OUTPUT FACT SHEET

Pilot actions (including investment, if applicable)

Project index number and acronym	CE1455 COMODALCE
Output number and title	O.T2.1 - Pilot actions fostering coordination among multimodal freight transport stakeholders through ICT systems
Investment number and title (if applicable)	N/A
Responsible partner (PP name and number)	PP08 BCT Gdynia
Project website	interreg-central.eu/comodalce
Delivery date	10.04.2022

Summary description of the pilot action (including investment, if applicable) explaining its experimental nature, demonstration character and transnational added value
BCT's pilot action was introduce to the market common communication platform for electronic data exchange coordinating rail deliveries to BCT (INCOS). The main task was to build digital environment for intermodal transport furnished with integration module facilitating system-to-system integration. The main challenge was to transfer into digital form very complicated process of coordination requiring intense communication exchange among the many partners in the chain. Our goal was to create a tool simple in understanding and easy in use. Digitalization level, size, structure and organization of the partners differed a lot which was additional obstacle to overcome. We had to take into consideration this and adjust our platform to match different needs and conditions. Also in some cases the mind shift (from manual to digital) was a great challenge to some partners. Apart of system-to-system integration we have developed with the most advanced partners we also created a complex user interface available by web page with possibility of half automatic upload and download the files. Apart of facilitation of communication platform gives a clear and vivid picture of the present situation regarding the delivery and transshipment of the intermodal trains at BCT and at Gdynia Port Station

INCOS platform was started in February 2021 in its trial version at production environment. Trial period was evaluated in May 2021 with satisfactory results and since that time INCOS is fully working in production environment. All the railways carriers and intermodal operators use the platform now and all containers discharged and loaded at BCT from and to wagons are announced and proceed via platform as well as all trains. We managed to develop 10 integration communicates covering the whole intermodal train process starting from creation and loading, through it trip up to delivery and discharging. We managed to connect via integration module with operational systems with two biggest intermodal operators covering 70% of all rail operations at BCT. We exchange approx. 55 000 integration messages monthly. The rest users who does not managed to connect yet or missing the operation system at all are able to connect via user interface (www.incos.pl)

INCOS platform was translated into English, German and Ukrainian Language. As one of the Railway Carriers is DB and some intermodal services from Ukraine to Polish ports are about to be started soon.

NUTS region(s) concerned by the pilot action (relevant NUTS level)

PL633 Poland, Pomorskie, Gdynia

Investment costs (EUR), if applicable

N/A

Expected impact and benefits of the pilot action for the concerned territory and target groups and leverage of additional funds (if applicable)

INCOS platform enables all participants: terminal, railways carriers and operators not only to communicate easier and faster providing punctual and reliable information, but also to plan, control and optimize their own internal processes. Platform saves costs and facilitates good planning creating additional capacity for all the partners without any hard investments.

Concerning leverage of additional funds, BCT will continue to develop the platform adding system-to system integrations with new partners (mostly railways carriers) and new functionalities will be added whose total cost amounts approximately to 500,000 euros. We plan to use our own funds but also apply for further EU cofounding programs.

Sustainability of the pilot action results and transferability to other territories and stakeholders

BCT will continue to host, maintain and develop the platform adding system-to system integrations with new partners (mostly railways carriers) and new functionalities will be added. We plan to use our own funds but also apply for further EU cofounding programs.

INCOS platform being the fists digital environment for intermodal industry in Poland is created in multimodal concept and it can be implemented in other sea and inland terminals covering the whole chain from origin to the final destination on national level.

In this moment INCOS platform is delivered to the partners for free as the only terminal cooperating is BCT. In case it will be implemented other terminals and can consider apply some business model of some microcharges for use to make the platform sustainable.

Building common cooperation environments it is crucial to take into consideration the characteristics, requirements and conditions of all the partners involved. Many meetings, consultations and very close cooperation are crucial for the success.

If applicable, contribution to/ compliance with:

- relevant regulatory requirements
- sustainable development – environmental effects. In case of risk of negative effects, mitigation measures introduced
- horizontal principles such as equal opportunities and non-descrimination

To get full cooperation of all participants at intermodal transport chain some regulations on national level has to be done. Railways companies still uses internal complicated and old fashioned procedures (very often paper) which does not respond to modern intermodal transports requirements. Much of these procedures has it origin in national legislation which has to be changed enabling fast and digital exchange od information.

There is also the trouble to get access to national rail infrastructure owner to get information about the movement train data. They are the best and single source of movement data but do not want to share this information due to safety data issues. Sharing data regulations in rail industry has to be changed in the way to facilitates the digitalization and implementation of synchromodality on national or European level.

