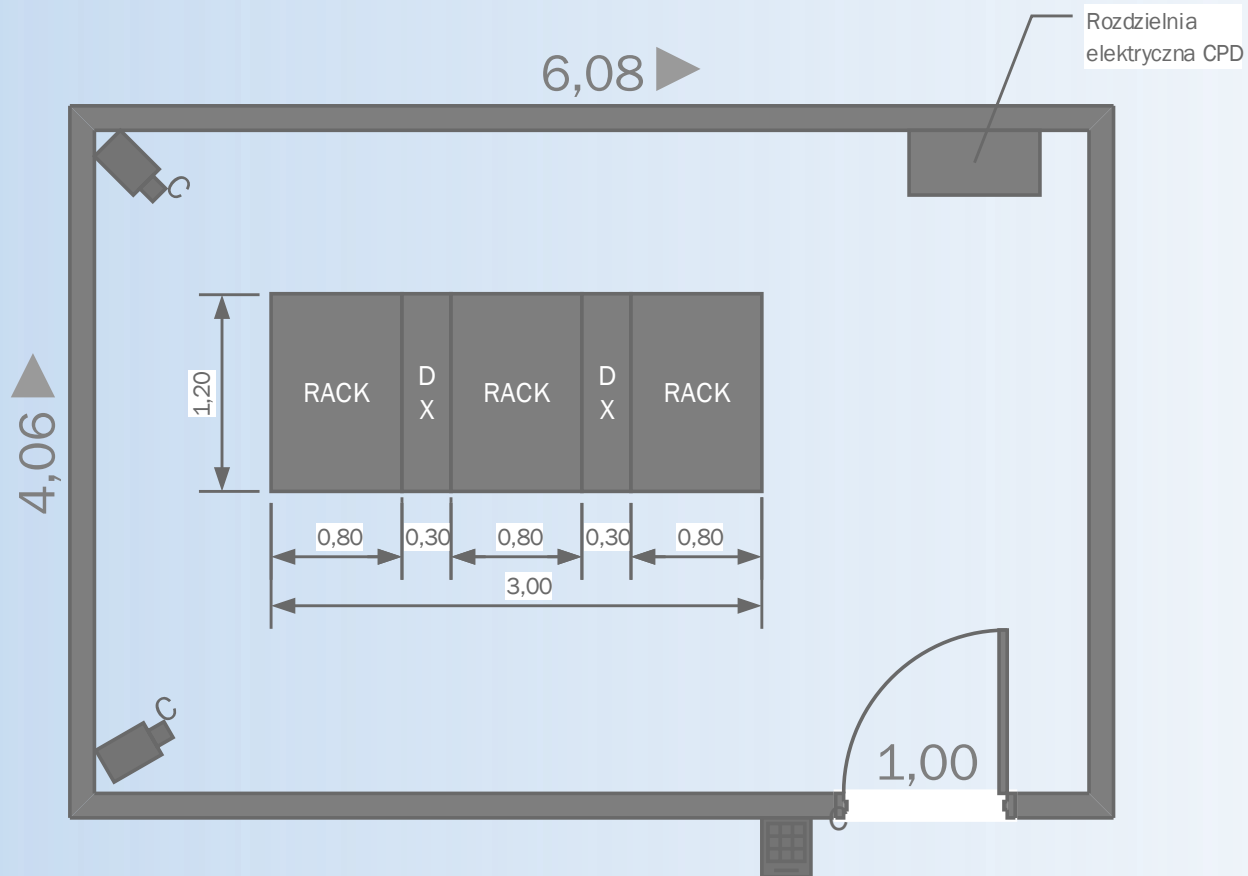
Aim of implementation

1. IT infrastructure in the office:

- two data processing centers: primary and spare interconnected by optical fiber,
- LAN with a dedicated server and installation of dedicated power supply adapted to the needs of IT infrastructure,
- hardware platform adapted for future requirements.



Aim of implementation



Target Implementation



Each of the centers will be equipped with:



disk array with a capacity of 20TB initial stage of the project upgradeable to 200TB; mutual content replication between arrays



