



Best Practices in Planning Inland Waterways Multimodal Platforms

Terms of Reference

1. Background & Facts:

Planning the development of ports in general, but also of inland ports, is not only a matter of infrastructures but also of intermodality, logistics and service given to costumers.

- **Logistics and intermodality** are nowadays strongly linked with an efficient transport (goods and passengers). To develop the economy and a sustainable mobility of a region (city), good accessibility (transport) is a key issue. Having a river is not enough, it should be a waterway, allowing cheap, safe, reliable and just on time transportation (import and export) of goods of different types (containers, bulk, construction material, fluid, fuel,..) to the inland ports.
- **Service given to costumers:** Identifying the customers' needs is also required to identify the needed infrastructures and the relevant facilities as a multimodal platform.

To integrate the infrastructure with the various transportation modes, making a river an efficient mean of transport (an Inland Waterway) the "requested" facility is a multimodal platform. This will contribute to move from RIVERS to WATERWAYS.

As the **Planning of Multimodal Platforms** topic is very broad, this WG will focus on multi modal platform along inland waterways after addressing some general concepts, which have other specificities than sea ports (smaller dimensions, different equipment's, other constraints and geographical implementation, traffic density, ...and other governances). Of course the traffic between the sea ports and those multimodal platforms will be considered as a key component of the multimodality of an IW platform, in addition to the railway and road connections with the platform. This WG will be a first step, latter another PIANC WG should present a more global and comprehensive view including the sea port specificities/perspectives. Hopefully, the masterplan of sea ports has already been investigated in Marcom WG158 and WG185, and these WG reports can be used as support by this new WG.

The inland ports, as intermodal platforms, have to:

- be integrated in information chains. A wide variety of communication systems already exist between intermodal operators and their clients, and many of them rely on modern technologies (RIS, Smart Shipping,...). Nowadays, the information services are integrated into as a part of e-logistics system and a transportation telematics system to link transport operators, shippers, forward agencies, and administrations together sharing transparent information concerning cargoes, means of transport and traffics;
- deliver goods within precise time windows;

- synchronize the logistical services into the production procedures with the minimal level of stocks;
- assure the cooperation of different partners in the production/consumption chains with thus the effective information exchanges, which provide the basic conditions (time intervals) for previsions, optimizations, and marketing.

Some of these issues (as the "information chains") will not be discussed in this WG as already tackled in WG125 (RIS) and WG156 (e-navigation).

2. Objectives and Intended product

The objective of having a PIANC WG on multimodal platforms is to help the decision makers (port managers, waterway managers, ...) to make the right choice, identify the relevant investment and platform locations. Multimodal platforms are mandatory tools for an efficient logistics, and therefore efficient waterways, serving at the economic development of a region or a country.

The "pragmatic" objectives (outcomes) of the WG will be:

- To present a series of case studies (project reviews) used to establish lessons learnt; on ports which have transitioned to multi-modal platforms (success stories), including connection between maritime ports and such IW platforms;
- To identify (based on these case studies) a methodology to assess the feasibility of a multimodal platforms along an inland waterway. This methodology should be able to support various specific IW development plans.

3. Detailed Content:

The WG report has as major objective to propose a general methodology, based on case studies, framing the required studies to assess the feasibility of multi modal platforms.

This methodology may include the following steps (this list is not exhaustive and will be completed by the WG):

- General concepts for multimodal platforms where waterborne transport (maritime and/or inland navigation) is present will be derived from the case studies.
- Market Analysis:
Identification of the needs in term of transport of goods and passengers, on the waterway but also for road and train (we need a multi modal transport model analysis):
 - Transport what?
 - How much?
 - From where to where?
 What are the current traffic (goods and passengers)?
 What are the trends for the future?
- Identify the stakeholders (shipping lines, ports, local industries, ..);
- Concept design of a platform in a IW:
 - Where to build?
 - What are the required facilities (quays, cranes, storage, ..)?
 - What are the target, connecting modes, expected size, required access, ... ?
 - Environment impacts;
 - Societal impacts & social acceptance (treat = Nimby);
 - Economic impacts (jobs, ..);
- How to manage a platform and how to make it efficient (business plan)?

Potential case studies (project reviews), used to derive lessons learnt, are:

- NL – Amsterdam, Rotterdam
- BE – Albert Canal and Trilogi Port (Meuse),
- FR – SNE; Lille-Dourges-Dunkirk
- USA -
- CHINA- Shanghai
- SPAIN – Sevilla and eventually Barcelona and Zaragoza (Bilbao) as their strong hinterland connexion

3. Existing Documents and PIANC Reports (as references)

The following documents will be reviewed, referenced and integrated when necessary:

- PIANC Reports:
 - WG172 (Marcom): Design of Small to Mid-Scale Marine LNG Terminals Including Bunkering , 2016
 - WG158 (Marcom): Masterplans for the Development of Existing Ports , 2014
 - WG152 (Marcom): Guidelines for Cruise Terminals , 2016
 - WG135 (Marcom): Design Principles for Small and Medium Marine Container Terminals, 2014
 - WG110 (InCom): Governance Organisation and Management of River Ports, 2010
- Annual reports of IW Ports (Duisburg, Paris, Liege, Pittsburgh, ...);
- Economic development plans (or business plan) of the concerned counties/regions;
- IAPH reports
- To be completed by the WG.

4. Working Group Membership

The WG should ideally include

- Port Manager and Multimodal platform manager,
- Waterway and/or political authorities, funding the platform,
- Logistics companies, transportation companies,
- Shippers,
- Infrastructure developers (Engineering Design and contractors)
- Companies in charge of transport assessment, traffic surveys, ..
- Consultants and experts in transport modelling and transport plan analysis
- Others, as an expert from IAPH

5. Relevance to Countries in Transition

The report will be of interest for South America and for most of the countries in transition. It will particularly assist decision makers in the assessment of investment in ports and waterway infrastructure.

6. Working with nature Change

Impact studies (usually mandatory), including impacts on environment, will be tackled by the WG and will be included in the proposed methodology, to make them opportunities and not constraints (*WG 203: Sustainable Inland Waterways – A Guide for Social and Environmental Awareness of IW Managers.*)