ICT Infrastructure
Robust ICT Infrastructure for the most demanding information systems

- Design and delivery of a functional ICT infrastructure for medium and large scale information systems
- Delivery of reliable, mutually compatible components and software solutions, their deployment and maintenance
- Design and delivery of infrastructure solutions with an optimal price/performance ratio and with no HW/SW vendor lock-in
- Professional user training, consulting and technical support throughout the lifetime of the products and provided solutions
- Migration of large data and information systems, including data centre consolidation
- Comprehensive, expert administration and effective upgrading of the ICT infrastructure
- Warranty and post-warranty service for provided solutions

www.unicornsystems.eu
Comprehensive Deliveries of ICT Infrastructure

With its extensive experience in ICT infrastructure deliveries, Unicorn Systems can design and implement optimal solutions for its new and existing clients. Our designed solutions offer an excellent added value to cost ratio. As a vendor-independent provider, we can always find the solutions that best match our clients’ needs.

We perceive the ICT infrastructure to be part of a complex corporate ICT environment.

The ICT infrastructure is based on the needs of information systems and the ICT strategy. It is a logical, physically structured system of components and activities, which can be used across different information systems.

The purpose of the ICT infrastructure is to build an environment to run information systems, which then provide users with the required functionalities. The ICT infrastructure consists of several interrelated areas (see Fig. 1).

A stable, optimised and properly secured ICT infrastructure, comprising the appropriate elements, is a prerequisite for the smooth running of critical information systems and has the following key features:

The ICT infrastructure includes a wide range of topics and areas. The reliable operation and systematic interconnection of these areas are essential not only to ensure the proper operation of the ICT infrastructure itself, but also your company as a whole.

ICT Infrastructure Solutions

Smart ICT infrastructure solutions seriously affect three of these key features:

▪ Optimised processes and services
▪ Operational continuity in emergency situations
▪ Sustainable cost of operations and regular upgrades

We focus on ICT Automation (of both information system development processes and the infrastructure), server and desktop virtualisation, solutions for infrastructure services (such as mail systems) and, last but not least, data storage and backup systems.

ICT Automation

In ICT automation, we deal with two essential topics:

▪ Automation of information systems and application deployment
▪ Automation of the ICT infrastructure to run information systems

Fig. 1 – Infrastructure Solutions

Fig. 2 – Operation Continuity
We can also, upon request, add an orchestration layer, which allows our clients to offer and run PaaS (Platform as a Service) and IaaS (Infrastructure as a Service) solutions.

For automation of application deployment, we use our extensive knowledge of information system development and deployment to provide our clients with optimal solutions for their environments.

**ICT Virtualisation**

Virtualisation allows you to optimise the utilisation of available system resources, providing an easy way to ensure high availability of data and information systems. At a technical level, it helps you make configuration changes without impacting the accessibility of your information systems.

We provide reliable virtualisation of your server infrastructure, which is highly efficient in terms of security, availability and cost savings. We offer proprietary and open source virtualisation systems and provide the services necessary to get your virtualisation infrastructure up and running, including its deployment or migration from a physical hardware solution.

For virtualisation of end user devices, we design and implement a virtual desktop infrastructure (VDI) and virtualisation of applications. A complex VDI can provide uniform virtual desktops to a large number of end users without having to build an extensive, homogenous hardware infrastructure.

**IaaS/PaaS**

We can design and build the infrastructure for private cloud services and create public cloud service environments tailored to your needs. Unicorn Systems runs its own cloud environment which can meet the most complex demands of our clients’ information systems.