server and application equipment

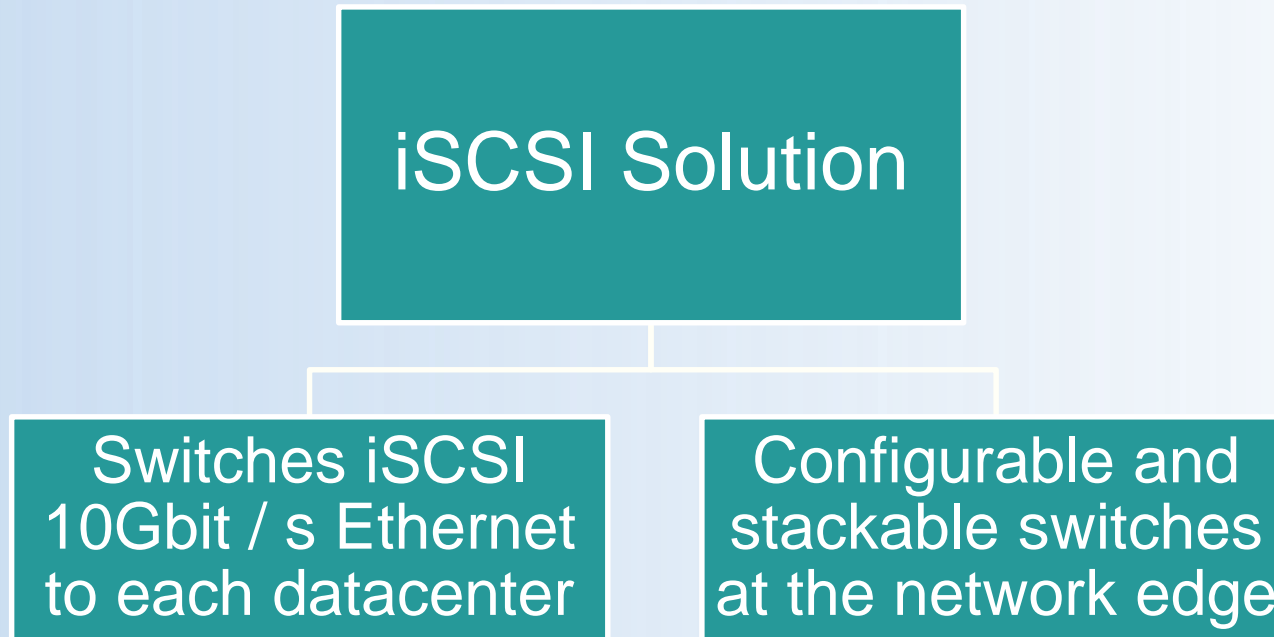


highly-efficient and secure UTM system which secures access to the network

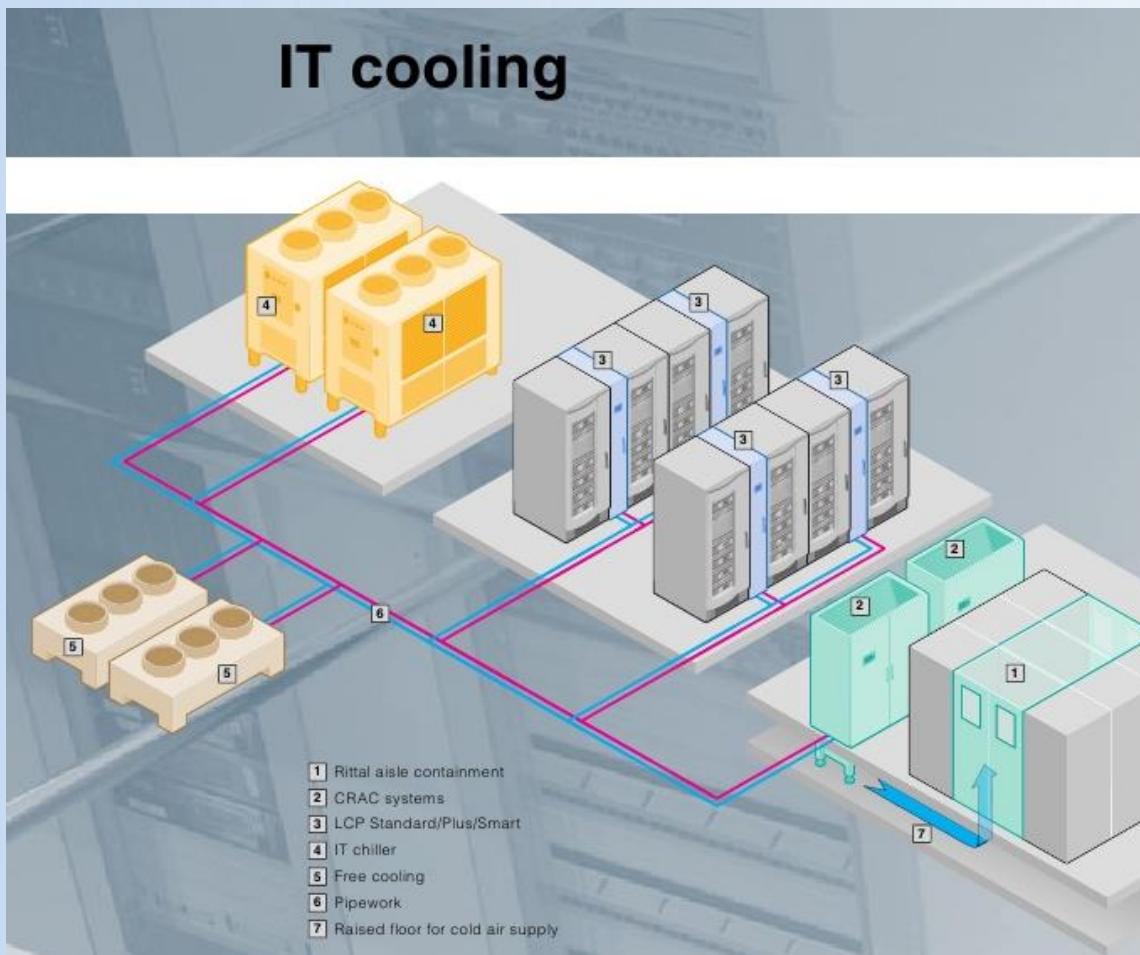


The system of backup data from all key systems.

2. Expansion / reorganization of the network environment - ensuring efficient infrastructure for the future challenges of the office



1. Server cabinet



The solution is based on freon splitters of high power cooling integrated with server cabinets.

Closed cabinets for infrastructure (servers, arrays, safety equipment), cross connection cabinets, air conditioning, fire extinguishers in the one sealed system platform.

