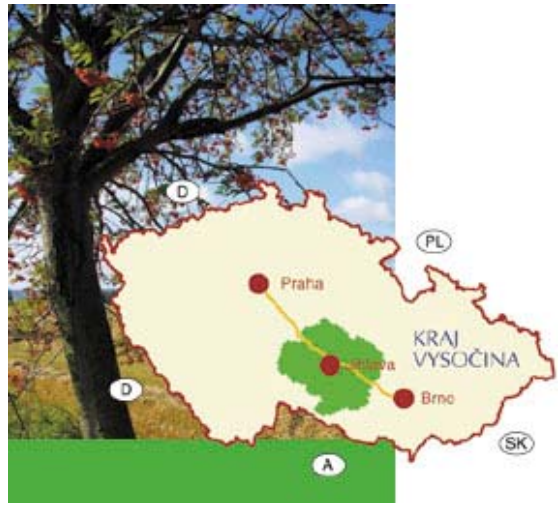
High quality of public services and desirable telecommunication environment by way of broadband development in the region - ROWANet network

Region situation before project



- Region population – 0,6 mil, **704** municipalities
- Regional authority established 2001

- Big number of municipal networks (30+ MANs)
- Big number of transit fiber lines and its projects
- Unusable market supply of backbone connections
- ISP's high usage of WiFi and FWA distribution lines
- Cablehouses not available
- Huge demand on broadband (>10Mbit/s) from public sector
- New universities in region
- Big requirement of private networks from Regional authority

Main objectives of the project

- Support of telco market supply in rural region with less than 5% of broadband
- Building of regional backbone fibre network owned by self-government
- Support of local networks on municipal and microregion level (MAN)
- Support of academical and research projects
- Support for regional rescue system

Basic information on ROWANet

- Backbone fibre network based on CWDM technology (min 2x1Gb/s to each node)
- 9 cities of the region connected by network, 120km of dark fibre, 20 CWDM filters, …
- Up to 50 nondirectly connect municipalities (using partners MANs)
- Fully functional data network interconnecting public organizations able to distribute services of other national networks and academicals network
- Portfolio of new network services fpr public sector (IP, VoIP, IPTV, VoD, SAN …)
- 15 new PIAPs in region (PC, WiFi)

Other project details

- 1,2mil EUR project was supported form SF (ERDF 0,5mil EUR), regional (0,6mil EUR) and state (0,1mil EUR) budget.
- Present applicant and project management ICT dpt. of RA
- Timing
  - 10/2003 – start of analytical phase
  - 06/2004 – regional assembly has approved project concept
  - 09/2004 – SF control unit has validate project to be financed
  - 10/2004 – public tenders realisation – contract on fibre lines (120km), active (Cisco) and pasive (CWDM) network components, PIAPs
  - 03/2006 – project completion (backbone, PIAPs, WiFi, …)
  - 05/2006 – tenders on first outsourced services (VoIP, IP, IPTV)

