

SEVENTH FRAMEWORK PROGRAMME

# B2B – loco project data base and selected success stories

B2B LOCO

**Scientific symposium of Croatian Scientific Society for transport (HZDP) - Croatian Workshop, Opatija, April, 28 ,2011**

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- Description of **work** and presentation of **results**, concerning:

  - ✓ **Task 4.1** – Identification of most crucial FP &other EU projects with solutions in the sector of logistics & transportation
  - ✓ **Task 4.2** – Identification of SMEs implementing the most innovative project results in practice

- Description of **success stories** from AUTh B2B – loco team :

  - ➢ Presentation of '**SMART – CM**' project
  - ➢ Presentation of '**PREVENT**' project
  - ➢ Presentation of '**POET'** project
  - ➢ Presentation of '**FRETIS'** (software developed under the support and funding of several projects)

# Task 4.1 - Description of work

- Collection of data (with the contribution of all partners) concerning realized FP – projects (finalized and running) in the area of transport & logistics, getting data from public databases, on-line documents and from the press
- Projects with results on promoting or implementing green technologies will be emphasized
- More than 160 FP and other projects in the database for projects applicable for SMEs (in the last 10 years), containing data on:
  - project id (name & full title),
  - period of implementation of the project (start / end date)
  - description of work (scope & tasks),
  - results of project (concerning the added value for SMEs),
  - working team (partners) and their contact details and
  - SMEs involved in the project realization with their contact details where available

# Task 4.2 - Description of work

- Collection of info on the firms participated in projects from the participants of the projects identified in Task 4.1
- Identification of most successful cases (success stories) to be presented thoroughly, highlighting again on green technologies
- Use of special form concerning:
  - project id (full title, coordinator and contact details, funding programme), duration - period of implementation of the project (start / end date) , logo and official web page
  - short description of work (scope & tasks),
  - SME oriented results,
  - working team (partners) and their contact details,
  - SMEs involved in the project realization and their added value,
  - SMEs exploiting projects results,
  - Target groups, companies contacted and their benefit and
  - Promotion of any green technologies

# Problems encountered

- ✓ Large number of projects that had to be contacted
- ✓ Old contact details - hard to reach or no longer existed
- ✓ Difficult to convince projects' coordinators to reply to our questions (lack of time, no tangible benefit for them)
- ✓ Short time of reaction of project coordinators – uncompleted answers received concerning SME benefits from projects
- ✓ Unwillingness from the part of some coordinators to "reveal" requested project info due to lack of time
- ✓ SME representatives' unwillingness to reveal any data due to indifference about research projects and no benefit gained: fewer number of SMEs collected than expected
- ✓ Large number of projects had no SMEs directly or indirectly involved/benefited by projects results
- ✓ Low participation/involvement of SMEs in FP projects due to lack of dissemination of results and potential benefits for SMEs from research projects

# When a case study is a success story

- Small and Medium sized Enterprises (SMEs) are benefited by the:

  - adoption and putting into action of methodologies,
  - exploitation of findings, results and conclusions and
  - use of patents

  produced by E.U. funded or co-funded projects in the field of Transport and Logistics
- The SMEs may either be involved in the projects (e.g. project partners, participants in a survey etc) or not
- The benefits from the part of the SMEs may be of business strategy influence, economic, organizational or other nature
- Special focus on projects with environmental friendly concept and / or promoting and implementing any green technologies

# Description of success stories

**Description of successful cases:**

- **SMART – CM**: Smart Container Management
- **PREVENT**: Develop a training programme to improve network zone safety
- **POET**: Prediction of  e-Economy Impacts on Transport
- **FRETIS**: Freight Transportation Information Technology Solutions (software including systems developed and funded in the context of several FP and other projects)

# 1. SMART – CM project id

- **Full name**: SMART – Container Management
- **Duration**: 36 months (AUG 2008 – JUL 2011) - Running
- **Funding**: FP7 – SST, Sustainable Surface Transport and partners from freight - related industries, (31 partners)
- **Description:** SMART-CM enables logistics and security related information to be shared along the global supply chain, by providing in advance customized communication on container status between Shippers, Logistics Service Providers, Transport Service Providers, Port Authorities with Terminal Operators, Authorized Economic Operator agents and Customs
- **Objective**: development of a Single IT platform which is Neutral and Open and will enable secure & interoperable data exchange among public administrations and market players in global door-to-door container transport management

# SME oriented results

**Added value for SMEs:**

- Development of an interoperable single window platform for container security devices ⟹ support the penetration of this technology providers to transport and logistics (T & L) industry.