2. Extinguishing system of sealed server cabinets
3. The automatic system of emergency opening the doors of server cabinets
And emergency power supply cabinets
4. Air conditioning based on system of heat exchangers: air / water cooled,
dedicated to sealed cabinets



5. IT chiller air-cooled refrigerant

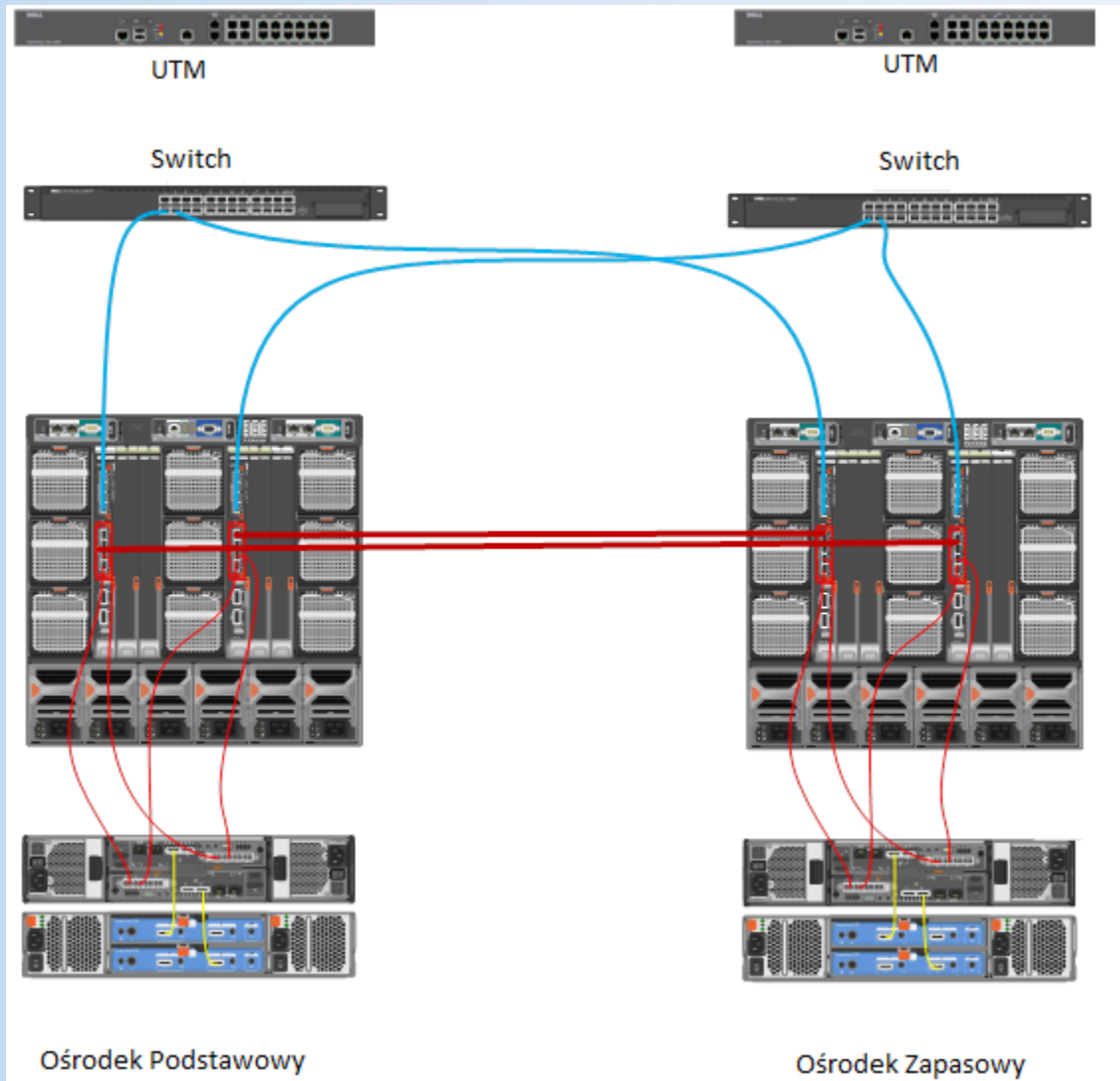
Intergrated cooling system FREECOOLING

assisted or completely replaces cooling realized by the compressor through an additional spiral of water, which uses outside air temperature to the cooling water return in the system

provides "no cost" chilled water for all installations, so that you can achieve significant energy savings

6. Interrow air conditioning, direct expansion dedicated to sealed cabinets (an alternative to the chilled water system) Szafy zasilania awaryjnego UPS
7. Monitoring - remote management of built IT infrastructure server
8. The management software for the main server and backup
9. Server room
10. Alarm system
11. Access control system
12. CCTV system
13. Guaranteed power supply

Hardware architecture



solution scheme of the primary and backup data processing center

Hardware architecture aims to provide not only efficiency for existing and planned applications supporting the office and eServices, but also the security of processing and storing the collected data in accordance with the guidelines of respective laws.

1. Modular Blade Enclosure with servers

BLADE SYSTEM

reliability

scalability

easy of
management

low total cost
of ownership

high return on
investment

2. Disc array

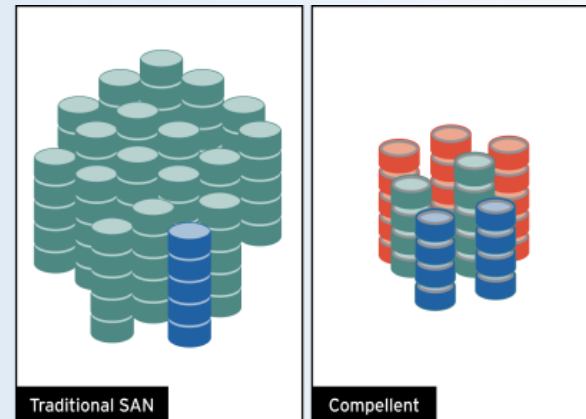
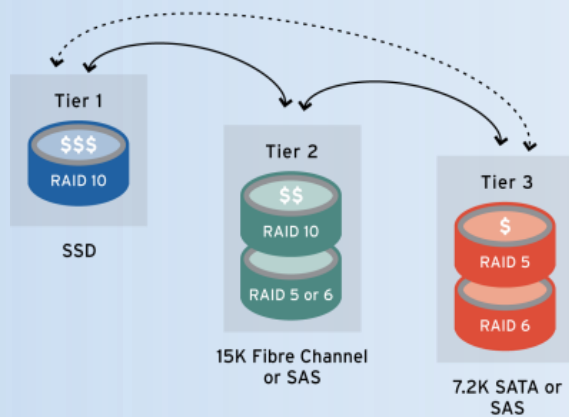
- NAS device unsecured algorithm dubbing firmware
- the device does not meet the basic safety guidelines control software,
- recommended to use the device as a backup medium for D2D backup model