**Backup and Archiving**

In backup and archiving, our projects focus on:

- Developing backup and archiving strategies
- Preparing/reviewing the data lifecycle in order to reduce backup and archiving costs
- Designing, delivering, and implementing backup solutions from the world’s leading manufacturers

**Server Infrastructure**

The server infrastructure, including the data storage solution, is the heart of the ICT infrastructure. Our data storage and processing solutions are built on robust, highly reliable hardware. Based on your application architecture and requirements, we provide powerful, reliable components to lay the foundations for smooth operation. We design and implement data transfer solutions in the following forms:

- Direct Attached Storage (DAS)
- Network Attached Storage (NAS)
- Storage Area Network (SAN)

**Data Networks**

Stable data networks are key prerequisites for high quality and accessible information systems. When designing data networks we employ a multi-tiered architecture, enabling an efficient response to any demands made by large data networks. We also provide implementation of networking-based services and solutions, e.g. Network Access Control, IP management solutions, VPN design and configuration, etc.

**Wireless networks** – We use wireless technology to provide access to computer networks using state-of-the-art transmission standards. Based on precise site surveys, wireless networks designed and implemented by us have excellent availability, reliability and signal stability.

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**Our solutions provide modern ICT environments while maintaining optimal operating costs**

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![Fig. 3 – ICT Automation](image-url)
Voice networks – We use proven solutions from reputable VoIP technology manufacturers. We design and implement VoIP networks, including integration with other enterprise information systems, such as CRM (customer relationship management) systems.

Data Centres
For data centres, we design server and data racks, UPS, access control and surveillance systems including CCTV (Closed Circuit Television) circuits.

Server and data switchboards – We use standardised racks from leading manufacturers for our server and network infrastructures. Our rack design and equipment meets load, cooling, cabling and management requirements.

UPS (Uninterruptible Power Source) – We provide UPS units with sufficient power and capacity to keep your ICT infrastructure and information systems operational.

Access control systems – We offer comprehensive access control solutions to secure protected devices and information, including monitoring the movement of individuals within the building. For these purposes, we employ state-of-the-art technologies and integrate data identification (PIN, smart cards) and biometric systems (fingerprints, retina scans, etc.).

CCTV – We can design a CCTV monitoring system for image transmission, display or recording. We work with our clients to plan the parameters and locations of the monitoring cameras and to manage the recording lifecycle, as well as integrating other enterprise ICT systems.

End User Devices and Platforms
The design and delivery of devices is important for end user work efficiency. The quality of terminal equipment affects users’ overall work satisfaction and their opinion of the usability of the information system and its added value. We provide mobile equipment solutions and deliveries, beginning with

ICT Infrastructure Services
As a leading supplier of information systems, we perfectly understand requirements for ICT infrastructure design and operation – in order to meet the client’s overall ICT requirements.

- We design an optimal ICT infrastructure solution for each information system, to reduce hardware acquisition costs.
- We provide ICT infrastructure solutions which can adapt to future capacity and performance needs.

■ We deliver and provide added value services, such as training courses, performance and disaster recovery testing or monitoring.
■ We take on the responsibility for the operation and support of the mission-critical ICT infrastructure we are assigned. We strive to eliminate problem situations and elements. Our careful documentation and sophisticated methodology means we can pass the ICT administration back to our customer or to a third party at any time.
■ We carry out migrations of large information systems and data, including the frequently unavoidable migrations across different architectures.
■ Based on a thorough analysis, we design and efficiently execute data centre consolidations in order to improve the efficiency of ICT operations.

Implementation and Renewal
The correct renewal and implementation of solutions is essential for ensuring the operation of your ICT infrastructure at a sustainable cost. We apply our extensive experience, gained from the design and development of numerous information systems, to projects. The implementation process follows tried and tested and functional scenarios.

![Fig. 4 – ICT Virtualisation](image)

![Fig. 5 – Services for ICT Infrastructure](image)
**Operations**
The problem-free operation of ICT is a condition necessary for achieving business goals. We ensure the operation of our own and of adopted information systems, supervision and administration of ICT infrastructure, regular monitoring, and performance of preventive controls. We guarantee the accessibility, functionality, and usability of the ICT, including full outsourcing. Thanks to this, clients can focus fully on their own business. We abide by the strictest SLA and we are able to provide our services anywhere, 24/7.

**First Line Support**
First Line Support represents effective and immediate help for information systems users. We provide solutions to known problems, including temporary solutions, and also ensure subsequent communication with Second Line Support. Depending on the client’s needs, we also offer other related services within First Line Support, for example the creation of statistical overviews and bulk task processing. We have a modern call centre with qualified personnel and we offer helpdesk and hotline services in all major world languages.

