



IT Cluster

Platform for Cooperation in the Intelligent Traffic Systems

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Some introductory words ...

- **Cluster Definition**

- Clusters are regionally located groups of interconnected companies, specialized suppliers, service providers, companies of related subject areas, banks, affiliated institutions and companies which compete but also cooperate with each other to increase their competitiveness, profitability and position on the market.

- **Proposition**

- Clusters can contribute to the cooperation between universities and the commercial sector.

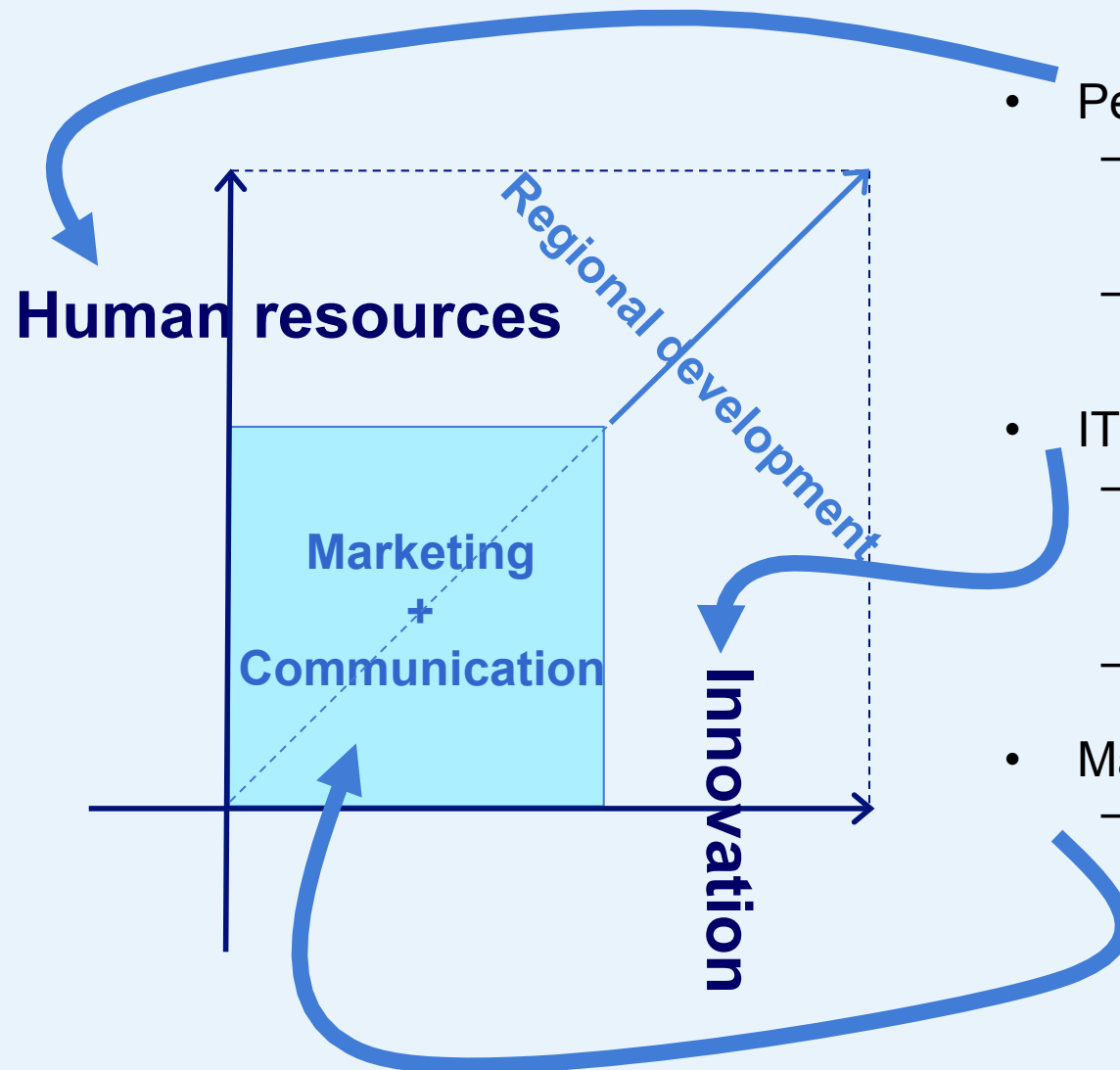
- **Proof?**

- There is no formal proof, but rather empirical: **derived from the trials and observations of the ITCluster association ...**