- Development of a service platform ⟹ makes available to SMEs of the logistics industry several value added services that allow them to monitor the operations of the global supply chains in real time and efficient way ⟹ supports the ‘entry’ of SMEs in the global logistics chains.

# SME involvement in the project

**SMEs involved in project's realization**:

- DHL Global Forwarding, Hellas (T & L company, responsible for the technical management of the project)
- KUEHNE & NAGEL, Hellas (T & L company, responsible for the quality management of the project))
- PROODOS S.A., Greece (transportation company co-operator of KUEHNE & NAGEL, project partner)
- TREDIT S.A. (T & L consultants and software providers)

❖ **Note**: more than 10 SMEs of the T & L Industry involved in global container transport chain COSCO, DHL, KUEHNE & NAGEL etc both in the EU and the non-EU territory

➢ **No green technologies promoted or applied yet**

# Exploitation of results

**Target groups - Companies (apart from Transport and Logistics) potentially benefited**:

- shippers and consignees from different production sectors,
- container security device (CSD) technology industry,
- IT and electronic service platform providers (software)

**First SME exploiting the project's results on business**:

(TREDIT S.A.) – project partner: updating and / or developing of new software focusing on the first project's results to penetrate in global T & L industry as a software expert, developer and provider

# Benefits provided by the project

**Contacted companies**:

- ✓ Transeuropean Consultants for Transport, Development and Information Technology S.A. (TREDIT S.A.)
- ✓ PROODOS S.A. (T & L, KUEHNE & NAGEL is a share holder)

**Benefits admitted to have been achieved:**

- ➢ TREDIT S.A.: Introduction to new IT applications and know how – use and updating of new software solutions and methodologies ⟹ save / earn money
- ➢ PROODOS S.A.: Introduction to new techniques concerning container management, track and trace, interoperability, data exchange – improvement of organizational business affairs new techniques and practices, reduction of logistics cost ⟹ save time & money

# Conclusions

- Project still running – Identification of specified results, determination of added value for SMEs and further analysis is not feasible to be produced yet – No concrete conclusions may be extracted for the time being.

- No green technologies promoted and / or applied yet. However, the project supports (the implementation of) interoperability in this context that it contributes to sustainable transport development.

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# 2. PREVENT project id

- **Full name**: Develop a training programme to improve network zone safety
- **Duration**: 24 months (OCT 2003 – SEP 2005) - Finalized
- **Funding**: Leonardo Da Vinci European Programme (contribution towards the promotion of a ‘’Europe of knowledge’’) – Budget: 276931€, (6 partners)
- **Description:** The scope of the project was to provide appropriate training to the main actors involved in work zone accidents: the workers and the drivers. It has developed dedicated and life-long vocational training schemes for highway repair and maintenance worker training personnel, and driving instructors.
- **Ultimate goal**: Increase of safety around work zones and reduction of the number or work zone related accidents.
- **Note**: Learning actions still aimed at SMEs (e.g. driver training schools and their unions)

# SME oriented results (1/2)

- Development of high quality, relevant learning material used in work zone worker training and driver education
- Making the training material available over the Internet and using information and communication technologies (ICT) towards most effective use of resources while making the material easily accessible and more attractive to potential users.
- Provision of work zone worker trainers and driving instructors with innovative training material and mechanisms

# SME oriented results (2/2)


- Supporting the work zone worker trainers and driving instructors' training and educational role and enhancing of their current curricula (taught knowledge) with material towards the improvement of safety and efficiency of work zones.

- Use of ICT tools and exploiting their potential in vocational (professional) training actions and products in the work zone safety sector.

- Addressing the needs of SMEs (driver training schools in particular), in developing appropriate learning schemes to facilitate access to learning for driver instructors, enhancing their skills and their training

# Added value for SMEs

**PREVENT brings numerous benefits to the economy and society and still has the following impacts:**

- Enhancement of highway repair and of maintenance worker training personnel training skills, with state-of-the-art educational tools, technical material and knowledge regarding the appropriate ways to position temporary traffic controls and divert traffic around work zones ⟹ minimi-sation of the potential for accidents.
- Provision of assistance to driving instructors in acquiring new skills and tools ⟹ education of drivers on work zone safety and driver behaviour.
- Objective of educational program: alert drivers as to what to expect and how to behave as they approach a work zone ⟹ minimization of their perception-reaction time and aggravation ⟹ reduction of accident risk.

