



Inte-Transit

Newsletter // Issue 2

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EDITORIAL

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Welcome to the second issue of the INTE-TRANSIT project newsletter!

INTE-TRANSIT is a MED project of strategic value for the Mediterranean ports, that runs from 2013 through 2015, implemented by 8 partner organisations from 4 Mediterranean countries. The basic aim of the project is to achieve a better organization of the MED ports and their logistic activities areas and establish a cooperation framework between relevant stakeholders in the MED countries.

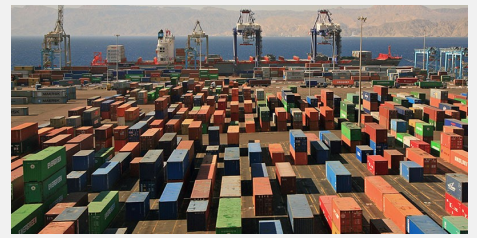
Moreover, large knowledge exchange and information sharing will be achieved during the whole project runtime and is highly expected to be of strategic impact not only for the participating ports, but also for the rest of the Mediterranean ports, operators and logistic parties.

Inside this issue you will find more on the INTE-TRANSIT project achievements during the 2nd year of its runtime, and specifically the latest advances on both INTE-TRANSIT Group Pilot activities as well as the Enhancement of inter-terminal operations: Equipment monitoring and positioning .

The results of the INTE-TRANSIT 2nd Training activity that took place in Naples, Italy, on 13-14 May 2014 are also presented while more information for the organisation of the project 1st International Conference are included.

Enjoy reading!

Mrs Geli Latsa
Dissemination Manager
SEAbility Ltd.



Application of ICT technologies on container tracking/monitoring

John Kanellopoulos, PCT



Pilot Group A is focusing on the improvement of monitoring and tracing containers and yard equipment that will allow the members of the group to pursue the objectives of this program.

The last few months were spent on the analysis of the needs of the partners and on identifying the differences and similarities of the current infrastructure in order to design a pilot that could be applied with minor differences on all participating ports.

Common ground was easily found since the similarities proved to be more than the differences and the pilot architecture was finalized. The Pilot Group A Functionalities will include:

- Tracking of Yard Equipment.
- Localization of Containers.
- Illustration of containers on the yard map.
- Capturing of yard equipment data for further analysis.

These functionalities will be achieved by developing a GIS based application, called the INTETRANSIT Management Server, to visualize the exact position of yard equipment (trucks, FL, SC) in the Yard and store the captured data for further analysis. This will be achieved by installing a DGPS receiver on monitored yard equipment. This will allow to capture yard equipment data related to the routes followed, idle times, total distance travelled loaded/unloaded etc. Moreover, RFID reader will be installed on the trucks participating to the pilot that will provide the ability to capture container specific data that will be stored on RFID tags attached to the container. By combining the location information coming from the DGPS receiver and the identification information coming from the RFID reader, the INTE-TRANSIT

Management server will be able to monitor the actual position of the containers in the yard. The INTETRANSIT Management server will also be loaded with the planned container positions coming from the port Terminal Operating System (TOS). This will enable the matching of the actual position versus the planned one. In case of discrepancies, the client part of the INTETRANSIT Management server that will be installed on the yard equipment vehicle mounted terminals, will pop-up a warning message to the equipment driver informing him of the discrepancy. From that point on the driver can decide whether to update the planned with the real position and inform his control tower accordingly or move the container to the planned position.

Based on the above design of Pilot Group A, the participating partners have moved on with the procurement of the relative hardware and the development of the INTETRANSIT Management Server. Piraeus Container Terminal has already acquired the necessary equipment and yard equipment will be ready for the pilot by the end of summer 2014 while the ports of Valencia NOATUM and Luka Koper are in the final stages of their procurement processes and should follow with the installations during the fall of 2014. From that point on, capturing and analysis of the data will allow the partners to pursue the objectives of the program and start capitalizing on the information extracted.





Last advances in the Group B pilots activities

Gracia Buiza, IAT



Group B has worked on the identification and description of the key performance indicators (KPI) linked to the processes studied in CONATECO (containers terminal in the Port of Naples) and the Logistics Area El Fresno of the Port of Algeciras Bay (Spain, managed by APPA).

On the base of the relevance for ports of having a complete dashboard including KPIs regarded the quality, environment and security; some additional ones over the directly linked to the key processes have been added to the starting lists.

