**NAME OF CASE**

Miscobiva – Management Information System Container Binnenvaart

**Keywords:**
Freight consolidation and transhipment, Business to business (B2B) solutions, cooperation, Innovative operational solutions, Transport management, ICT solutions

**Description:**

Sixty ships communicate their position to the Management Information System Cobiva server. Like car navigation systems, the GPS satellites tell the server where the ship is. The owner or the client knows precisely where the ship is and where it is going. This information is processed in the Shipmate software and calculates precisely what the expected time of arrival at a port or a lock is. Hereby, bridges, locks and the flow of the river are taken into consideration. Combining this information with information about deep-sea and inland terminals, quay lengths, cargo, cranes and available staff, time and productivity gains are achieved by optimal planning schedules. Because planning is optimized, emissions are also reduced. If a skipper knows he will have to wait for a while at the terminal or the lock, he can reduce speed, leading to a reduction of waiting time as well as CO2 emissions.

**Benefits:**

- Optimized logistical processes, leading to reduced fuel costs and kilometres, reduced time loss.
- Better positioning information provides the customers with a higher level of service.
- Reduced emissions.

**Success Factors:**

- Already comparable systems have been tested, among others by VITO (Dutch Association of Inland Terminals), but these were limited to one stevedore. Miscobiva is oriented towards the entire chain of inland navigation.
- Better planning and hereby reducing production costs is in the interest of all cooperating organisations.
- The operators involved in Miscobiva are responsible for 40% of all container transport on the Rhine.

**Supported Strategic Targets:**

- The development of a digital infrastructure for the container Inland Waterway Transport (IWT), to improve the entire logistical chain.

**Starting Point/Objectives/Motivation:**

The main problem, idea or motivation that led to the development and introduction of the new practice:

High expenditures and emissions that are not necessary. It improves the planning at the terminals which reduces waiting time here.

The common practice before the implementation:

Every operator operated alone and the owner of the ship and the client did not know where the ship precisely was. This caused delays at locks and bridges, leading to higher costs and higher emissions then necessary. Also the customs procedure cost more time.

The purpose and the sustainability objective of the case:

Increase efficiency and reduce emissions due to shorter waiting times.

Solution:

The system is based on tracking and tracing of barges using GPS. Over sixty vessels are equipped with it. The position of the vessel is sent to the Miscobiva-system on shore by GPRS.
Through the Miscobiva system the owner/commissioner of the ship can see such information as the location of the ship, its direction and what speed it travels at. Furthermore this information is linked to other data on the Miscobiva server, such as engagements and travel information. Miscobiva can predict at what time the ship will be at its destination, just like navigation equipment for road transport. It takes into account bridges, locks and the speed of flow in rivers. The system works with real time information; the oldest information is five minutes old at most when ships are sailing outside port areas. When ships get near the seaports, the information is one minute old at most.

By using these predictions and the reliability of the real-time information the logistic chain can be planned more accurately. It also creates the possibility of better anticipating possible interruptions elsewhere in the chain. Unnecessary waiting times can be prevented.

Next to the real-time information on the level of vessels, a link is also realised to the information on the level of cargo. By doing so the vessel is becoming an integrated part of the back office of the barge operator. As a result the barge operator, vessel and terminal have the same, reliable, information at their disposal. In addition to the advantages for the logistic chain the system also offers advantages for the safety and swiftness of inland navigation traffic and law enforcement services. Because of the possibility to make estimations for waiting times at permanent structures, skippers can travel at an optimal speed and by doing so decrease CO2-emissions.

By means of this project container IWT is contributing to mitigating future difficulties in the field of mobility, sustainability and efficiency of goods transport. The project Miscobiva is a large step forward to a professional, industrially organised container IWT that is ready for the demands of the future.