Baltic Container Terminal (BCT)
Gdynia Port, Poland

BCT BALTIC CONTAINER TERMINAL GDYNIA
An ICTSI Group Company

International Container Terminal Services, Inc.
EXCELLENCE UNCONTAINED

International Container Terminal Services Inc.
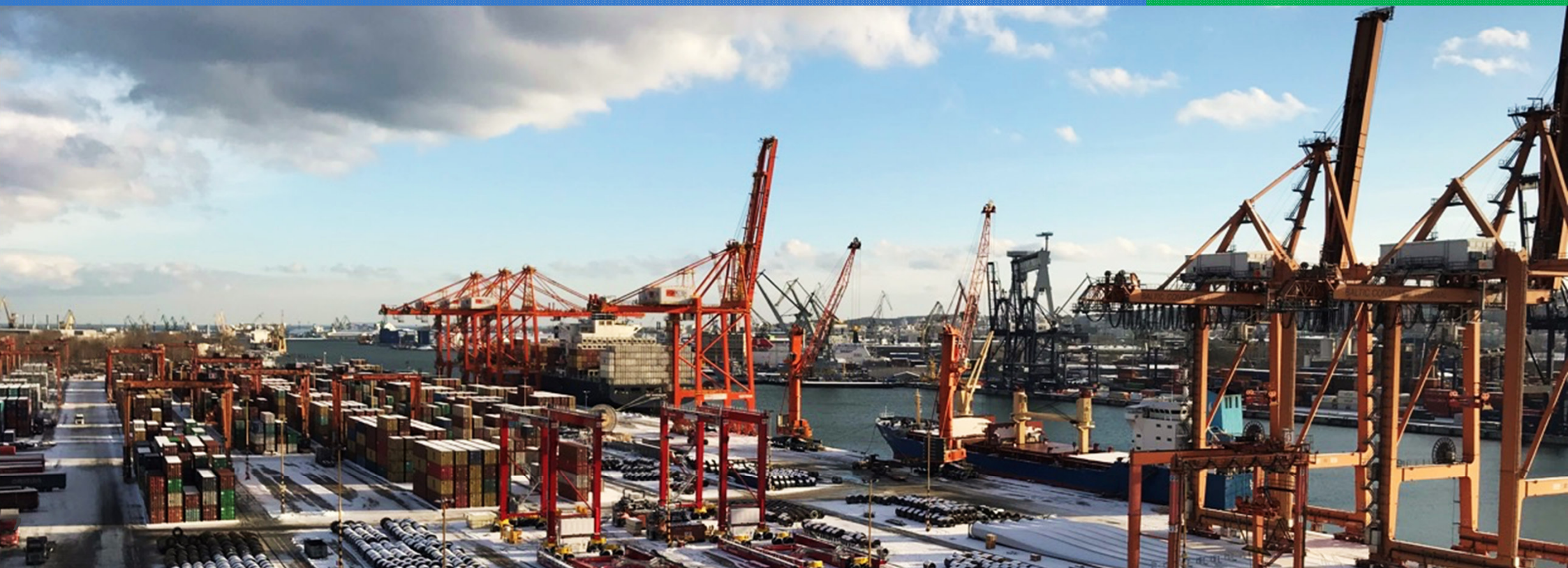
Building digital & green environment for intermodal at Gdynia Port, Poland – COMODALCE Project.

WEBINAR Decarbonising Small and Medium Ports

July 7th 2021

Agenda

- *Gdynia Port, Poland*

- *Baltic Container Terminal*

- *Intermodal environment*

- *COMODALCE Project & INCOS Platform*
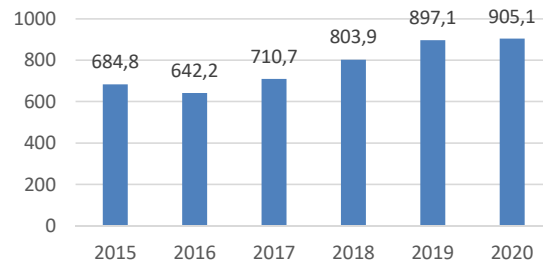
- *Environmental impact*