Historical Development

- ITCluster was established in January 2006 as a citizen-action org.:
 - cluster was established by 18 companies, organizations and people working especially in the IT sphere
- The role of the association is primarily:
 - to create an environment for multilateral **development of IT specialists** based on the close cooperation with educational institutions, with the objective of ensuring human resource development in the association members
 - to establish conditions for the **maximum application of synergy** of production and development potential in the IT sphere and other related spheres
 - **to support innovation processes**, research and development of association members' activities
 - **to support communication** among business, public service, self-regulatory and non-profit organizations with related interests
 - **to offer advisory and consultancy services**
 - to organize **seminars focused on IT problems** and related subject fields

People for IT ■ IT for People



- **People for IT**
 - Satisfying demand, both in number and quality, of university graduates.
 - Securing lifelong education and defining long-term objectives in this area.
- **IT for People**
 - Research and innovation should be perceived as having a „shared future“, not only as an perfunctory approach to current problems.
 - Research and innovations should also meet regional requirements.
- **Marketing and communication**
 - Ensuring of cooperative projects according to concrete requirements of cluster members.

Modus operandi

- IT Cluster as an **attractor** of projects in the IT sphere, the idea, **complexity and extent of which exceed the limits of its individual members.**
- IT Cluster as a **generator of a virtual company** established from its association of members for the purpose of realization of the above mentioned projects.
- IT Cluster as a **platform for communication and formation of partnerships** between association members and their clients.
- IT Cluster does not offer **one concrete product.**
- IT Cluster applies the **synergic effect of co-operation** between companies and organizations doing business in various fields of IT.

Schematic representation of IT Cluster activities



Requirement

Product



Virtual company establishment

Company 1

Company n

Company $n-1$

Company i

Company k

Company l

Solution



Intelligent Traffic Systems

- **Project of high level complexity** based on close cooperation of many IT Cluster members
- **Three phases**
 - **Feasibility study** for City Hall of Ostrava including **analysis of the current state!**
 - Pilot project of ITS for Ostrava – **static traffic.**
 - **Complete implementation of ITS**, which should exploit the **research potential of the university** and the planned supercomputing centre.

Pilot Project Requirements

- Building of the **Traffic Information Centre** in terms of deployment of suitably dimensioned hardware and software.
- Preparation of the foundation for the subsystem of traffic control – **Traffic Control Center**.
- **Linking** of the Traffic Control Center **with** the National Traffic Information Centre (**NDIC**)
- Development of **simulation and prediction tools** based on FLOREON system for the gradual improvement of efficiency of navigation and traffic optimization.
- **System must be open** for further implementation of the complex (and complete) traffic management system.

Pilot Project Outputs

- **Navigation system for drivers on selected parkings using variable traffic signs.**
- Foundations of **Transport Information Centre** have been built.
- Public traffic-information portal is **linked with NDIC.**
- **Large parking lots (80 +)** have been included.

