ČD - Telematika provides Internet, data and voice services. It also carries out construction projects and operates and services various components of telecommunication infrastructures, including complex ICT projects. The company portfolio also includes additional services with added value including contact centre services, system integration, data diagnostics and analysis or cyber security. ČD - Telematika utilises geographically independent data centres equipped with high level security systems and also provides 24/7/365 customer support services.

The company owns the largest fibre-optics infrastructure in the territory of the Czech Republic, which is 3,500 km long, is used to operate metropolitan networks in 26 cities, and offers 500 connection points and more than 25 specialised workstations.

The biggest assets of ČD - Telematika are its exceptionally qualified employees and know-how. The company holds several quality certificates such as ISO and AQAP 2110, and NBÚ certification and it is also a member of various professional associations such as the CZ.NIC, the NIX.CZ, and others. The company has joined the FENIX project with the intention to provide safe Internet in the Czech Republic.

Since 1994, the company has become an important supplier of wholesale telecommunication services on the Czech ICT market. Services with guaranteed SLA have already been positively verified by civil service customers, private corporations, national operators and local providers of Internet connectivity services.
ČD - Telematika (ČD-T) offers connection options through its own extensive fibre-optics infrastructure. DWDM, SDH and IP (IP MPLS, L2) technologies operated within this infrastructure allow the company to offer a wide variety of high-quality telecommunication services. Thanks to the unique know-how, the company not only leases fibre-optics infrastructure but also designs, constructs and services optical routes.

ČD-T offers high-quality and reliable Internet connection with the option of Internet connection security incident monitoring and direct connection to the national peering node NIX.CZ.

Thanks to ČD-T voice services, local Internet providers and ICT service providers may also offer land lines through their own portfolios without the need to invest into expensive technologies. Their clients may also obtain free telephonic information. ČD-T also connects branch switchboards used by customers to the public telephone network.

Three geographically independent data centres of ČD - Telematika meet high safety criteria. They use state-of-the-art technologies, naturally including connection to fibre-optics network from several independent directions. Continuous operation is monitored by highly trained and experienced specialists.

Thanks to our highly experienced employees and know-how, ČD-T offers a wide spectrum of services from design services, construction of telecommunication infrastructures to implementation and operation including maintenance services and outsourced auxiliary services. With high-tier expertise, ČD-T provides security for transfer, voice or data, as well as cable, power and security as well as for monitoring camera systems. Offered services also include implementation, planning and evaluation of servicing and maintenance.

ČD-Telematika utilises its own customer centre, which accepts requests from end-users, and Service Desk. Therefore, ČD-T is prepared to operate other telecommunication networks. Thanks to highly skilled operation and servicing employees and support for its own IT systems, ČD-T is able to cover the entire spectrum of needs and requirements of owners of telecommunication infrastructures.

**Offered services**

- **Voice services**
- **Data centres**
- **Internet services**
- **Infrastructure maintenance services**

**ČD-T FIBRE-OPTICS INFRASTRUCTURE**

**SELECTED REFERENCES:**

- AŽD Praha s.r.o.
- CESNET, zájmové sdružení právnických osob
- České dráhy, a.s.
- ČD Cargo, a.s.
- ČD – Informační Systémy, a.s.
- Internet Mail, a.s.
- ISP Alliance a.s.
- KABELOVÁ TELEVIZE CZ s.r.o.
- Ministerstvo dopravy ČR
- Ministerstvo vnitra ČR
- Town of Svitavy
The internal project management of ČD - Telematika is based on PRINCE2® methodology, which allows us to deliver solutions that fully respect customer requirements and technological capabilities while taking into account the required quality and budget.

Control systems made by ČD-T can be used to control security, fire and traffic systems such as fire ventilation, adjustable traffic signs, measuring instruments, camera systems, EPS, EZS, including connection of all these components into one unit and connection to dispatch stations. Affiliation-based services include projects focusing on engineering/utility networks, development of user software applications for traffic serviceability or monitoring and supervising centres.