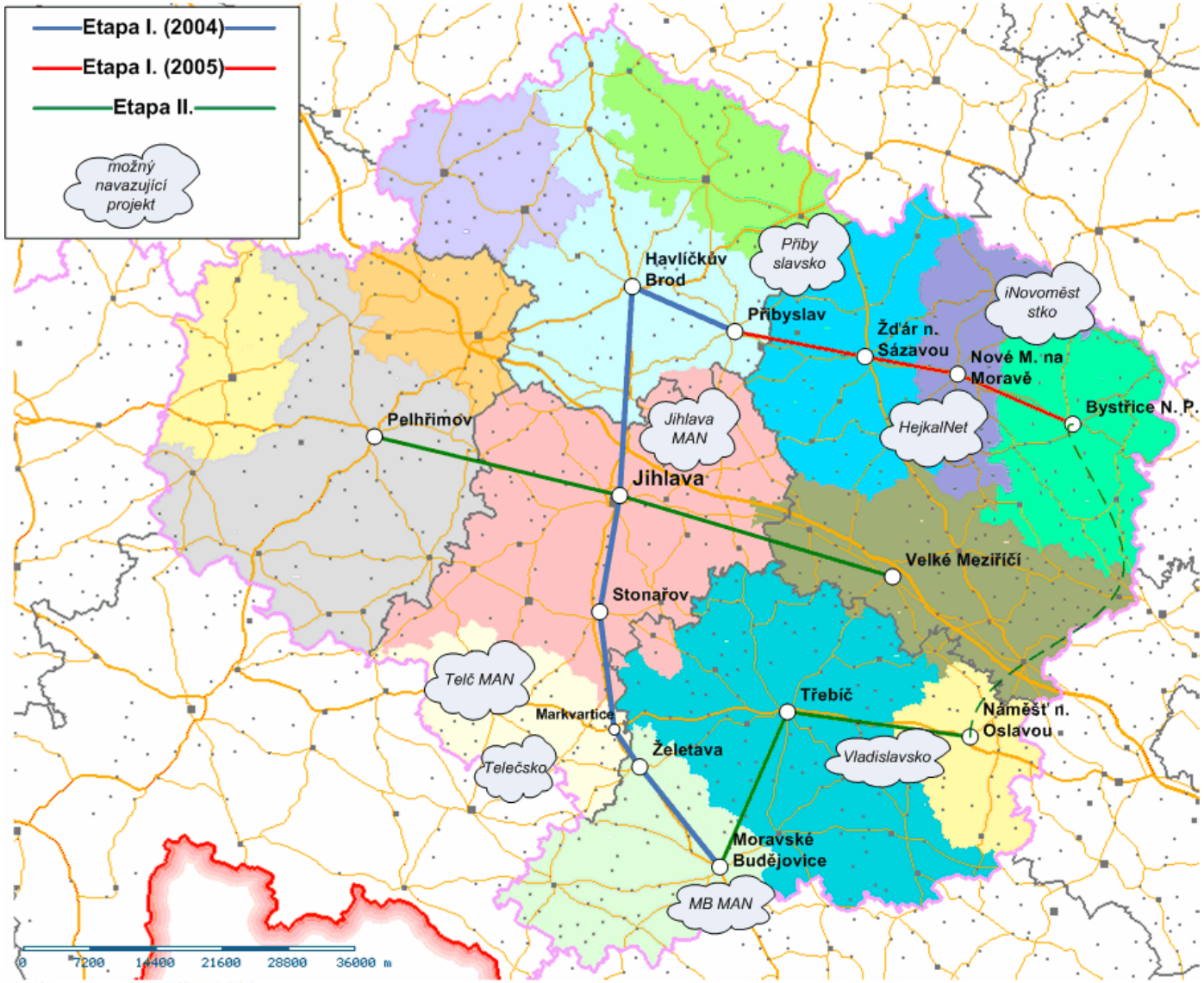
Main project partners

- **OPTOKON Co. Ltd. spol. s r. o.**
  – fibre and CWDM elements producer.
  - owner of Optonet network.
  - supplier of ROWANet-S
- **Self Servis** – supplier of ROWANet-N
- **British Telecom** – project consultations, FS and market research
- **Anect a. s.** – system project of NIC Vysočina
- **Autocont CZ a. s.**
  – technical project of CWDM part a project coordination with MAN
- **Cesnet z. s. p. o**.
  – Czech academical high-speed network, national EDUROAM partner

Main public sector partners

- **Nové Město na Moravě City** – HejkalNet, eNovoměststko projects (financed by JROP), content projects (GIS, FWA internet kiosks, tourism, sport)
- **Moravské Budějovice City** – existing metropolitan CATV network, CWDM and SAN/NAS services testing, microregional WiFi network
- **Telč City** – Internet in Telč exhibition, MAN projects financed from SF, WiMAX regional network project
- **Havlíčkův Brod City** – private MAN network, seat of the regional library
- **Přibyslav City** – metropolitan CATV+FTTX network, microregional network project
- **Žďár n. S.** – metropolitan FWA and FTTB network
- **Bystřice n. P.** – metropolitan FTTB network