GDYNIA PORT, Poland

General Data

- *Port Of Gdynia is placed in south-east coast of Baltic Sea*
- *Medium size universal port serving containers (BCT, GCT) , Ro-Ro ferries (Stena Line, Finnlines), break bulk (OT Port) & bulk cargo (Bulk Cargo Terminal, Grain Terminal)*
- *From year to year beating records of transshipment (2015-2020; 24% of growth)*
- *100 years of anniversary this year*

total transshipment (million tons)

Year	2015	2016	2017	2018	2019	2020
Value	18,2	19,6	21,2	23,5	23,9	24,6
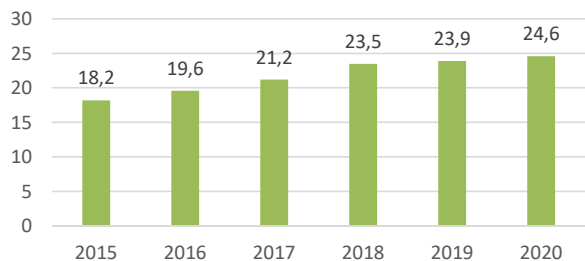
containers TEU (thousands)

Year	2015	2016	2017	2018	2019	2020
Value	684,8	642,2	710,7	803,9	897,1	905,1

BCT- Baltic Container Terminal, Gdynia

1 **The oldest and the second biggest container terminal in Poland**
- *Started operations in 1979*
- *In 2019 transshipped 511 000 TEU (record); in 2020 507 000 TEU*
- *Since 2003 100% shares belongs to ITCSI*

2 **Quality service leader**
- *Ship to shore gantries average productivity; 32 moves/hour*
- *Rail gantries average productivity; 25 moves/hour*
- *Average truck terminal stay; approx. 30 min. (gate in/gate our)*

3 **Intermodal leader**
- *Intermodal share 25% (in 2012 & 2014 record 41%)*
- *50 trains per week (approx. 300 containers daily)*
- *12 Intermodal operators offering 20 inland destinations*

4 **IT and new technology leader**
- *Automated gate system (road and rail)*
- *Server EDI (for system integration)*
- *DGPS container yard position system*
- *Platform INCOS (Electronic train notification and coordination system)*

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Intermodal organization

1 ## Old fashion communication

*There is **no PCS** at Gdynia Port and most of the communication and data exchange among the intermodal chain players is proceed manually. The old fashion procedures still exist as well as exchange of paper documents. Phones, faxes, radio-communication and e-mails are the means used for communication and traffic coordination.*

2 ## Immature digital environment

*The big players have their own operational systems they are not open to the environment. Systems are designed to satisfy their internal needs and not for external communication. No electronic data interchange among them. The SMEs usually has no access to highly developed technology due to high cost and limited access. In conclusion **digital community is very small and fragmented.***

3 ## Electronic common platform

*There is no way to grow following this inefficient and slow communication of coordination. There is a need to create electronic common platform for Intermodal business with very flexible integration module enabling all the partners to use and develop **system to system integration at low costs and will relatively small effort.***

E-mail

port	gestia	kontener	kodkontener	waga
BCT		TEXU7398750	40DV	20761
BCT		BMOU5545345	40HC	5454
BCT		TGHU7327604	40HC	11239
BCT		MEDU879550		3985
BCT		TGHU		55

Hi, what is the status of the containers for our train to Warsaw ?

hey, I will send you the list back in a minute. There are five boxes still on board , 1o blocked by Customs and 15 still with no pre-lodge, but where are the wagons?

Hello, Train from Warsaw is delayed but the one from Poznań arrived at 14:37 Please note the sequence of wagons….?

