## O.T2.1

### Output factsheet: Pilot actions

<table>
<thead>
<tr>
<th>Project index number and acronym</th>
<th>CE36 ChemMultimodal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead partner</td>
<td>Ministry of Economy, Science and Digitalisation Saxony-Anhalt</td>
</tr>
<tr>
<td>Output number and title</td>
<td>O.T2.1</td>
</tr>
<tr>
<td>Responsible partner (PP name and number)</td>
<td>PP6 + PP7 ·Ústí Region, SCHP ČR</td>
</tr>
<tr>
<td>Project website</td>
<td><a href="http://interreg-central.eu/chemmultimodal">http://interreg-central.eu/chemmultimodal</a></td>
</tr>
<tr>
<td>Delivery date</td>
<td>23.04.2019</td>
</tr>
</tbody>
</table>
The pilot project was aimed to bring the MM transport closer to companies, to increase the utilisation of MM transportation by the project partners by 10% and to reduce CO2 emissions.

The following schemes show, that conditions for multimodal transport development are established at European continental level. Specific shipping routes and commodity streams need to be systematically updated in cooperation with shippers and logistic services providers. Such close cooperation has been provided to address the specific tasks and objectives of ChemMultimodal project. As demonstrated in the analysis, chemical companies and logistics entities are strongly involved in this cooperation. In the other parts of this document the specific examples are described.

The basic conditions in the Czech Republic determine the approach to combined transportation as a whole, and the relations with transportation of chemical commodities are represented by the developed infrastructure - the railway and road networks and the number of reloading points, established mostly without the support of the government.

The area of the Czech Republic and in particular the area of the Ústí Region does not have the most suitable conditions for regional or national multimodal transport utilisation. Routes longer than 500 km represent the exception of the rule. A completely different situation is in continental transportation. The utilisation of combined transport is efficient in importing/exporting from / to the Czech Republic or in transit transportation.

Ústí Region is not only a region of chemical industry and energy, but also an important hub of railway and road routes in the North - South direction and in the West - East direction.
KEY RESULTS

- Significant accentuation of MM transport by road transport;
- Acceleration of negotiations among providers and users on the possibilities of know-how transfer and MM transportation increased utilization;
- The positive turn of philosophy of approach of all transport chain actors towards MM transport.
- ChemMultimodal's pilot phase tested usefulness and effectiveness of the project’s already developed tool-box, aimed on the multimodal transport promotion. To reach this, companies in all participating regions/countries were contacted and invited to collaborate closely with ChemMultimodal project partners to investigate if road transport can be shifted towards rail and/or short-sea transport. To raise awareness on multimodal transport and to establish better contacts of chemical industries with logistics service providers, a series of local workshops were arranged during the pilot phase.

In Czech Republic, 8 chemical companies participated in the pilot phase. The data informing on the increased utilization of multimodal transportation were presented in cooperating companies during the years 2018/2016.

The concrete result of ChemMultimodal project is included in the final Pilot Project report and became also part of the SCHP ČR Responsible Care methodology including the regular monitoring of multimodal transports into indicators of the Responsible Care initiative.

5 transport routes were designed, estimating the transport of chemical goods in the range of 101 million tonn-kilometers, producing CO2 emissions of 6.253 tons per year.
NUTS region(s) concerned by the pilot action (relevant NUTS level)

NUTS 0  Czech Republic
The pilot actions were planned and implemented practically on the whole territory of the country. Due to the size of the country, relevant multimodal transports could be organized only with destinations out of the Czech Republic.
Regarding the starting points the Ústí Region is part of NUTS II Region “Northwest” No. CZ 04 together with the neighbouring Karlovy Vary Region. Ústí Region is NUTS III No. CZ 042.
The pilot project involved 8 chemical enterprises from all regions of the Czech Republic with an emphasis on the Ústí Region, where three companies were involved - Unipetrol RPA, Spolchemia and Vodní sklo.
From the point of view of activities of the Ústí Region in ChemLog projects, the Region focuses on reduction of the danger rising from chemical goods transportation, while conditions for further development of chemical industry in the Region are created, in order to preserve and strengthen the competitiveness. Majority of chemical goods transportation represents the transit transport in the Ústí Region. Due to the proven effect of the shift of the central parts of the multimodal transport routes on railways or waterways, the efforts of the Ústí Region are driven also by the efforts to contribute to the reduction of emissions from road transport on railways or waterways (Elbe River).
Therefore, the region development strategic documents include the development of conditions for creation of container terminals and new routes, incl. high-speed railways or even better use of Labská vodní cesta (Elbe River road).
The pilot project involved companies from 7 chemical regions, alongside the region of Ústí nad Labem included companies from the following regions - NUTS II: - Karlovarský, Středočeský, Pardubický, Moravskoslezský, Jihomoravský and Zlínský.
Expected impact and benefits of the pilot action for the concerned territory and target groups