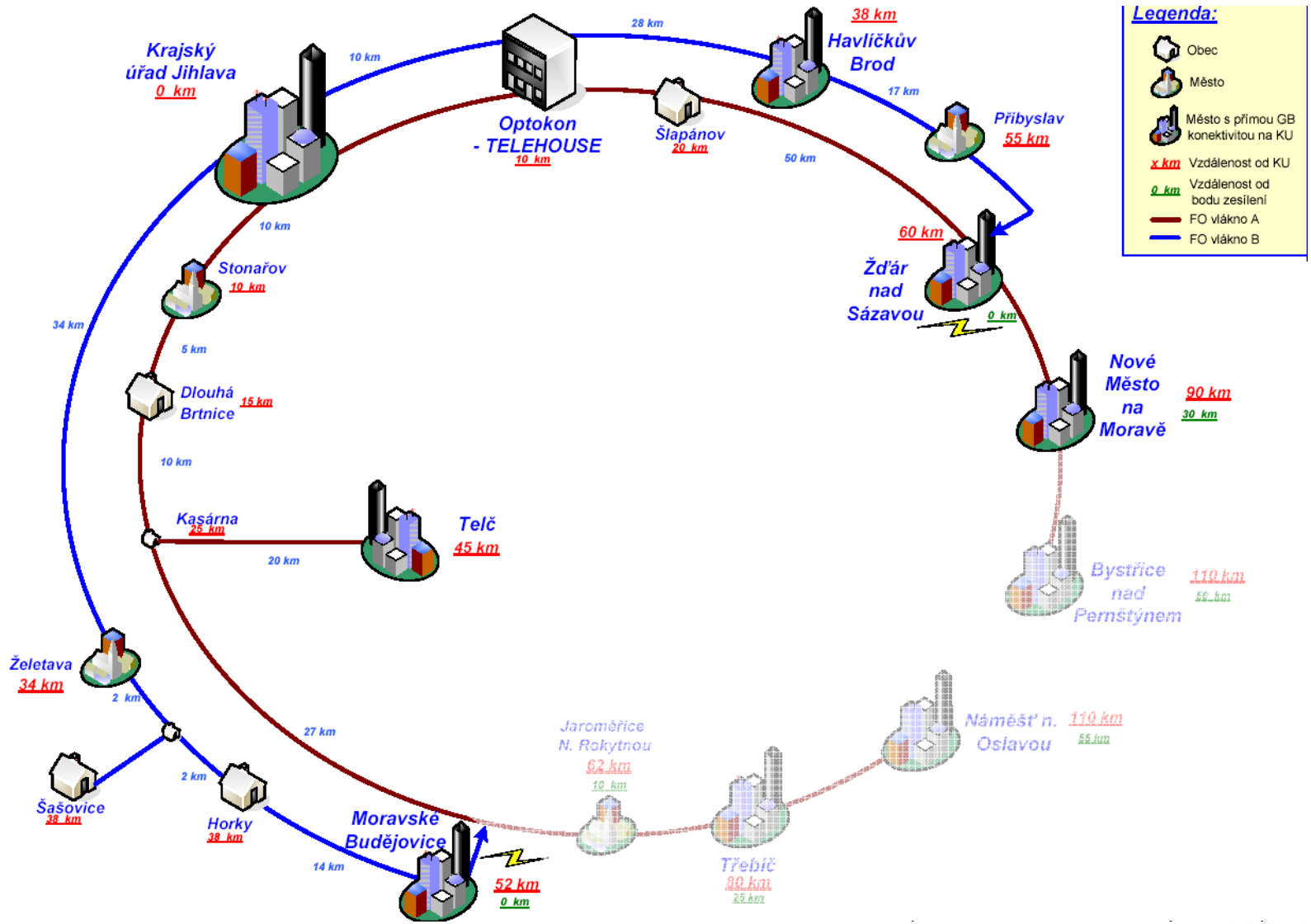
Topology



Information Society Technologies

Joint Regional Operation Programme Czech Republic

Kraj Vysočina



BReATH

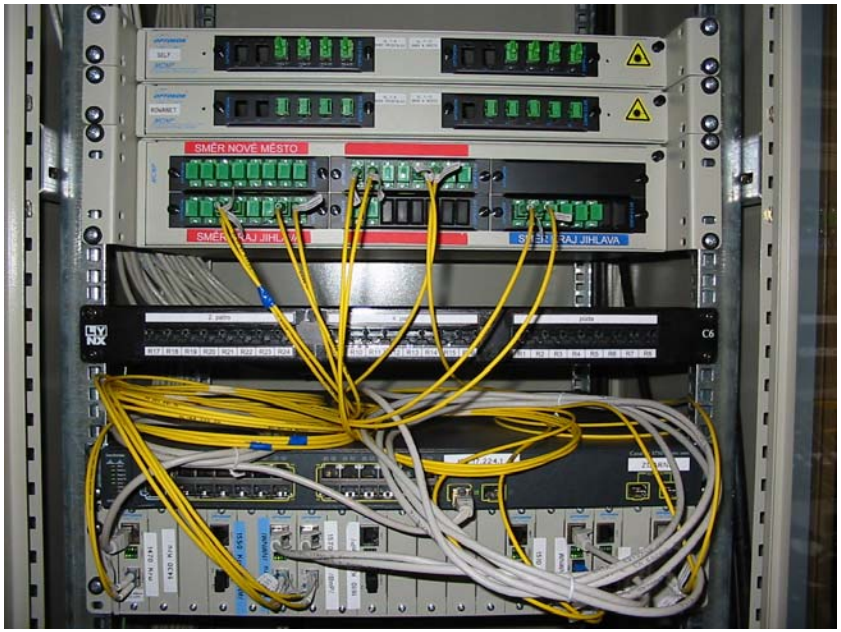
rowanet

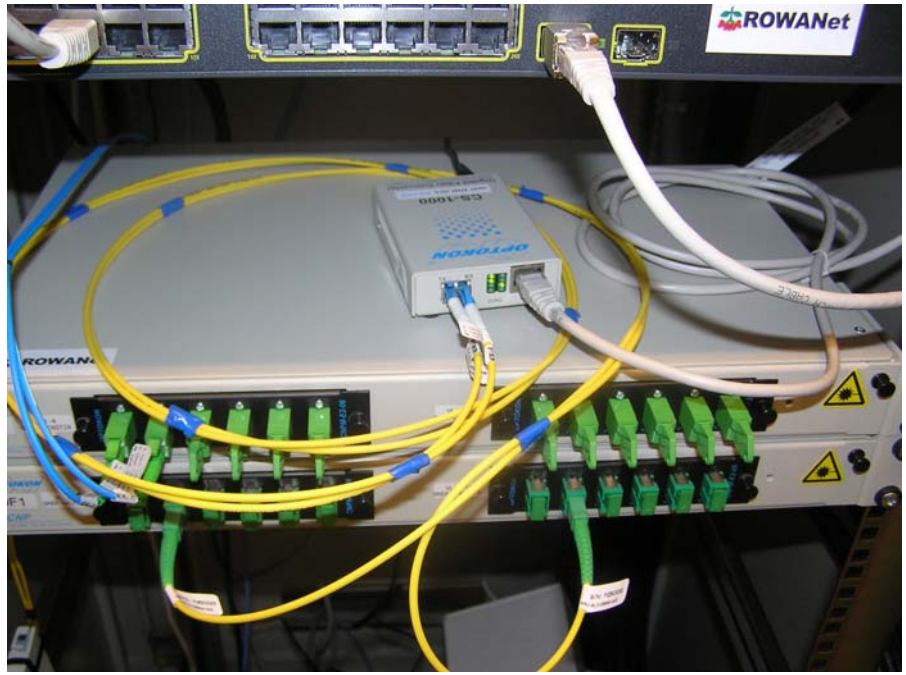
Information Society Technologies

Joint Regional Operation Programme Czech Republic

Kraj Vysočina

Samples of Installations





Provided network services

- High-speed public internet connection (10Mbit/s – 1Gbit/s)
- Advanced network services (VPN, MPLS, IPv6)
- Hosting services for public authorities
- User roaming services (EDUROAM, SparkNet)
- Public internet access (Wifi Hotspots)
- High capacity services (SAN/NAS, iSCSI, >20TBytes)
- GIS services (regional map services – WMS, WFS)
- Services for rescue system (GPS, video monitoring)
- Demand aggregation for VoIP, IP and IPTV
- Networks monitoring

Project innovation

- Usage of CWDM technology on regional level
- Development and coordination of national and global operators owning transit lines to provide new services in the region
- Coordination of municipal activities in building last mile networks using standardized backbone interfaces and regional financial grant system
- Providing new high capacity services for public sector
- Low network operation costs due cooperation with private operators and academic sector
- Using new network standards (IPv6, iSCSI)