The processes and KPIs proposed in this document are based on international standards such as: ISO 9001 (about Quality Management Systems), ISO 14001 (about Environment Management Systems) and ISO 28000 (about Security Management Systems for the supply chain) applied in CONATECO and a logistics area (El Fresno). Somehow, this dashboard intends to bring close ports and their logistics areas to the compliance of these standards.

This way, the following three great groups of processes are set:

- **Strategic (ST) processes:** This group includes those processes and tasks directly linked to the directors responsibilities, being all of them processes that transform data into relevant information to manage and control the organization in all of issues relative to quality, security and environment. The processes included are: Planning; Review by directors; Continuous improvement; Skills management and HHRR planning; Identification and assessment of environment aspects; and Identification and assessment of security risks.

- **Operational (OP) processes:** This group includes those processes linked directly to the services provided by the processes studied in CONATECO and APPA, which are: Export of dry cargo through containers (in CONATECO) and Export of cargo through ro-ro between the Port and its Logistics Area El Fresno (in APPA).

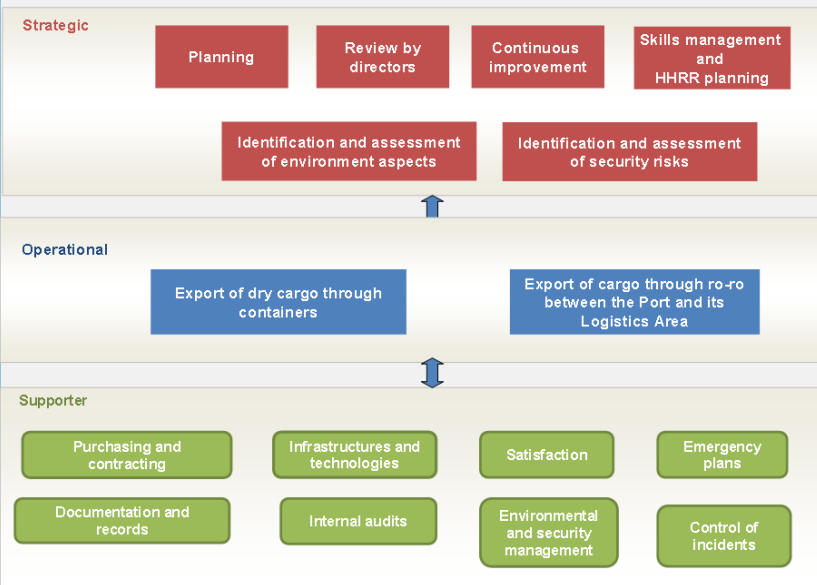
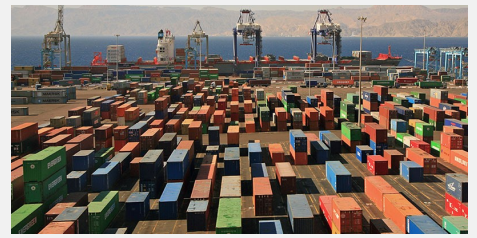


Figure: Processes map for INTE TRANSIT Group B

- **Supporter (SU) processes:** This group includes those processes linked to the resources management, measure and analysis tasks and in general the no-strategic processes needed to the performance of the key processes. The processes included are: Purchasing and contracting; Infrastructures and technologies; Documentation and records; Satisfaction; Internal audits; Control of incidents; Emergency plans; Environmental and security management.

Seven KPIs have been identified related to the Strategic processes, fifteen related to the Operational processes (5 CONATECO, 10 APPA) and fifteen related to the supporter processes.

This content will be managed using Business Intelligence (BI) which has become vital in every company interested on having the necessary knowledge to make the correct strategic decisions for the business. Specifically, PENTAHO (open source) is the tool proposed to improve the ability of proper decision-making in the INTE TRANSIT Group B.



Enhancement of inter-terminal operations: Equipment monitoring and positioning

Eric C.B. Cauchi, Geli Latsa, SEAbility Ltd.



The optimization of inter-terminal procedures is one of the essential goals of the Inte-transit project, as it will ameliorate services provided by terminal operators by bringing innovative technologies to support

localization, monitoring and remote management of equipment and containers.

Technologies such as precise point positioning supported by software defined Global Position System modules have set new frontiers to positioning application development and have removed barriers such as increased hardware cost. Moreover Geographical information Systems (GIS), an ecosystem that accompanies applications such as equipment localization, has evolved according to recent technological trends that enable the development of scalable, maintainable and upgradable software systems that can address business strategies in a sustainable fashion.