**Second Line Support**
Our Second Line Support provides solutions to information system issues which cannot be solved by First Line Support. Detaching the Second Line Support from Building Up guarantees the SLA parameters for solving problems and errors. Furthermore, we provide support when solving new and non-standard operational tasks such as data migration, database upgrades, or minor changes in information systems.

Unicorn Systems is certified in accordance with ISO 9001, ISO 10006, ISO 14001, ISO 20000 and ISO 27001 to provide services related to the supply of ICT solutions.

**Unicorn Information System**
Unicorn Systems lets its clients share information through the Unicorn Information System, which is operated by the Plus4U internet service. The Unicorn Information System gives each authorized user 24/7 access to information about any supported project or provided service. Anytime and from anywhere, a client user will have access to documents and information on the status of a project and every user will always be able to communicate with other members of the project team.

**Added Value**
- **Proven and technologically advanced solutions** We only offer our customers solutions which are proven and ensure real added value.
- **Solutions ensuring added value** We actively search for new solutions and promote the ones we find most suitable and appropriate.
- **Vendor independent solutions** We provide vendor independent solutions, which is why we can offer optimal solutions which meet the needs and demands of the customer.
- **Comprehensive deliveries** We cover the entire life cycle of the deployed solution for our customers – from the initial consultations and design, through delivery, installation and parameterisation, training, testing and full deployment to integration with other solutions.
- **Help with problem solving** Along with manufacturers, we ensure effective technical support and help with problem solving.
- **Proper documentation of the entire installation** Our standard procedure during the installation is to provide the client with documentation containing the description of the installation and the setup of the software and hardware components supplied in the corporate environment.
About Unicorn Systems

Unicorn Systems is a renowned European company providing the largest information systems and solutions in the area of information and communication technologies. We have focused on providing high added value and a competitive edge to our clients for many years. We have been operating on the market since 1990 and since then we have created a series of high-end large-scale solutions that are extended and used among the most important companies in a variety of sectors. We have the best references from companies in banking, insurance, energy and utilities, communication and media, manufacturing, trade and the government. Our customers are not only the largest companies but also market leaders. We have detailed knowledge of the entire spectrum of all business sectors. We understand the principles of their operation as well as comprehend the specific needs of our customers.

References

Banking
- Česká spořitelna, a.s.
- ČSOB, a.s.
- Komerční banka, a.s.

Insurance
- Česká pojišťovna a.s.
- Komerční pojišťovna, a.s.

Energy and Utilities
- ČEPS, a.s.
- BritNed Development Ltd.
- EirGrid plc
- EMS Elektromreža Srbije
- National Grid plc
- RTE EdF Transport
- SEPS a.s.
- PTC SEE CAO LLC
- TenneT TSO B.V.
- Terna Rete Italia S.p.A.
- Transelectrica – Romanian National Power Grid Company

Telecommunications
- Vodafone Czech Republic a.s.

Public administration
- Kraj Vysočina
- Ministerstvo pro místní rozvoj ČR

Industry
- RADIUM s.r.o.
- Rockwell Automation s.r.o.
- SOR Libchavy s.r.o.
- ŠKODA AUTO a.s.
- TurboConsult s.r.o.
- VUAnCh a.s.

Sales and Services
- BRISTOL a.s.
- McDonald’s ČR s.r.o.
- ORIFLAME SOFTWARE s.r.o.
- TESCO a.s.

Information technologies
- Plus4U Net a.s.

Education
- Česká zemědělská univerzita v Praze
- Vysoká škola chemicko-
- technologická v Praze
- Vysoké učení technické v Brně
- Západočeská univerzita v Plzni

Health
- ELLA-CS, s.r.o.
- Nemocnice Na Františku
- Nemocnice Strakonice, a.s.
- Oblastní Nemocnice Trutnov a.s
- Státní ústav pro kontrolu léčiv

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