# SMEs involvement in the project

**Apart from CERTH – HIT (coordinator of the project) all the other consortium project partners are potential SMEs**

**Notes especially concerning Thessaloniki S.A.:**

- ✓ 2 teaching centres (equipped with the most modern audiovisual means - T.V, Video, Slides, computers etc) in Thessaloniki and branches in Kilkis & Halkidiki, Greece.
- ✓ Members and collaborators of the company:118 individual but not autonomous owners of driving schools
- ✓ Has established the first Centre of Road Safety in Northern Greece (drivers trained in real driving conditions for the improvement of their driving ability - use of “Skid car” and “Roll car” simulators, according to European standards.

# Exploitation of results

**Target groups - Companies (apart from Transport and Logistics) potentially benefited**:

- Road safety institutes and organizations
- Enterprises specializing in driving learning and road safety
- Transport and logistics companies

**SMEs exploiting the project's results on business:**

- Thessaloniki S.A.(driving schools union in the northern part of Greece)
- Institute for Road Safety Research
- 3M Hellas Limited (manufacturing company)

# Benefits provided by the project (1/2)

**Benefits that are of business strategy influence:**

- The methodology followed in developing PREVENT concerning safety when driving
- A new training curriculum, including a complete set of materials both in hard copy and on – line, for educational purposes with the subject of ‘Improving Work Zone Safety’
- A new training package, which consists of hardcopy handbooks and videos (CD - ROM) including instructions related to road safety, driver’s learning and behaviour (attitude), guides for the appropriate traffic regulation and pilot training
- The dissemination actions of the project together with the events that took place within its duration and ever after were of great importance

# Benefits provided by the project (2/2)

**Contacted company**: Thessaloniki S.A.(driving schools union in northern part of Greece)

**Benefits admitted to have been achieved:**

- application and use of new – modern methods of teaching,
- updating of software and of techniques used while training of new drivers or candidates for driving licence ⟹ extra stimulus and motivation for customers' attraction and a spur for greater productivity,
- road safety and environmental driving actions and campaigns promoting safety while driving ⟹ increase of road safety , together with eco – driving and
- introduction of new authentication certificates (e.g. ISO documentation), and methodologies ⟹ improvement of organizational business affairs

# Conclusions

- Project finalized but learning actions are still aimed at SMEs Road safety institutes and organizations and companies specializing in driving learning and road safety (e.g. driver training schools).

- No green technologies promoted and / or applied yet, except, perhaps, the environmental friendly driving techniques promoted in parallel with the safe driving attitude from the part of the school – driving learners.

PREVENT

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# 3. POET project id

- **Full name**: Prediction of e-Economy Impacts on Transport
- **Duration**: 28 months (DEC 2002 – MAR 2005) - Finalized
- **Funding**: “Mobility and Intermodality” within the 5th FP “Competitive and Sustainable Growth” (9 partners)
- **Description:** The overarching goal of POET is to understand the potential impacts of the e-Economy on the future demand/supply for passenger and freight transport, and the opportunities presented by this digital revolution for improving the quality of life of Europe’s citizens by mitigating the adverse impacts of transport.
- **Objective**: Identification of the opportunities presented by this digital revolution for improving the quality of life of Europe’s citizens by enhancing accessibility and by mitigating the adverse impacts the e- Economy could have on urban transport

# Description of project goals (1/2)

**The project develops a conceptual model that includes:**

- physical elements of the transport system and the behavioural aspects of transport and travel choices made by various actors
- analysis of how developments in the e-Economy can change decision making behaviour (relevant for transport)
- estimation of the potential impact of behavioural change(s) on mode choice
- estimation of the potential impact(s) of changes in choice behaviour on urban transport & traffic flows

# Description of project goals (2/2)

- Understand of the choices and factors that are relevant for and affect the demand and supply of passenger and freight transport in urban areas (cities and regions)
- Provision of insight in how the e-Economy could change the way individuals, households, and organizations make decisions (e.g. regarding the use of transport system
- Modeling of the impact of the e-Economy on urban transport and traffic flows and the resulting impacts on energy use, emissions, social exclusions, and the competitiveness of cities and regions

❖ POET's development and analysis of actual case studies offers a way to learn about how the various actors responding to developments in the e- Economy

# SME oriented results

- Development of virtual case studies to gather information about the possible responses of actors to future situations that do not yet exist (innovative characteristic of POET)

- Case studies (concerning freight transport) that cover different types of companies involved in the complete transport chain and supply networks were selected

- Various actors (firms and businesses, households and individuals) are presented  in-person or via the Internet, with realistic future scenarios describing, among other things, new technologies, transport infrastructure and market conditions. The actors are then asked to make choices. The outcomes from these choice experiments are modelled to identify the impacts of the e- Economy on the demand for passenger and freight transport.