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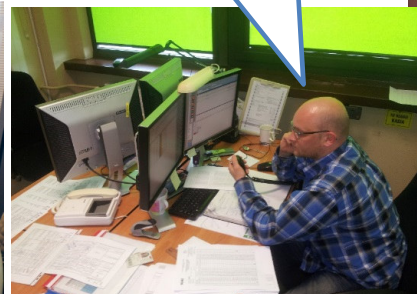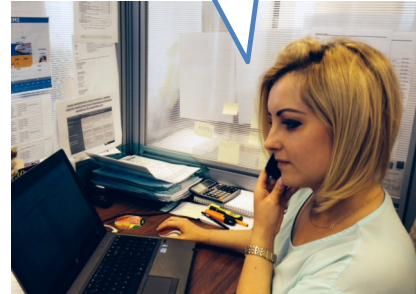
COMODALCE – the international research and implementation project

1

Enhancing COordination on multiMODAL freight transport in Central Europe

Project no. CE1455 Interreg

EU institutions identify the problem of poor coordination between participants in multimodal transport, especially among the ports and their hinterland in Central Europe. The aim of the project is to improve the coordination and communication of terminals and port companies with the participants of the multimodal chain using innovative IT and organizational solutions..

2

Whole project budget: 2 million EUR, (BCT 183 000 EUR)

Co-financing on the level of 85%

3

10 entities from Italy, Slovenia, Germany, Hungary and Poland

They carry out 10 pilot actions to improve communication and cooperation by digitizing processes and integrating operational transport systems

PILOT BCT – Intermodal communication and coordination electronic platform

Platform INCOS – digital environment for intermodal business

1 **Connecting all participants**

BCT's INCOS platform facilitates the system-to-system integration building the digital environment for all the participants in intermodal chain (Operators, Railways Carriers, Terminals) working in Gdynia Port providing and sharing data in real time

2 **Adjusted to the partners' needs and IT-conditions**

Platform is furnished in a special integration module for easy, flexible and low-cost integration adjusted to the possibilities, conditions and digitalization level of each partner no matter the size and volume they handle. INCOS also provides the half automatic download and upload aggregated data for the ones who do not have any operational system (via web user interface

3 **Standardization**

INCOS order the process, makes it clear and understandable for all the partners, propose common standards

Freight Forwarder

Sea Container Terminal

Railway Carrier

GPS GSM

Other systems and participants

Platforma komunikacyjna

INCOS

Intermodal Operator

PILOT BCT – Intermodal communication and coordination electronic platform

Characteristics

1 **Useful**
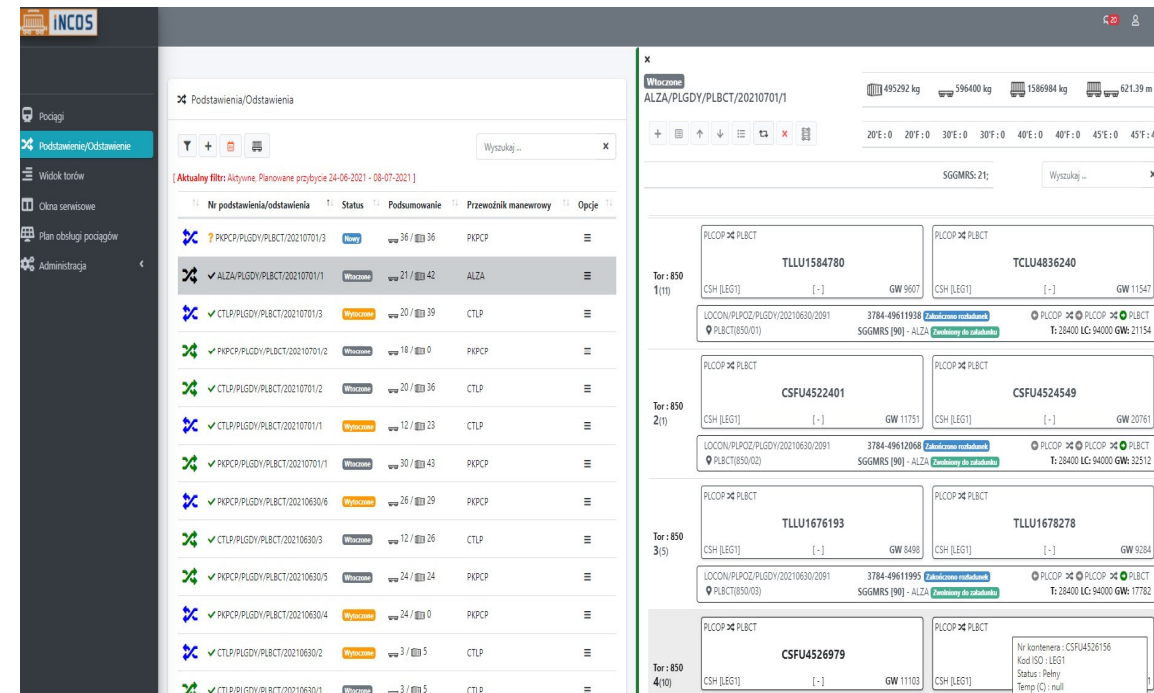*Respond to all the users' needs*