Now

Recommended solution

- Enterprise array,
- the device has a number of safeguards against infection firmware,
- array adapted itself to the method of usage data stored on it,
- data active are transferred to the fast carriers through a Data Progression mechanism made by array,
- device divides the drive for faster and slower regions thanks to the functionality of the Fast Track.

Functionality Fast Track - differentiating each drive faster and slower regions allows for more precise placement and fitting data to appropriate levels of access speed.



Fluid Data concept - a mechanism enabling smooth movement of data within the array between virtualized physical disks.

3. Data backup

Software for archiving and backup

must support the leading virtualization solutions such as VMware and Hyper-V

must provide the ability to create a backup repository on local disks (DAS), removable disks, disk arrays SAN or NAS

must perform backups to discs, based on the technology of incremental snapshot block-level data

must enable conversion the system to a different hardware platform in 3 modes

must provide the ability to fully centralized web management module backup on servers

must be able to extend your license

4. Switches core (backbone)

Solution that meets the basic requirements for:

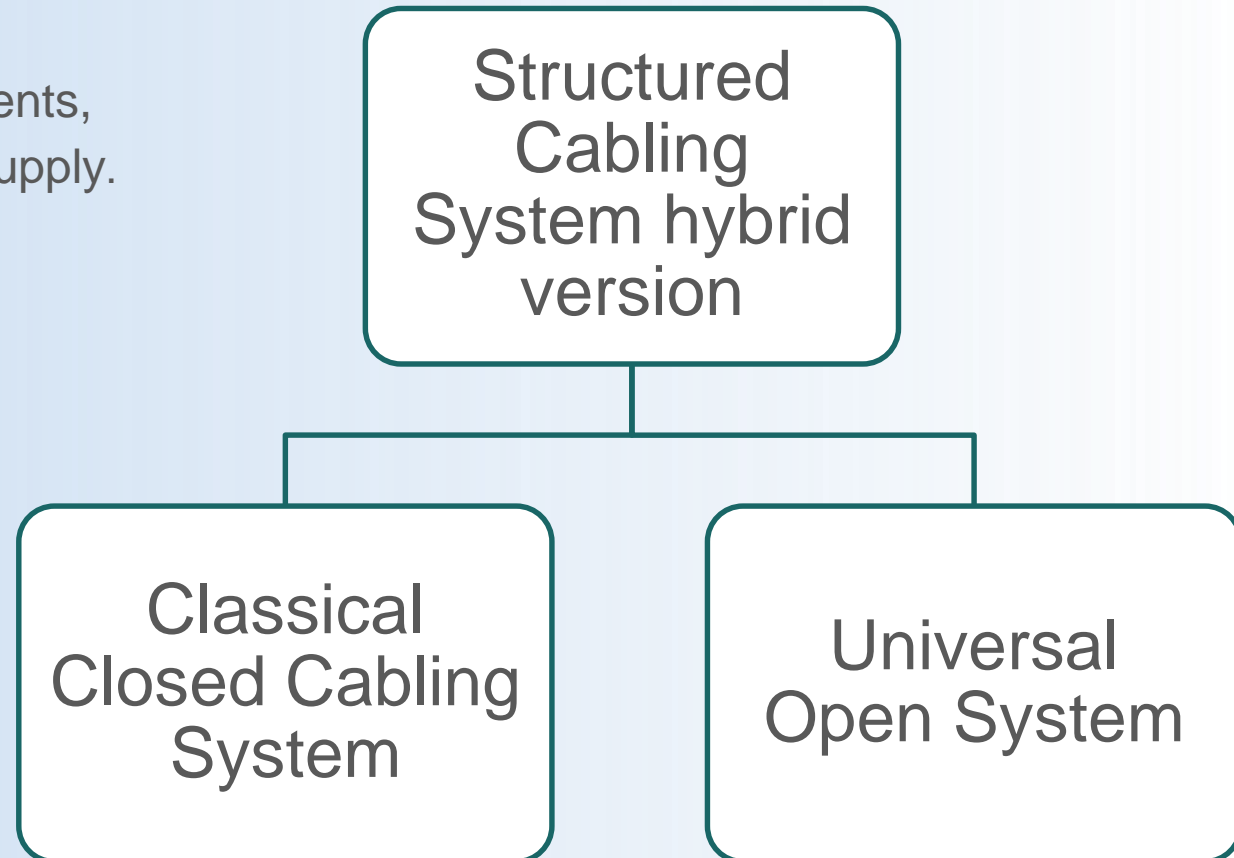
- security,
- management,
- handling routing.

5. Safety of contact LAN to the Internet



Structured cabling system:

- horizontal cabling - a universal system (open) category 7_A ,
- backbone cabling(fiber optic transmission),
- distribution points,
- guaranteed requirements,
- dedicated electrical supply.