# Added value for SMEs

- The familiarity of users / businesses / citizens to electronic communications and thus to the information technology and future technological progress in general was attempted to be advanced

- The networking collaboration among researchers (companies and institutes) and decision makers / actors (both in European and abroad) has contributed and resulted to:

  - The promotion of coordination of Research and Technology Development (RTD) activities,
  - The reduction of duplication of efforts,
  - The increase of scale economies,
  - A step closer to the new economy with significant EU economical gains.

# SME involvement in the project

**SMEs involved in project's realization**:

- DHL TRANSEK, Transport consultants
- PROODOS, University Institute (spin – off)
- The Netherlands Research School for Transport, Infrastructure and Logistics
- Kessel und partner, Transport consultants
- Solving international, Logistics and Supply Chain Consultant

**Note**: PROODOS (University of the Aegean spin-off) in the near past, but not any more, since the enterprise and members, share holders and partners (personnel and cooperative bodies) were sort of affiliated by the University of the Aegean, Greece.

# Exploitation of results

**Target groups - Companies (apart from Transport and Logistics) potentially benefited**:

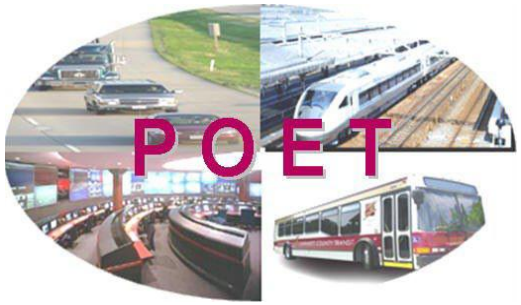
- Transport and Logistics companies (PROODOS)
- Transport consultants (TRANSEK, Kessel & Partners)
- Logistics and Supply Chain consultants (Solving Int/nal)

**Benefits admitted to have been achieved:**

- Promotion of actions concerning the transmission and reception of information, without regard to distance, at a relatively low cost
- Introduction of Information Technology to new businesses and enterprises in order to mitigate the adverse impacts of the transport development

# Conclusions

- Understanding of the impacts of e-Economy on the changing use of transport and related infrastructure ⟹ assistance to the planning of such resources over the decade up to 2010.
- Provision of basis for more successful implementation / promotion of innovative transportation and telecommunication technologies for making cities more competitive ⟹ more effective transportation system ⟹ alleviation of negative side-effects (e.g. congestion, air pollution) ⟹ improvement of health & better living environment.

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# 4. FRETIS software id

- **Full name**: Freight Transport Information Technology Solutions
- **Duration**: 60 months (2005 – 2010) - Finalized
- **Funding**: Supported in the context of many projects of 5th & 6th FP, amongst which the following are listed:
  1. GIFTS (Global Intermodal Freight Transport System, FP5, APR 2002 – MAR 2005)
  2. EFFORTS (Effective Operation in Ports, FP6 - research area for 'Networked Businesses', MAY 2006 – APR 2009)
  3. FREIGHTWISE (Management Framework for Intelligent Intermodal Transport, FP6, JUN 2007 – APR 2010)
- **Description:** State of the art software package for the management of freight transport operations in fully intermodal environment, including modern hi – tech equipment and integrated on – line system for its operation, maintenance and control, promoting connectivity and interoperability
- **Objective**: Cost effective management and control of intermodal freight transport operations

# FRETIS description

**The full FRETIS suite consists of the following systems:**

- IFT - Intermodal Freight Terminal system (full control of intermodal terminal operations), developed in the context of EFFORTS project
- ICM – Intermodal Chain Management system (full control of intermodal freight transport chain operations and chain planning)
- FPC – Fleet Planning and Control system (management of truck fleets, using GPRS equipment, Internet connection)
- RTM – Rail Transport Management system (planning and monitoring, tracking and tracing of cargo, wagons, trains)
- e-DOCS – Electronic Document Submission system (exchange of formal and business documents for all actors of the supply chain), developed with the common architecture and framework in the context of FREIGHTWISE project