Implementation of INCOS platform has also a great positive import on port natural environment. It makes intermodal transport more competitive and accessible taken our heavy truck traffic from the city port area. Reducing congestion, noise, traffic jams and road accidents.

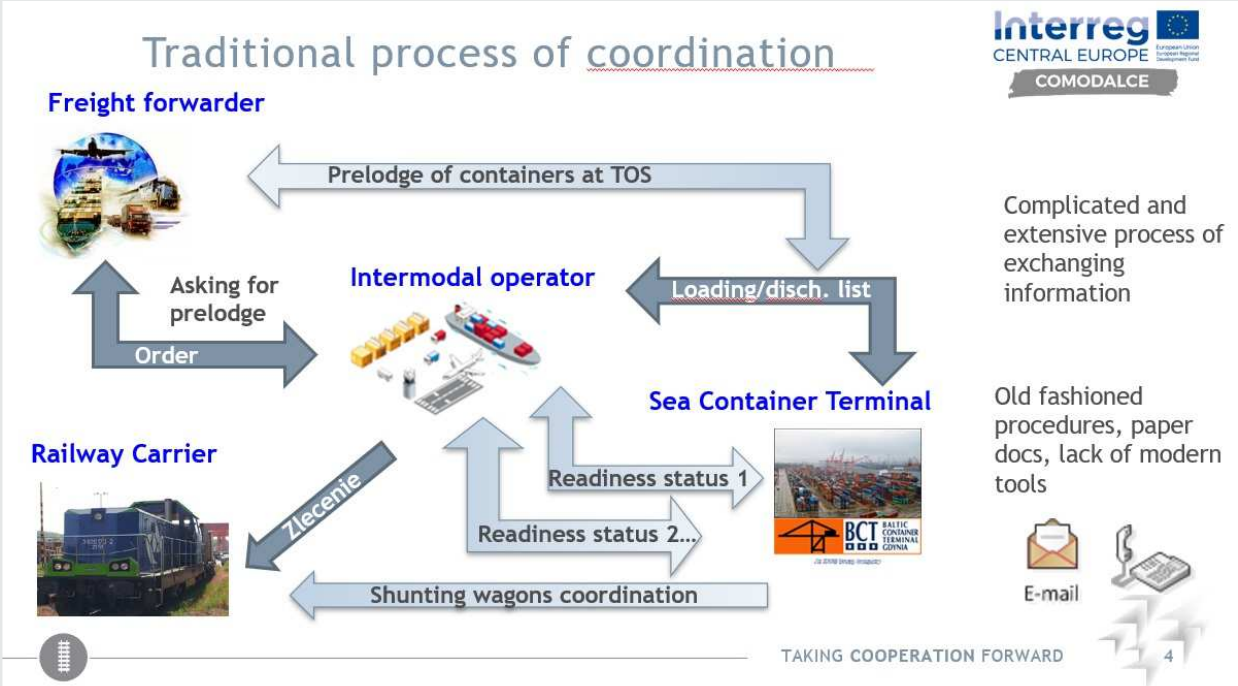
INCOS is an open environment without any barriers or obstacles to access by any user.

References to relevant deliverables (e.g. pilot action report, studies), investment factsheet and web-links
If applicable, additional documentation, pictures or images to be provided as annex

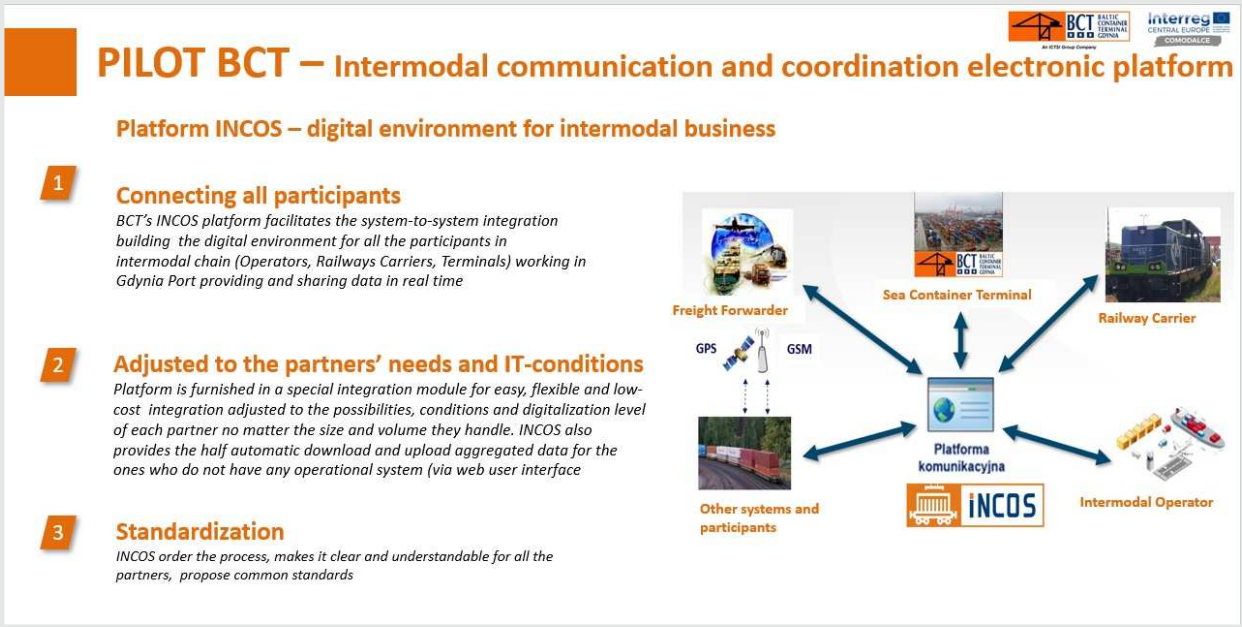
The output is based on the following deliverables*:

- D.T2.8 "Pilot action final report"
- D.T1.3.8 "Strategy for fostering coordinated multimodal freight transport through ICT systems – BCT GDYNIA"
- T1.2. "Territorial Needs Assessments for Gdynia Node"
- D.T2.2.15 "Pilot action evaluation report"

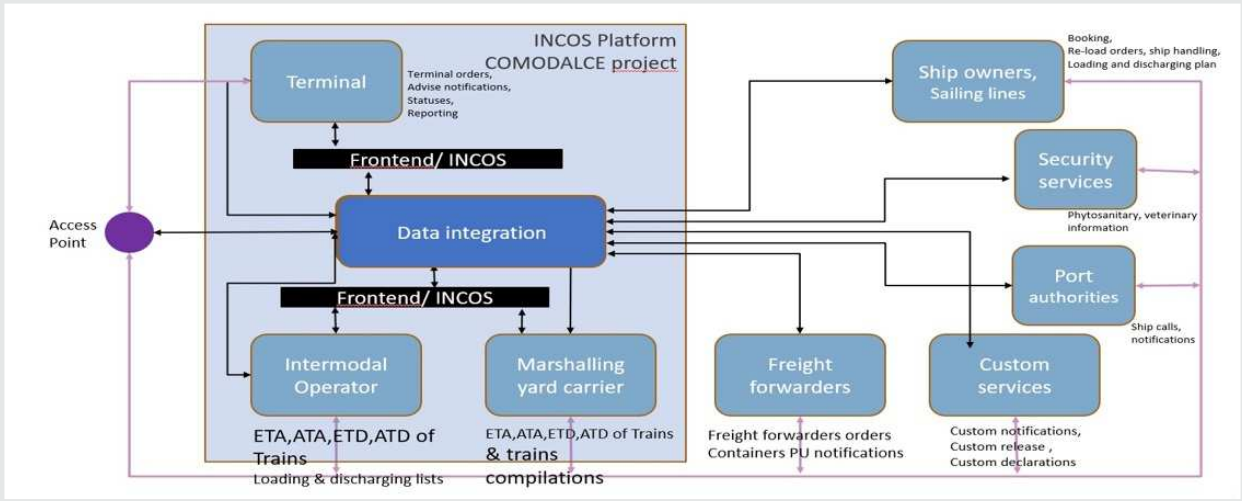
Traditional exchange of information during coordination of intermodal train delivery to sea terminal.