ERP

Aim of implementation



- **reducing search time information**
fast access to key information, data and documents necessary for decision-making, in a protected, controlled and centralized environment;
- **simplification and automation of processes**
automation and electronic path of doing things (absences, referrals to training, maintenance of delegation);
- **access to knowledge regardless of user location**
remote access using mobile devices;
- **reduce the cost and speed of information distribution**
improving workflow and reducing the need to print documents - consequently reduce costs;
- **flexibility in relation to future applications**
expandability, modularity, scalability;
- **enhancement of work output**
via a centralized, accurate, current and reliable base versioned documents and tools supporting the functional areas that have not been supported;

Aim of implementation



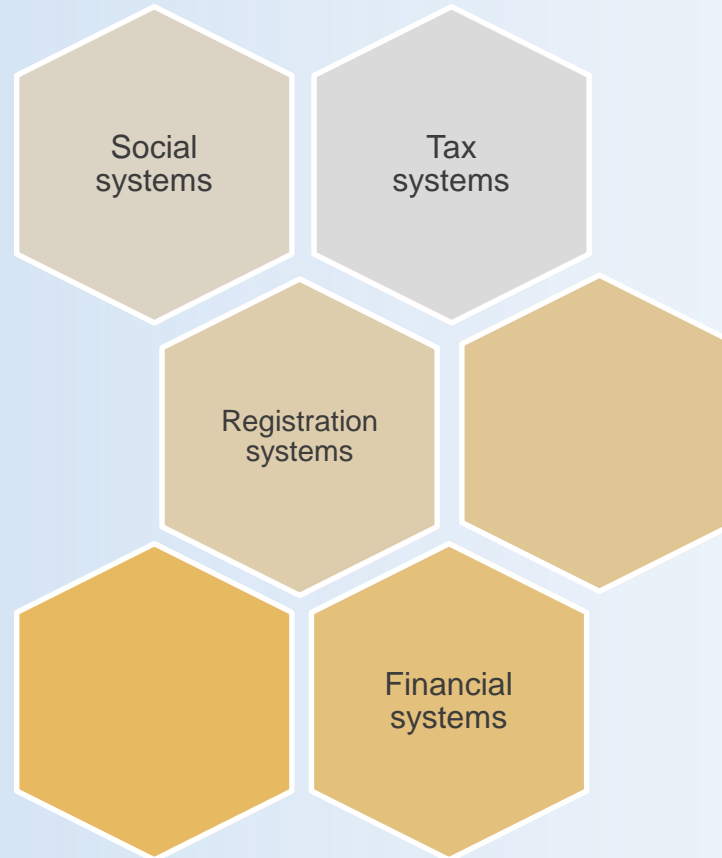
- **reducing of training costs (shortening training time)**
via an easy-to-use through a simple, readable, absorbable, visually unified (same in all modules of the system), system interface and intuitive through an efficient, extensive context-sensitive help;
- **reducing the cost of system maintenance**
through guaranteed long period to provide this service, there is no need to create service level agreements for each system separately;
- **support for the processes of organizational change**
by automating data entry, self-service;
- **the use of modern mobile solutions**
in the form of tablets, smartphones allow the execution of official duties outside the workplace.

The specific objectives of the project are:

- increasing the use of innovative IT solutions in the work of public administration,
- limiting "paper" document workflow in the work of public administration,
- electronic dissemination of information flow in the office.

The scope of a project

The basic functional areas of ERP



Residents portal

Aim of implementation



System allows for the development of e-services and electronic public tasks performed by the office and significantly accelerates the speed to reach information for authorized persons.

This is an essential element of improving the quality of work of the office.

E-services related to the project



Residents portal

E-services that require authentication:

Public consultation;

Fees;

Requests for a copy of acts: birth, marriage and death certificates;

Reservation deadline civil marriage;

An application for permission for cutting trees;

The request for transport of corpses from abroad;

The application for a fishing license;

The application for registration floating equipment;

The application for a subscription capita (parking area);

The application for a license to sell alcohol;

The application for an ID card;

Waste management;

An application for a scholarship (academic, athletic, social)

Correspondence - a list of correspondence sent to the citizen,

Tax Declaration.

E-services areas:

Public consultation;