# FRETIS implementation

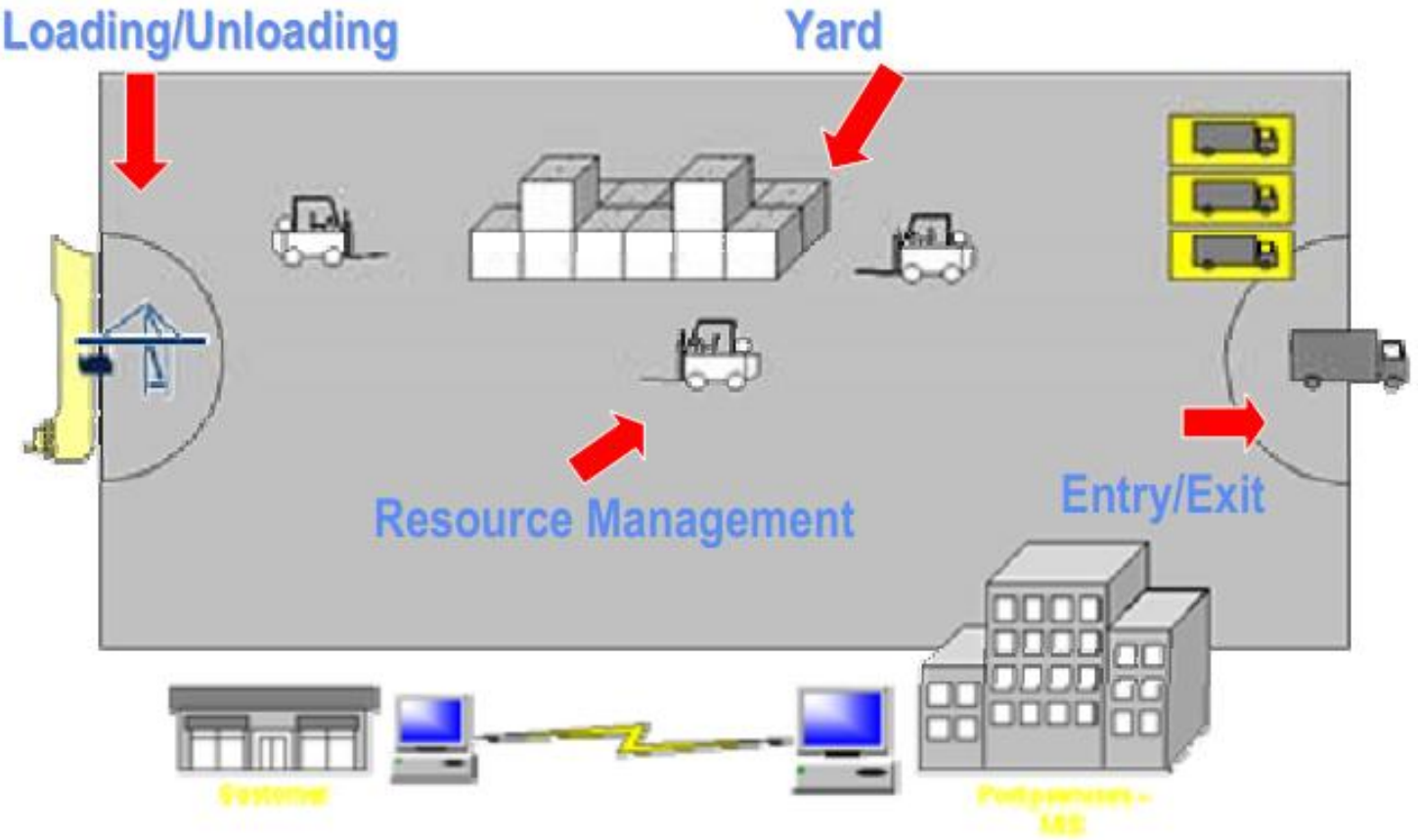
**Parts or individual systems of FRETIS currently in use by several bodies and enterprises:**

- Intermodal Freight Terminal system (IFT) and Intermodal Chain Management system (ICM) running in the container terminal of Thessaloniki port to ensure and guarantee full control of intermodal terminal operations and chain planning in combination with the use of e-DOCS in the processing of documentation and related issues
- Fleet Planning and Control system (FPC) and Rail Transport Management system (RTM) are adopted by PROODOS S.A., in order for the organization of their truck fleet to be accomplished more efficiently and for the tracking and tracing of their cargo to be achieved in real time, especially concerning fuels and dangerous goods or heavy loads (rails, metro equipment and electronic devices)