Good practice

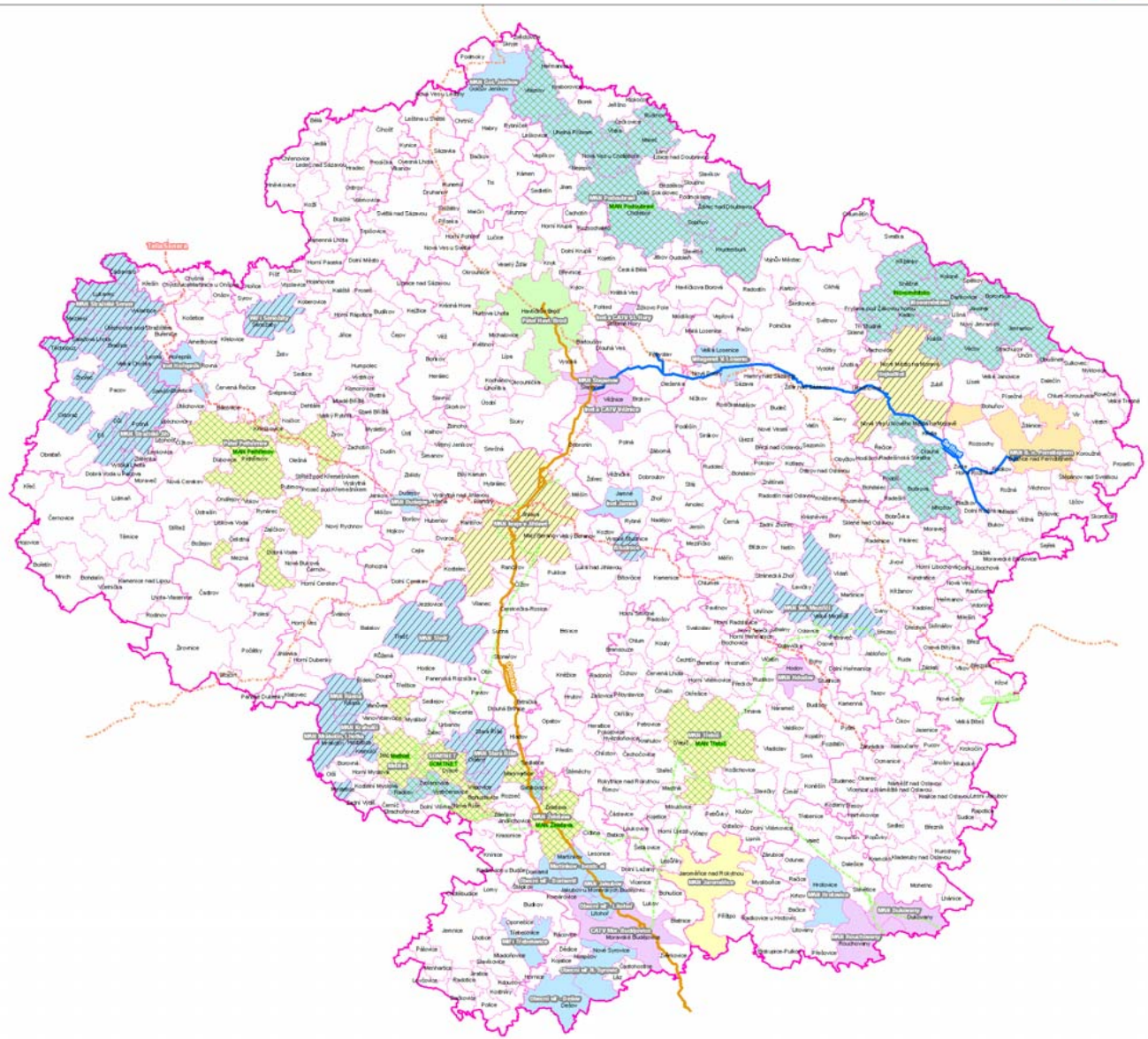
- Usage of PPP methods to build public networks
- Detailed analysis of existing and usable infrastructure before we are going to build new one
- It’s possible to discuss with global operators about their fiber lines to provide regional services
- It’s possible to support telco supply without dealing with public aid problems
- Usage of other regions good practice (e.g. Turku SparkNet)

Things to avoid

- Early to clarify positions and relations of operators and region in cable and telehouses
- Be aware with project schedule (negotiation with land owners)
- Practice of Czech administration process of SF ☹

Things to celebrate

- “unlimited” expandable network capacity when using fibers and CWDM
- Low operation costs of large network
- Working model of PPP cooperation



BReATH

rowanet

Information Society Technologies

Joint Regional Operation Programme Czech Republic

Kraj Vysočina

Contacts

Regional Authority of the Vysocina Region

Žižkova 57, Jihlava 587 33

www.kr-vysocina.cz

- **Ing. Petr Pavlinec – ICT department director**
  - **pavlinec.p@kr-vysocina.cz**
- **Ing. Václav Jáchim – head of the policy section of ICT dep.**
  - **jachim.v@kr-vysocina.cz**