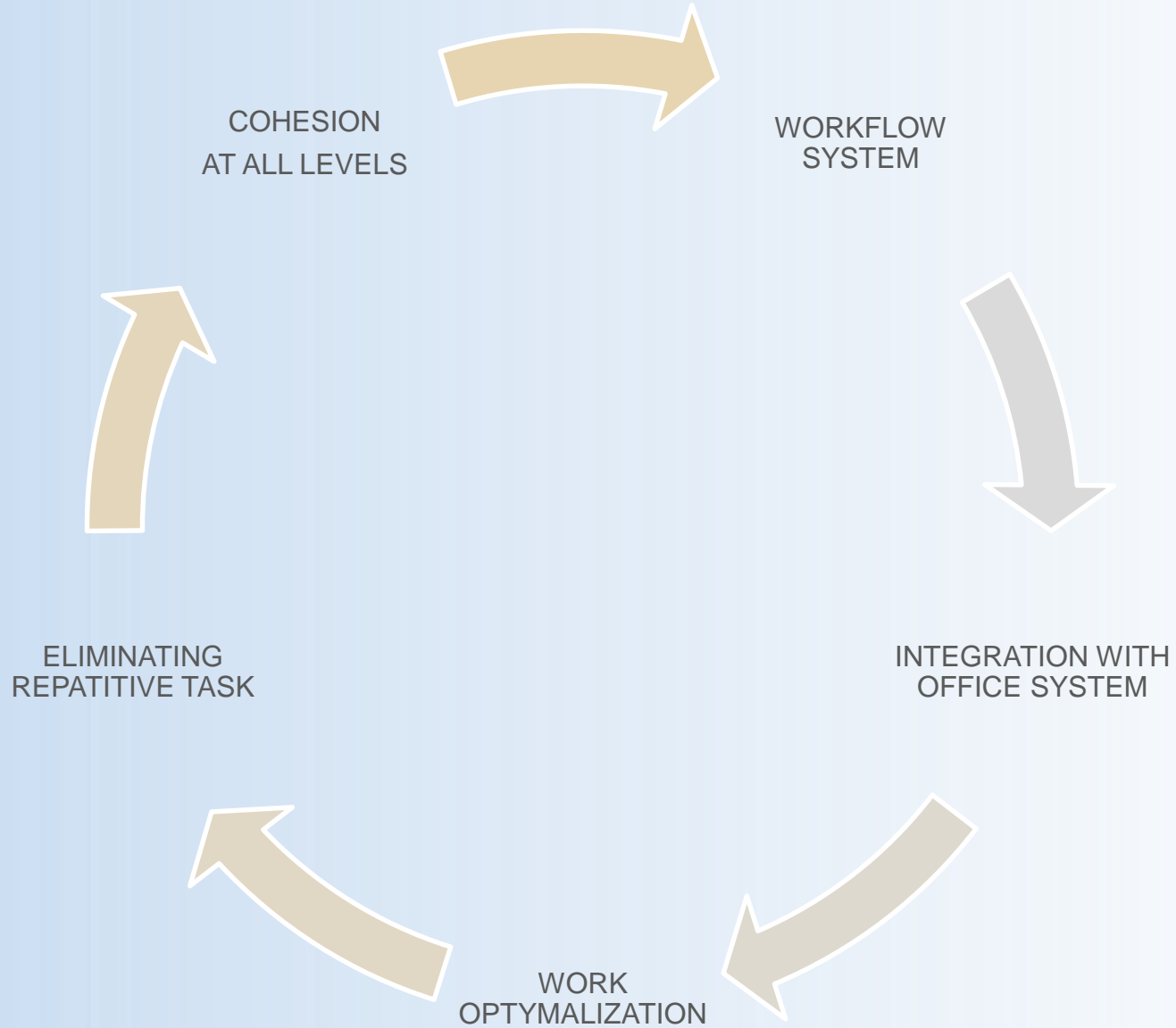
Citizens budget:

Informant;

Conclusions - Public information.

Document Management System

Aim of implementation



Aim of implementation



- Accelerating document flow
- Enable full monitoring of circulation and the state of issues
- Improve the timeliness of issues
- The possibility of receiving and handling of documents in electronic form
- Preventing the loss of documents
- Arrangement of documentation
- Reducing the cost of public service
- Improving the quality of public services by being able to settle the case without the need to visit the office
- Improving conditions for starting and running a business
- Increasing the degree of use of information technology by the inhabitants of the region
- Increase the region's competitiveness - through greater availability of public services.

The scope of a project



DMS:

- Will handle all of offices and institutions
- Allows for the reception, storage and circulation of files in any format in accordance with applicable laws
- Enable handle all the statutorily prescribed actions chancellery related to the processing of correspondence and cases, in particular: communicating letters, create proceedings of, settling, suspend and resume cases, create folders, keeping records, numbering and classification of documents and cases
- Provides automatic transmission of writings and cases of appropriate numbers and signatures and to ensure correct used determinations with respect to applicable legal requirements
- Will allow to conduct Institution Structure Registration and Institution Workers Registration – registers allow reflects the hierarchical structure of the relationship between positions and assign workers to job
- Will enable to registration the visitors
- Will be fully compliant with the applicable procedures for dealing with archival material and non-archival documentation
- Will allow to transfer files with cases which are ultimately closed to archives

The scope of a project



DMS:

- Will allow to scan submitted letters in paper form into an electronic form
- Will be responsible for communicating documents between users
- Will allow to access to data for multiple users - each user have the necessary privileges depend on the position of the Office
- Will enable to service replacement
- Provide the ability to compile reports informing about the history of each case, a list of all users working on your case accompanied by supporting documents and made activities
- Allow individual users to carry on a calendar equipped with a schedule that will allow you to record and visualize the planned dates
- Will have the registry contracts

GIS

Aim of implementation



The construction and commissioning to everyday use of Geographical Information System which is collecting, processing and sharing customers from the sphere of inner city administration and agencies comprehensive, current and integrated data on geographical space and its land use to improve decision-making processes and delivery of electronic services

Aim of implementation



- Setting up a system to conduct national geographic and cartographic resources
- Modernization of the functioning of the administration by increasing the efficiency of sharing spatial data
- Elimination of redundancy and minimize the costs of data processing
- Obtaining summaries of spatial information in line with the needs of users

Automatization of geodetic documentation over the Internet through the conversion analog geodetic documentation to digital form

The scope of a project



The essence of this project is to implement Geographical Information System, which through compliance with the INSPIRE Directive will become part of the Spatial Data Infrastructure (SDI).

The INSPIRE Directive defines the SDI as:

(...) Metadata, spatial data sets and spatial data services; network services and technologies; agreements on sharing, access and use; and coordination and monitoring mechanisms, processes and procedures established, operated or made available in accordance with the Directive.

Spatial information infrastructure: authorities create a network of services, which include services:

- Search Services - Catalog Service for the Web (CSW)
- View services - Web Map Service (WMS), Web Map Tile Service (WMTS)
- Downloading services - Web Feature Service (WFS), Web Coverage Service (WCS)
- The transformation services - Web Processing Service (WPS).