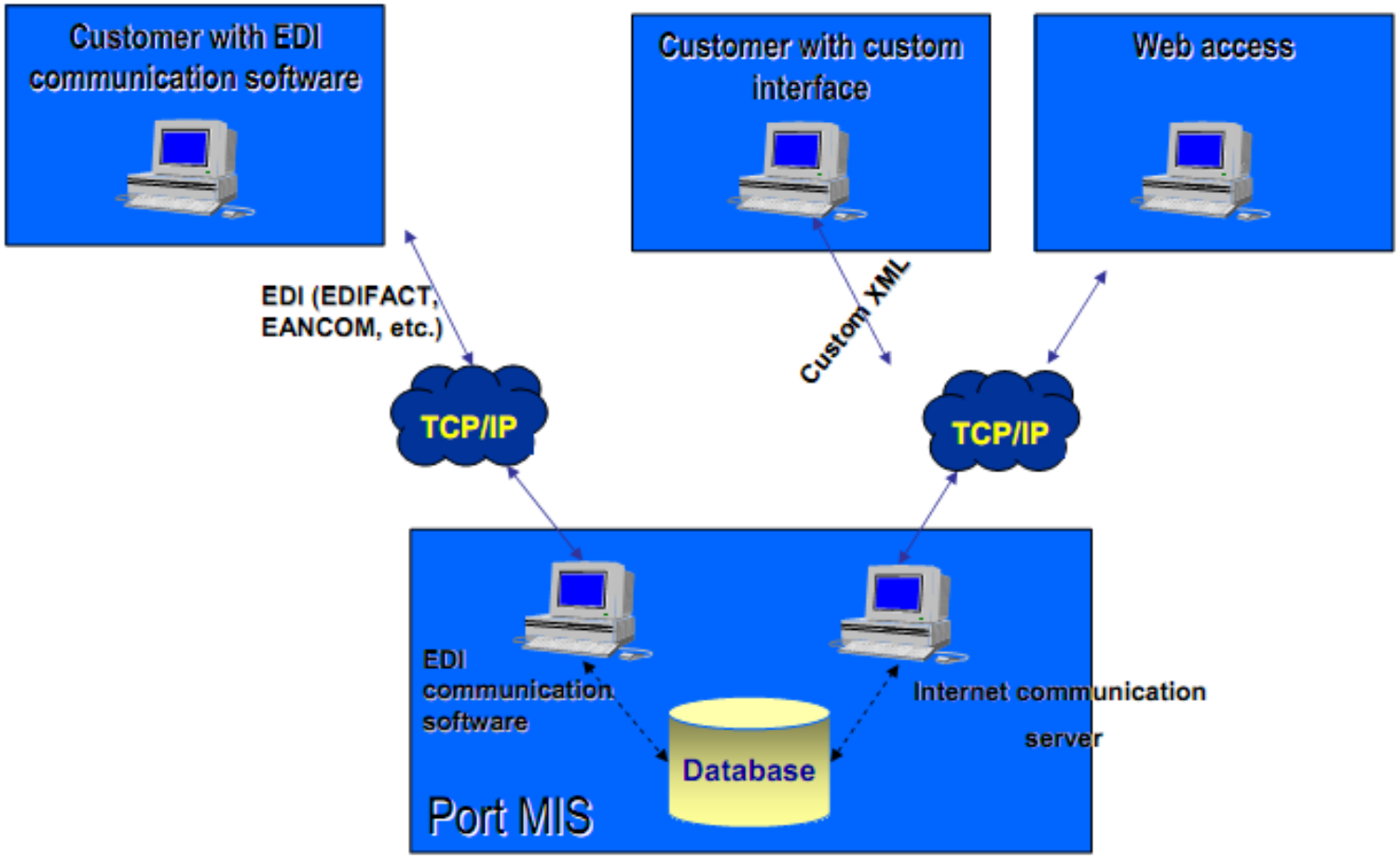
# FRETIS IFT architecture

The full FRETIS (Freight Transportation Information Technology Solutions) suite comprises the development of Intermodal Freight Terminal system (IFT), which consists of 11 interconnected and integrated modules, each of which can be installed and work independently, allowing for maximum flexibility and expandability