Statutární město Ostrava
oficiální portál města

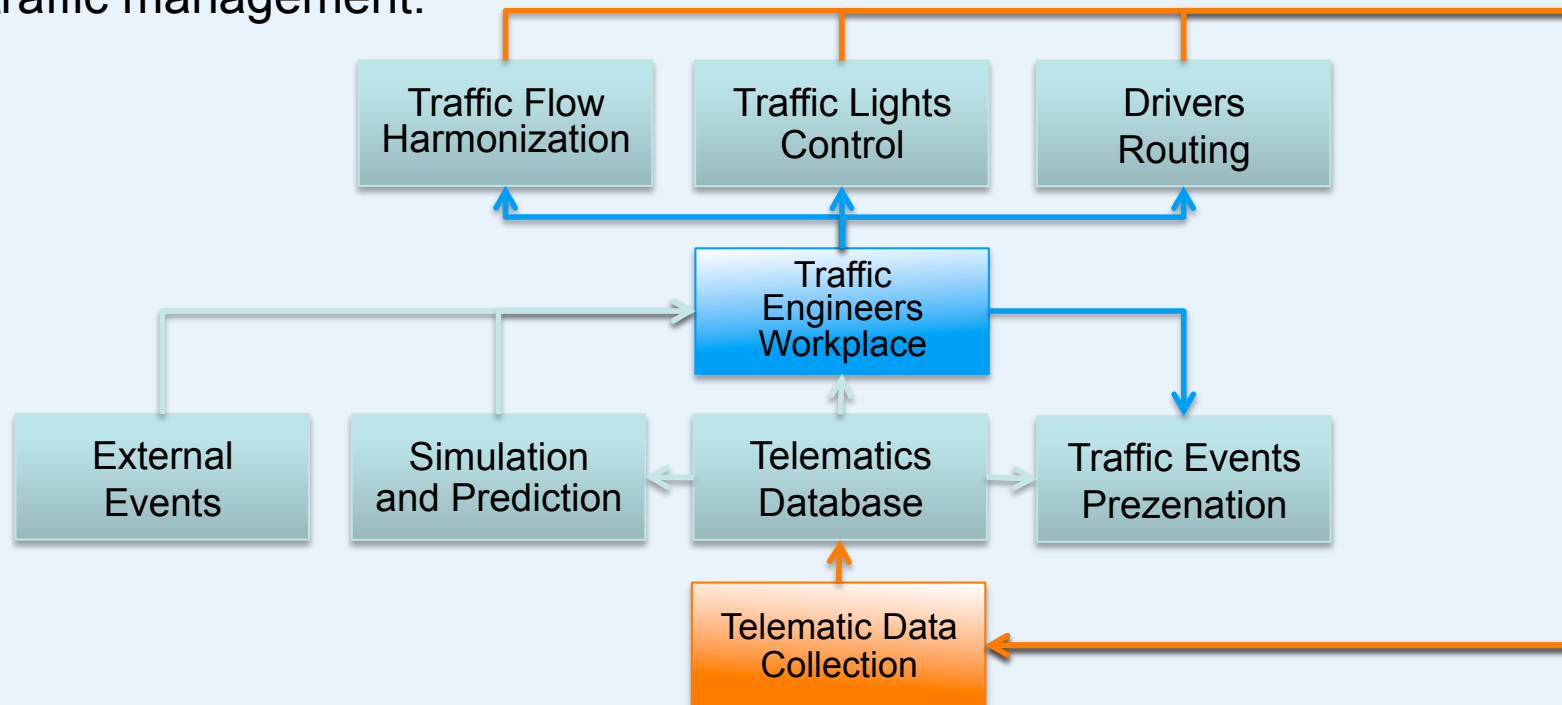
OSTRAVA!!!

Aktuálně v ČR:

- D1 ve směru Praha mezi 190.5 a 189.5 km : Dopravní uzavírky a omezení**
19.01.2010 09:00 - 19.01.2010 11:00
neprůjezdný pravý jízdní pruh neprůjezdná zpevněná krajnice (odstavní pruh) práce údržby
- D1, ve směru Praha, mezi 136 km a 135 km : Nehody**
Od 19.01.2010 09:41
převážně nákladní vozidlo
- na silnici 36818 v obci Horní Štěpánov okres Prostějov : Dopravní uzavírky a omezení**
19.01.2010 09:37 - 19.01.2010 10:37
neprůjezdné, padlý strom
- na silnici 9 v obci Lipa okres Česká Lipa : Dopravní situace**
19.01.2010 08:00 - 19.01.2010 11:00
dopravní problém kyvadlový provoz jedním jízdním pruhem
- na silnici 45 v obci Bruntál : Nehody**
Od 19.01.2010 09:24
nehoda s únikem paliva havarované vozidlo kyvadlový provoz jedním jízdním pruhem
- na silnici 60 v obci Skorošice okres Jeseník : Omezení provozu a zátky**
19.01.2010 09:13 - 19.01.2010 12:13
komunikace dočasné uzavřena mokry sniž
- na silnici 55J v obci Horní Moštěnice okres Přerov : Nehody**
Od 19.01.2010 09:23
hromadná nehoda kyvadlový provoz jedním jízdním pruhem očekávejte silný provoz
- na silnici 330 v obci Hlmburk : Nehody**
Od 19.01.2010 07:38
nehoda nákladního vozidla
- D1, ve směru Brno, 39,5 km : Nebezpečné překážky**
19.01.2010 09:04 - 19.01.2010 11:30
překážka na vozovce, průjezd se zvýšenou opatností neprůjezdný jízdní pruh pomalá vozidla
- na silnici 312 v obcích Zámberk, Dlouhoňovice, Hejnice a České Libchavy okres Ústí nad Orlicí , délka 8.3km : Nehody**
Od 19.01.2010 08:15
nehoda nákladního vozidla probíhá

Future ...