The scope of a project



Construction of GIS requires a multifaceted and complex actions, which have found their direct reflection in terms of proposed project, ie.:

- In the area of data collection
Basic map. It is planned digitization, customization, computerization of spatial data (maps and thematic layers) together with metadata that describes them
- In the area of technical measures
It is planned to implement solutions (applications) with the expected functionality, and equipping with the necessary servers and computer sets with software and peripherals (infrastructure implementation project)
- In the area of processes and procedures
Cooperation and coordination in the field of integration of the various components of the technical infrastructure of the whole system and to conduct comprehensive training administrators and users of the system

Conclusions:

- Application of works
- Application to amend the zoning plan
- Submit comments to the zoning plan
- Applications for certificates
- Applications for outline from the zoning plan
- Application to extract from the zoning plan



Creating a basic map will enable the use of the following e-services:

providing the district geodetic, orders maps, reviewing documents for download (contract).



Residents will be able to use e-services at any time of the day or night practically without direct contact with the office.



All the necessary stamp duty will be implemented through mass payment system.

Integration of Geographical Information and Accounting Information Systems will allow to:

- reporting surveying and mapping via a web browser
- acquisition of geodetic documentation necessary for the realization of applications over the Internet automatically without the participation of office employees
- fully object-oriented data exchange
- Remotely updating the data on ERP – owners, division of plots, sales of the plots, correspondence between resident and the office

Security

Aim of implementation



Residents are subject to three main risks:

- Floods: due to its location surrounded by rivers
- Fires: because for instance in case of large areas of forests
- Contamination by toxic industrial lotions: in connection with the location in the city chemical plants

Other hazards faced by residents of the city are local and they are:

- Failures of equipment and gas, energy and water networks
- Contamination and epidemic infection
- Other consequences of natural disasters (eg.: hurricanes, blizzards)
- Road and railway disasters
- Construction disasters
- Terrorism
- Criminality

Aim of implementation

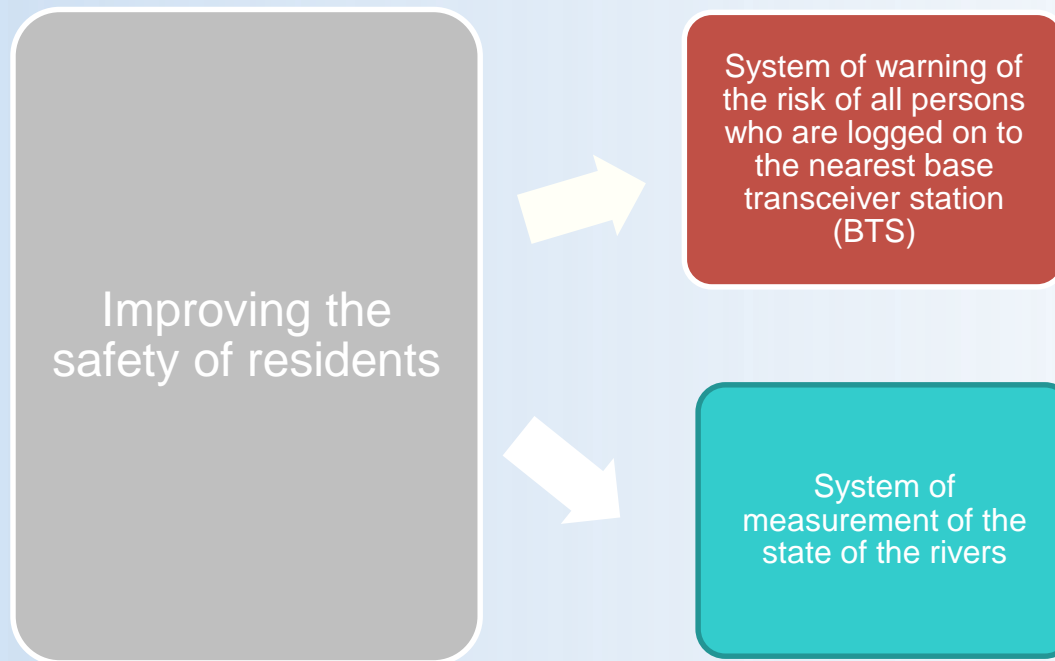


1. Providing the good state of the environment for current and future inhabitants of the region.
2. Protection against natural disasters, especially of flood hazard.
3. Increasing the level of personal, public and health safety, including emergency services.

The scope of a project



Ensuring the safety of the population and to minimize damage in case of an emergency event requires the use of modern system solutions, covering the area of municipal services, organizational units and - most importantly - the inhabitants.



The scope of a project



The implementation of a system of registration and threat assessment and response procedures, including: the creation of an integrated database and the launch of the Portal Emergency Response provided by the web browser ensure effective response by office in emergency situations