Unique know-how allows ČD - T to offer sophisticated solutions designed to measure the quality of routes which connect railway cars to sophisticated sensory technology (photometry, laser technology). On-line data processing allows instant identification of possible defects on the given transport route, followed by a rectification request based on priority and severity of the defect. This allows customers to plan preventive maintenance at the most defect-prone areas, thus avoiding possible exclusions and associated extra costs.

ČD - Telematika provides extensive services in the area of information security, from initial investigation all the way to implementation of complex security systems in line with the given control systems, and in line with legislation related to cyber security or protection of classified information. Based on customer needs ČD - Telematika provides extensive security services in terms of physical, communication and information protection requirements.

ČD - Telematika participates in innovative solutions related to the Internet of things (IoT), and helps cities and municipalities to optimise their parking areas or remote building security systems.

ČD-T is able to supply and operate specialized SW solutions dealing with transportation telematics, logistics data repositories, and extensions of monitoring and surveillance systems for ICT infrastructure. System integration services include complex delivery of ICT infrastructure for transit systems (railways, roads), including of hosting services primarily offered to the civil service.

GSM-R projects are created with the support of extensive servicing background. Delivery of stationary vehicle and mobile communication systems (radio, Simplex, GSM-R) starts with the actual design of the solution and installation including warranty and post-warranty 24/7 service with guaranteed SLA.

Synergy of Knowledge and Experience

The internal project management of ČD - Telematika is based on PRINCE2® methodology, which allows us to deliver solutions that fully respect customer requirements and technological capabilities while taking into account the required quality and budget.

Control systems made by ČD-T can be used to control security, fire and traffic systems such as fire ventilation, adjustable traffic signs, measuring instruments, camera systems, EPS, EZS, including connection of all these components into one unit and connection to dispatch stations. Affiliation-based services include projects focusing on engineering/utility networks, development of user software applications for traffic serviceability or monitoring and supervising centres.

Unique know-how allows ČD - T to offer sophisticated solutions designed to measure the quality of routes which connect railway cars to sophisticated sensory technology (photometry, laser technology). On-line data processing allows instant identification of possible defects on the given transport route, followed by a rectification request based on priority and severity of the defect. This allows customers to plan preventive maintenance at the most defect-prone areas, thus avoiding possible exclusions and associated extra costs.

ČD - Telematika provides extensive services in the area of information security, from initial investigation all the way to implementation of complex security systems in line with the given control systems, and in line with legislation related to cyber security or protection of classified information. Based on customer needs ČD - Telematika provides extensive security services in terms of physical, communication and information protection requirements.

ČD - Telematika participates in innovative solutions related to the Internet of things (IoT), and helps cities and municipalities to optimise their parking areas or remote building security systems.

ČD-T is able to supply and operate specialized SW solutions dealing with transportation telematics, logistics data repositories, and extensions of monitoring and surveillance systems for ICT infrastructure. System integration services include complex delivery of ICT infrastructure for transit systems (railways, roads), including of hosting services primarily offered to the civil service.

GSM-R projects are created with the support of extensive servicing background. Delivery of stationary vehicle and mobile communication systems (radio, Simplex, GSM-R) starts with the actual design of the solution and installation including warranty and post-warranty 24/7 service with guaranteed SLA.
In order to provide Ethernet and Internet services, ČD - Telematika operates an IP network with circular topology which guarantees high service availability. The fibre-optics network has capacity of up to 80 x 10 Gbps. The main points of the network use 2 x 10 Gbit/s. The IP network is connected to NIX node with two independent lines each having capacity of 10 Gbit/s and foreign connections with capacity of 4 x 10 Gbit/s. The IP network fully supports IPv6 protocol and, in addition to other services, it is also used to transfer IPTV signals.

Customer support centre and supervision services are available 24 hours a day, 7 days a week. Customers may find service stations at 25 locations in Czech Republic. Services are guaranteed under SLA terms.

ČD - Telematika has met the demanding technical safety parameters necessary to join the FENIX project, which originated on the grounds of the NIX.CZ association. Members of FENIX, major providers of connection and content, are preparing for extreme situations in the effort to guarantee secure internet traffic in case of cyber-attacks.