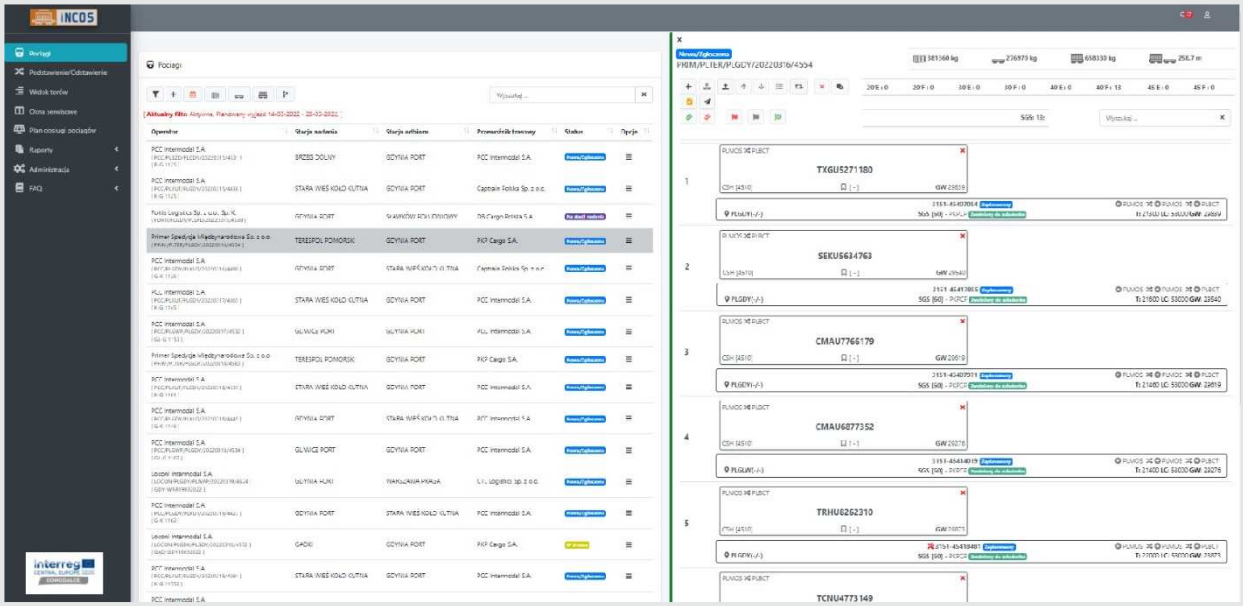
INCOS concept implementation



INCOS platform structure



Screenshot from web user interface



Example of integration message (structure)

1. SPRAWDZ KONTENER

➢ **Wywołanie**

GET - https://incos.pl/rest-container/container/{NrKonenera}

➢ **Odpowiedź**

```
{"data":
        {"container_nbr": null,          - nr kontenera
         "container_iso_type": null,     - iso typ
         "actual_location": null,        - bieżąca lokalizacja (YARD, OFFDOCK, VESSEL, CFS )
         "status": null,                 - status ( E - empty, F - full )
         "category": null,               - relacja ( E - export, I,X - import )
         "line_code": null,              - kod Linii Żeglugowej
         "seal1": null,                  - nr plomby 1
         "seal2": null,                  - nr plomby 2
         "seal3":null,                   - nr plomby 3
         "seal4":null,                   - nr plomby 4
         "temp_min":null,                - minimalna temperatura ( stopnie C )
         "temp_max":null,                - maksymalna temperatura ( stopnie C )
         "temp_set":null,                - ustawiona temperatura ( stopnie  C )
         "eu_status": null,              - status EU ( Y,N )
         "customs_status": null,         - HOLD celny ( puste lub HOLD jeżeli jest założony )
         "constraint": null,             - inne ograniczenia, lista rozdzielana średnikiem
         "imo_class":null,               - klasy imo rozdzielane średnikiem
         "un_code":null,                 - kody UN rozdzielane średnikiem ( w kolejności odp. dla klas imo)
         "oversize_top":null,            - ponadgabaryt
         "oversize_left":null,           - ponadgabaryt
         "oversize_right":null,          - ponadgabaryt
         "oversize_front":null,          - ponadgabaryt
         "oversize_back":null,           - ponadgabaryt
         "vgm_weight":null,              - waga VGM ( kg )
         "gross_weight": null,           - waga brutto ( kg )
         "net_weight": null,             - waga netto ( kg )
         "in_yard_date": null,           - data wejścia DD-MM-YYYY HH24:MI
         "in_yard_type": null,           - sposób wejścia ( T-truck, V-vessel, R-rail )
         "out_yard_date":null,           - data wyjścia DD-MM-YYYY HH24:MI
         "out_yard_type":null,           - sposób wejścia ( T-truck, V-vessel, R-rail )
         "vessel_code_in":null,          - kod statku dla złożenia ( jeżeli sposób wejścia V )
         "vessel_name_in":null,          - nazwa statku dla złożenia ( jeżeli sposób wejścia V )
         "vessel_visit_invoy":null,              - kod podróży dla złożenia ( jeżeli sposób wejścia V )
         "vessel_code_out":null,         - kod statku dla podjęcia ( jeżeli sposób wyjścia V )
         "vessel_name_out":null,                 - nazwa statku dla podjęcia ( jeżeli sposób wyjścia V )
         "vessel_visit_outvoy":null      - kod podróży dla podjęcia ( jeżeli sposób wyjścia V )
         "prelodge":null – czy istnieje awizacja dla kontenera w systemie terminalu (Y,N),
        },
"status":""}
```

data - zawiera dane kontenera
status (SUCCESS/ERROR) - kod odpowiedzi, w przypadku error patrz p.3 - opis struktury danych komunikatu błędu