2 **Open access for everybody**
No charges or access formal obstacles (everybody who wants to use it is welcomed)

3 **Flexible & dynamic**
Integration module is adapting to the user's exchange data conditions (does not impose unique standard)
System is produced by BCT so any modifications and changes can be introducing easily and fast (no license limitations)

PILOT BCT

Benefits for all the partners

- *Operational costs reduction*
- *Increase of capacity without hard investments*
- *Increase competitiveness and sales*

Terminal	Intermodal Operator	Railway Carrier
Shorter average gross time of servicing a full train from 4 to 3 hours	Shorter delivery time due to efficient last mile shunting (from 20 to 12 hours) giving better wagons utilization (faster loops and more trains per week)	Better utilization of locomotives due to precise working plan. Increase local station capacity (reduction of wagon idle time)
Increase Terminal capacity by 20% (from the current 7 trains to 9 a day) due to elimination of congestion & faster rotation of the wagons	Cost reduction caused by errors, delays, penalties, and complains	Effective wagons' management due to current position status
Better utilization of Terminal resources (manpower and equipment) due to more accurate planning.	Communication and employment cost reduction. No expenditures for system integration.	Eliminations of locomotive empty runs and stoppages due to on-line terminal operations planning information
Simplification and facilitation of cooperation proces with the terminal - increasing the competitiveness and sales (priceless !!)	Shortening the delivery time improves the competitiveness of intermodal transport in relation to road transport and increase in sales	Capacity increase and sales

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GDYNIA PORT, environment

1 **Metropolis**

- Port Of Gdynia is surrounded by the city (250 thousand of habitants)

- Gdynia City together with Gdańsk, Sopot and satellite smaller cities is 1 million habitants' metropolis.

- There is natural green environment protected area close to the Gdynia city

2 **Road Traffic**

BCT generates av. 800 trucks daily traffic (adding 300 trucks traffic of neighbor container terminal is over a thousand trucks going in & out to western port area)

3 **Rail Traffic**

BCT generates av. 7 container trains daily traffic (adding other terminal 4 trains daily is more than 200 wagons daily shunting from the port station to terminals

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Port environmental impact

Huge port traffic has negative impact to the Gdynia City

1

Pollution
Truck and shunting locomotives use diesel engines producing pollution and CO2 contamination within the city area

2

Noise
Truck and rail traffic circulating 24/7 produce a lot of noise night and day going through the city to the port.

3

Road congestion (traffic jam)
As Terminal is located inside the city area port trucks shares the same streets with metropolitan traffic causing traffic jams in rush hours and often road accidents

BCT INCOS, environmental impact

Exchange of real-time data, better operational planning and wagons' management helped to reduce negative environmental impact to the city and local natural environment

1 **Directly by reduction of rail traffic (noise & pollution)**

- *elimination od single locomotive transit (always wagons in & out)*
- *Reduction of shunting trips by carrying maximal numbers of wagons (in and out) in one trip*

2 **Indirectly by reducing road traffic shifting containers from road to rail due to better competitiveness of rail (Intermodal) port delivery (reduction of noise, pollution, traffic jam and accidents)**

- *Rail shunting costs reduction*
- *Total Intermodal transit time reduction*
- *Reliability increase of Intermodal service*
- *Better accessibility of intermodal services*

Thank you

Piotr Frąckowiak

Intermodal Manager
Research & Development

BCT – Bałtycki Terminal Kontenerowy, Sp. z o.o.
Ul. Kwiatkowskiego 60
81-127 Gdynia
Tel: 795-501-441
Mail: pfrackowiak@bct.gdynia.pl