In Inte-Transit, a framework that integrates various state of the art technologies in positioning and GIS is being implemented in order to enable transparent equipment and cargo transportation.

The cornerstone of the Inte-Transit localisation system is the RTK (Real Time Kinematic) based positioning technology. RTKlib is an open source RTK software library that enables precise and standard positioning, for both real-time and post-processing scenarios, based on the GNSS. (Global Navigation Satellite System).

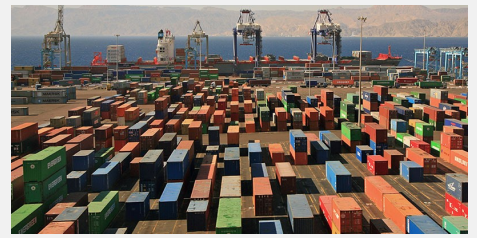
It is compliant with many GNSS raw data hardware receivers which provide raw phase information to the central RTKlib processing module. Moreover a set of accompanying software modules enable standardized dissemination of positioning data, in formats such as RINEX2/3, NMEA, RTCM3 etc. The RTKlib software library is based on POSIX (Portable Operating System Interface for Unix), therefore it can be ported to various, low cost, Unix based platforms.

However, precisely calculating equipment position is only one aspect of Inte-transit. An additional aspect of the system's architecture is to remotely display equipment position information, so that inter-terminal processes can be monitored and managed in a decentralized manner by various client devices such as smartphones, tablets or desktop PC's.

Such communication processes are enabled by deploying a service oriented approach to the system; web servers are deployed in order to disseminate positioning information and provide additional services for terminal operation management. Additionally AJAX (Asynchronous Javascript and XML) based front-ends create a visualisation of terminal layout and moving equipment, that is accessible through most contemporary web browsers available. Inte-transit's content rich, front-end visualization framework is based on the OpenLayers Javascript library for dynamic maps, an open source library that is based on standardized protocols for map visualization.

Development of solutions based on open source software and standardized protocols is an essential aspect of Inte-transit, as it enables a widespread use of the solutions that can be integrated in any port terminal ecosystem worldwide.

For additional information regarding Inte-transit positioning technologies, deliverables and demos please visit <http://www.inte-transit.eu/>



1st International Conference - Save the Date!

Geli Latsa, SEAbility Ltd.



The INTE-TRANSIT consortium is inviting you to its 1st International conference focusing on “*ICT technologies as enablers for improved operations in modern MED ports*”, that will be held on October 14th and 15th, 2014 at the Port Authority of Valencia, Spain.

INTE-TRANSIT- “*Integrated and Interoperable Maritime Transit Management System*” is a MED project that runs from 2013 through 2015, implemented by 8 partner organisations from 4 Mediterranean countries. The INTE-TRANSIT consortium proposes an innovative integrated approach to overcome the fragmentation of knowledge and approaches, towards the promotion of a new information management system for the ports, which will be able to improve logistic operations and cargo monitoring. Moreover, a strong cooperation framework between relevant stakeholders in MED countries will be established for best practice exchange, cooperation and personnel training.

By attending this conference, you will be able to network with project partners, discover the State of the Art on ICT tools used for modernisation of port logistics, the challenges that MED ports currently phasing, as well as the INTE-TRANSIT developments and ICT solutions towards the creation of an integrated management model to improve container monitoring and to modernise the organisation of the MED ports logistic areas. In parallel, a demo and poster session will take place, showcasing the project evolutions and technologies.

This is a first 'Save the Date' invitation for every interested person. Participants may include port authorities and operators, freight forwarders, Shipping and Logistic Companies, Shipping/Container Lines, Transporters, Consultants and Maritime Organizations etc.

Don't miss this event - save the date. We will be more than pleased to welcome you in Valencia on October 2014.

Registration is now open. Please fill in the conference registration form available [here](#) and send it via email to Mr. Vincent Ernoux, Valenciaport Foundation, (vernoux@fundacion.valenciaport.com) by **3 October 2014**.

Your reservation will be confirmed via email.

Additional information and details on the programme will follow shortly.





A Successful Second Training Activity for INTE-TRANSIT Project

Gaetano Verde, CO.NA.TE.CO. SPA

The second training activity took place in Naples on the 13th and 14th of May 2014 and was hosted at the Maritime Terminal in the Port of Naples under the topic “Improvement of MED ports transit capacities through multimodality and intermodality. Towards a more efficient organisation of ports logistic activities”.