# FRETIS IFT: terminal overview

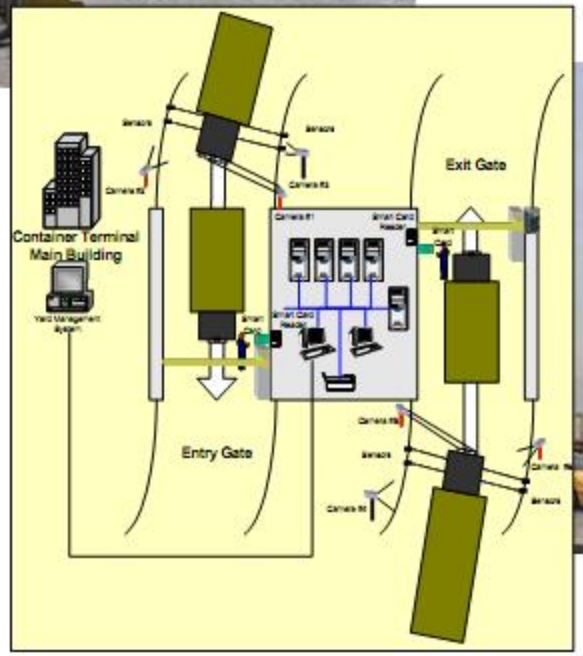


# FRETIS IFT: e-document submission



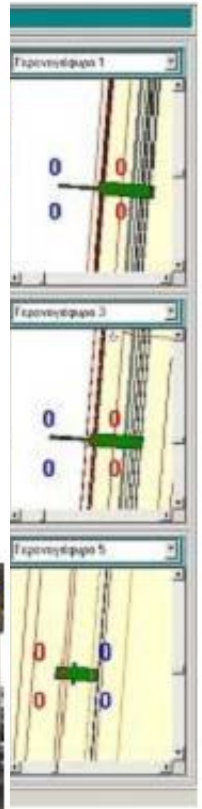
# FRETIS IFT: access control equipment


Access control equipment



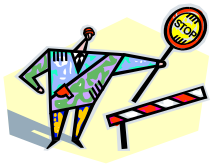






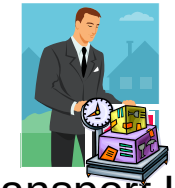
# FRETIS RTM architecture

- Used for planning and monitoring (tracking and tracing) the transport procedure, supporting multimodality (co - modality)
- Full and user friendly monitoring of the position of cargo wagon and complete trains along rail corridors, by getting information from any of the available types of recognition and communication technologies
- Aim: promotion of cooperation amongst players involved in the transportation procedure (users, regulators, service providers and network managers), identifying or determining a common architecture and a common framework in the process of communication with each other