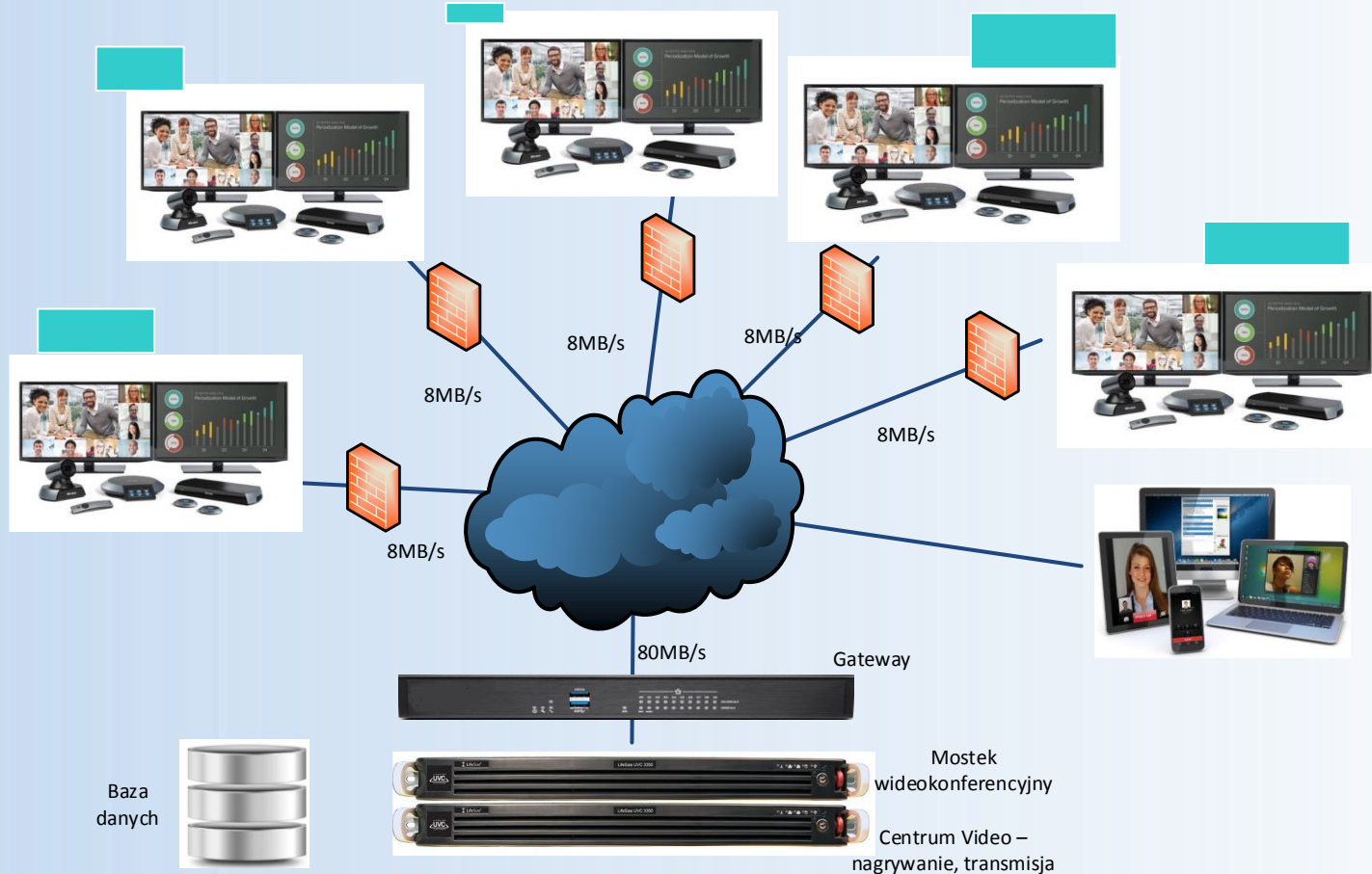
Emergency Response Portal

- Location presentation on a digit map:
 - Urban units involved in the rescue
 - Escape routes
 - Essential elements of technical infrastructure in responding to the crisis
- The possibility of entering information on a map during the rescue, so that they are available immediately for all units participating in the action
- The ability to access information using a web browser via mobile devices, desktops and laptops.

Educational cloud

- equal educational opportunities
- introduction of modern methods of education
- raising the level of education
- increase the level of knowledge and competence
- increasing access to modern information and communication technologies
- leveling access to knowledge and learning
- establish sustained co-operation between universities and schools high schools

Video communication



Aim of implementation



- improving the functioning of the Office of Jelenia Góra and organizational units by improving the flow of information
- creating the conditions for faster decision-making
- creating the possibility of conducting "ad-hoc" meetings such as regular meetings
- the provision and improvement of cooperation of local, regional and international
- creating conditions for more efficient use of working time of employees of the City of Jelenia Góra and organizational units
- baskets reduction related to the participation of employees of the City of Jelenia Góra and organizational units in missions

The scope of a project



The scope of a project



- Video communications system components:
 - Telepresence room
 - Set consisting of a codec and camera (to connect to their existing arbitrary projection systems)
 - Sets consisting of a codec, camera and the TV
 - Videotelephony equipped with camera and color display
 - Videoconference software installed on PCs equipped with a webcam
 - Webcams / video being retrofitting of computers on which the videoconference software will be installed
 - Video teleconferencing bridge connecting different media / protocols (PSTN, ISDN, IP), streaming backup server
 - Implementation of the system
- Promotion
- Integration with the existing telephone system and e-mail software

Public procurement portal

Aim of implementation



Implementation of the system integrating public procurements aims to improve processes related to conducting tenders and automate operations:

- Integration of procurements announced by all departments
- Records of involvement in budget expenditure
- Circulation of information about planned procurements

System integrujący zamówienia publiczne

Publication of procurements

Determining the dates of tenders

Registration of contractors and their offers

Conducting single and multi-stage auction

Publishing the results of the proceedings in accordance with the requirements of the Public Procurement Law

The scope of a project



The system should provide mechanisms to archive the procurements, allowing in a range of archived data to:

- **Confidentiality**
It is to ensure that the information transmitted on the Portal can be read only by its authorized persons
- **Authentication**
It is to correctly determine the origin of the message, including ensuring the authenticity of source (user)
- **Inviolability**
It is to ensure that the data stored in the Portal and the information transmitted can be modified only by authorized persons; modify include: writing, changes, the state change, delete, record creation, processing transmitted between Portal elements
- **Accountability**
It is to provide full information on all decisions taken by each of a Portal users activities related to the modification and viewing data
- **Access control**
It is to ensure that access to resources of the Portal is fully controlled by administrators

**Vă mulțumesc pentru
atenție!**