This event, organised by CO.NA.TE.CO S.p.A. with the support of IAT, ICCS and SEAbility, provided the opportunity to more than thirty attendees, including key personnel from the local port authority and terminal to learn more about issues as the ICT role in an efficient and sustainable logistics organisation for maritime transport as well as familiarisation with best practices presented by companies and port authorities, such as the ValenciaPort Foundation, NOATUM, Andalusian Public Ports Authority and the Port of Koper, among others.

The opening speech of the training activity was made by the Managing Director of CO.NA.TE.CO (Napoli Container Terminal) Mr Pasquale Legora who welcomed the delegates and proceeded to present and analyse all relevant aspects of CO.NA.TE.CO, including their strategic planning for the forthcoming years.

The location of CO.NA.TE.CO as a European node located at the centre of the Mediterranean Basin places and its strategic proximity to international trade routes highlights the attributes of the Port of Naples as an important link between North and South Europe. CO.NA.TE.CO is the leading terminal operator of Naples port and one of the largest operators in Italy. A number of major shipping lines utilise CO.NA.TE.CO as a hub terminal, thanks to its ideal geographical position, which is particularly favourable for transshipment operations and also for its high participation as a gateway for Italian exports. The terminal uses this opportunity to speed up the gate-in and gate-out activities with new OCR system technology, bringing functional improvements to the Port of Naples, reducing road congestion and facilitating the operators and the port users.

The professionals that attended the two training days were from four different countries (Spain, Greece, Italy and Slovenia). What is worth a special mention is the high evaluation score awarded to the event by the attendees, which attained a mean value of in excess of 5 points in a scale from 1 (poor) to 6 (best).

The INTE-TRANSIT project will organise the next training activity in Valencia during the coming October. The dates and programme will be disseminated by the INTE-TRANSIT partners through their websites and of course the INTE-TRANSIT project website (www.inte-transit.eu).



Figure: Speech by a representative of Luka Koper (Slovenia)



News and events

INTE-TRANSIT 4rth Plenary meeting

After Valencia, the Port of Luka and Seville, the 4th project Plenary meeting took place in Naples, Italy on 12 May 2014 hosted by CO.NA.TE.CO. SPA. In the beginning of the meeting, Mr. Avv. Emilio Squillante, the General Secretary of the Port Authority of Naples, warmly welcomed the consortium partners and briefly presented the strategic importance of Naples port terminal within the Mediterranean basin. Moreover, Mr. Pasquale Legora de Feo, Managing Director of CO.NA.TE.CO. SPA., presented an overview of CONATECO's profile and activities as well as terminal expansion plans in the following years.

Subsequently, the project coordinator Dr. Angelos Amditis, ICCS, on his turn welcomed the consortium and the project officer (PO), opened the 4th plenary meeting and highlighted the key points of the agenda. The PO expressed her positive criticism with respect to the INTE-TRANSIT project, stating that it is considered among the most successful projects so far in the respective objective of the MED programme.

During this meeting, 27 project participants discussed on the work already performed through the different project Work Packages and planned the next actions focusing on succeed all the project objectives.

Specifically, the project coordinator presented all the administrative and financial activities (WP1) including reporting and the overall project monitoring. In addition, the WP4 work for the improvement of information management systems have been also discussed throughout the different pilot leaders presentation. The work plan of WP4 is split in four phases. Currently, INTE-TRANSIT is in the 3rd phase, which is actually the implementation phase of the project. Finally, the INTE-TRANSIT Dissemination Leader presented all the already performed activities and motivated the project consortium to strength its efforts towards the diffusion of INTE-TRANSIT basic messages and evolutions. The organisation of the upcoming international workshop and the third training activity was also discussed in details among the partners.





Inte-Transit

Integrated and Interoperable Maritime Transit Management System

INTE-TRANSIT provides the tools towards the improvement of cargo monitoring and better organisation of the MED ports logistic areas

CONSORTIUM



Agencia Pública de Puertos de Andalucía
CONSEJERÍA DE FOMENTO Y VIVIENDA



FACTS

Identification number: 2C-MED12-05, ERDF

MED Programme

Axe 3: Improvement of mobility and of territorial accessibility

Objective 3.1: Improvement of maritime accessibility and of transit capacities through multimodality and intermodality

Duration: 1 January 2013 – 30 June 2015

Total cost: 1.834.201,98 Euros

Coordinator: Institute of Communication and Computer Systems

Website: www.inte-transit.eu

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Projet cofinancé par le Fonds Européen de Développement Régional (FEDER)
Project cofinanced by the European Regional Development Fund (ERDF)