Transportation Network Manager

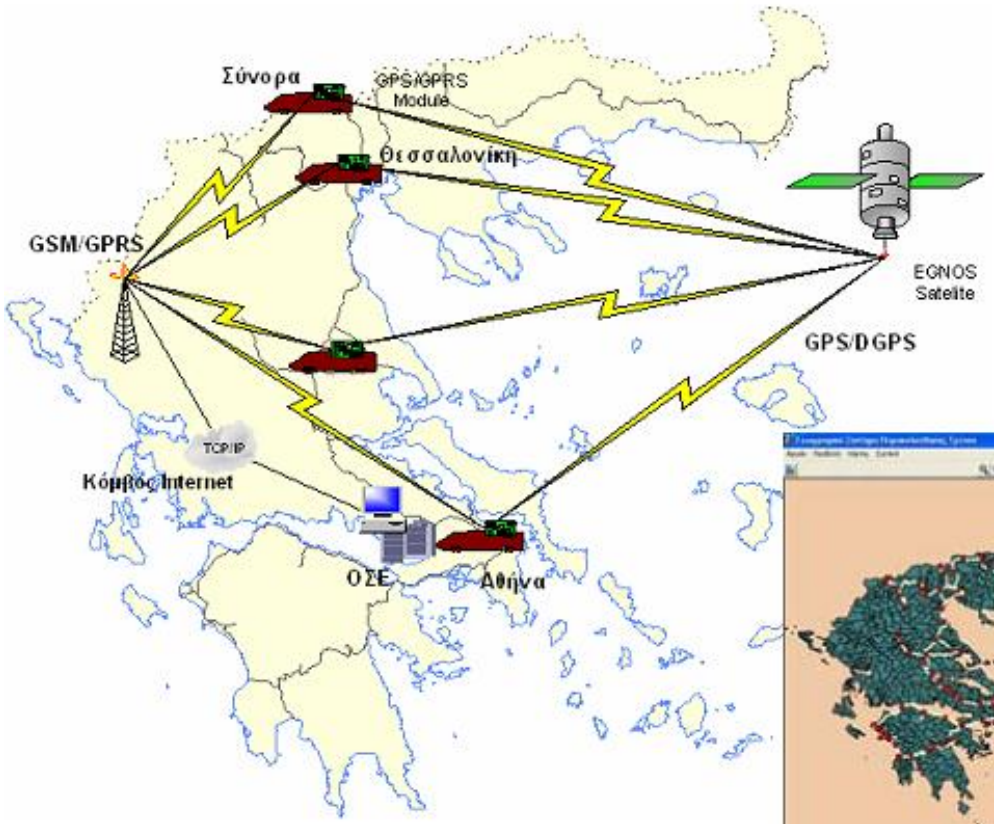
Transport Service Provider

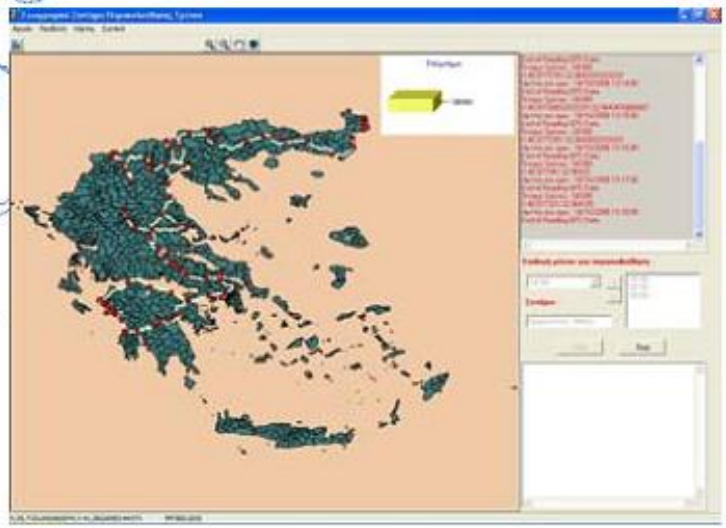


Transport User

Transport Regulator

# FRETIS RTM rail monitoring



# Added value for SMEs

- **Upgrading of level of services** provided by terminals to transportation companies –customers (elimination of delays fastening the involved procedures promoting reliability, increase of checking, integration of control during entry/exit of terminal & loading/unloading, e - documentation and invoicing towards the reduction of the volume of paper work required)

- **Better exploitation and saving of time and money** (total automation of procedures, full integration, modulation, coordination and organization of shipments with container track and trace system, yard planning & inventory control, GIS and resource management)

- **Increase of accessibility** and user friendliness - enhancement of customer service (interactive web based application providing real time information through Internet)

# Involved bodies & companies

**SME involved in the development & marketing of FRETIS**:

- ✓ Transeuropean Consultants for Transport, Development and Information Technology S.A. (TREDIT S.A.): T & L consultants and software developers

**Enterprises involved in the pilot testing & running of FRETIS (IFT)**:

- ✓ Th.P.A. - Thessaloniki Port Authority (container terminal)

**Enterprises involved in the pilot testing & running of FRETIS (RTM)**:

- ✓ PROODOS S.A.: T & L, intermodal transport, transit, warehousing and insurance of freight (road, rail, air, sea, multimodal and special (heavy) cargo and fuel in cooperation with KUEHNE & NAGEL)

# Exploitation of results

**Target groups**:

- T & L companies and Supply Chain consultants
- Freight Terminals (especially ports)
- Road truck and rail freight companies (fleet management & rail truck and trace system)

**Benefits admitted to have been achieved:**

- TREDIT S.A.: Development of software and pilot testing and running with view to integrate its use and provide (sell) it to market
- PROODOS S.A.: Tracking and tracing of rail cargo in real time
- Th.P.A.: Facilitation & fastening of shipping process and full control of cargo incoming, outgoing or handled in the container terminal with real time reporting & monitoring

# Conclusions

- **FRETIS enables the integration of services provided at Freight Terminals (especially ports), rail and vehicle stations by:**
  1. fastening the procedures at terminals (entry/exit, documentation, organization of warehouses and depots)
  2. promoting intermodality of transportation modes and interoperability amongst communication systems
  3. lowering the total cost, internal (transport and tariffs) and external (elimination of delays and environmental impact)
  4. enabling the activation of involved bodies (e.g. SMES) and promoting of partnerships amongst them in order to cooperate while using FRETIS systems and exploiting the provided services

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