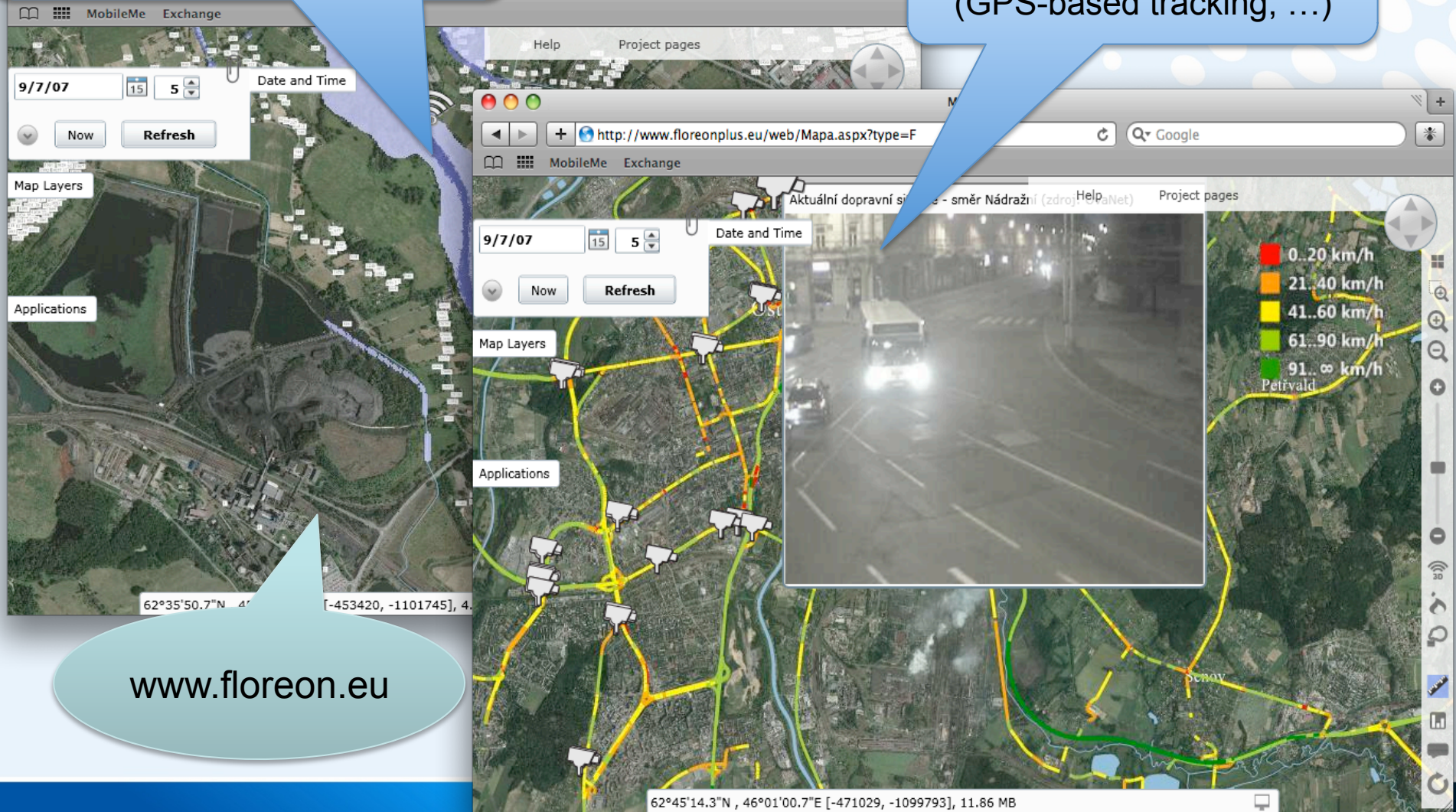
- **Routing drivers with information boards and signs** according to current traffic conditions, according to the weather and according to cultural or sporting events in the area.
- **Data visualization** portal for the public linked with camera system.
- **Providing the NDIC data to car navigation systems using RDS-TMC.**
- **Simulation and prediction** of traffic flow - a future way how to automate traffic management.



... and what we have!

Floods modeling and simulation
(web-based, virtual reality ...)

Traffic monitoring and prediction
(GPS-based tracking, ...)



www.floreon.eu



THANK YOU!