With the realisation of the pilot action in the Czech Republic road transports on 5 routes (one with the 3 options) were investigated for their multimodal potentials. In result of the activities carried out, transport on 3 of these routes have been successfully reorganised, while n the other 2 transportation roads the possibilities of their utilisation by MM transport were identified.

Except the measurable impacts, the experts responsible for pilot project realisation transferred the know-how shared by the partnership, this also enabled not only the improvement of MultiModal tool but also the capacities for the follow up development in companies in identification of multimodal technologies were increased.

Highly evaluated is also the socio-economic and environmental approach in decision making process and in utilisation of transportation modes by all participants.

<table>
<thead>
<tr>
<th>#</th>
<th>Number of small face-to-face meetings</th>
<th>Logistic service provider(s)</th>
<th>Transport distance and mode(s)</th>
<th>Modal split (in %)</th>
<th>CO₂ emitted (per month; calculated)</th>
<th>CO₂ reduction (anticipated or real)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>Bohemiakombi 1) LSPs 2)</td>
<td>1 227 km Road 705 km Rail</td>
<td>Road 63.51%</td>
<td>20 606.4 kg</td>
<td>3 568.95 kg</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>Bohemiakombi 1) Kombiverkehr 1) LSPs 2)</td>
<td>1 075 km Road 936 km Rail</td>
<td>Road 53.46%</td>
<td>19 629.5 kg</td>
<td>4 545.85 kg</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>Inter Ferry Boats1) Naviland Cargo 1) LSPs 2)</td>
<td>784 km Road 1 367 km Rail</td>
<td>Road 36.45%</td>
<td>17 703.5 kg</td>
<td>6 471.90 kg</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>at the stage of complex negotiations with 1) + 2) + ports</td>
<td>480 km</td>
<td>Elect.rail 95% 5% truck</td>
<td>59 427,80 kg</td>
<td>91 921,64 kg</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>Bohemiakombi 1) Kombiverkehr 1) LSPs 2)</td>
<td>1 300 km</td>
<td>Elect.rail 90% 10% truck</td>
<td>30 290,00 kg</td>
<td>86 890,00 kg</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>Metrans1) LSPs 2)</td>
<td>1) Rail-truck 1015 km 1) Short 285 km 1) Elect.rail 90% 10% truck 2) short sea</td>
<td>47 299,00 kg 1) + 9120,00 kg 2) Σ 56419,00 kg</td>
<td>102 549,00 kg</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Bohemiakombi1) LSPs 2)</td>
<td>1 100 km</td>
<td>Elect.rail 90% 10% truck</td>
<td>27 347,21kg</td>
<td>42 113,79 kg</td>
</tr>
</tbody>
</table>

Source: SCHP ČR

1) Shuttle operator 2) logistics service provider (all in service)
Sustainability of the pilot action results and transferability to other territories and stakeholders

Sustainability and transferability of results in other regions.

The approach approved for ChemMultimodal pilot project realisation, i.e. the direct cooperation with chemical companies and providers of logistic services in tool box utilisation will continue also with organisation of workshops.

Logistic committee of SCHP ČR submitted in the framework of the evaluation of activities and fulfilling of tasks of ChemMultimodal project the action plan to the board SCHP ČR (CEO of chemical companies). This plan was approved on 17.04.2019.

The increased informing on CO2 emissions is included into this plan, the calculator of emissions is part of the toll developed under the project. It possible to use it not only for chemical substances measurement, but also in other industries.

The ChemMultimodal project tools are presented on project websites. The other information on the pilot project realisation in the Czech Republic are inserted on websites of SCHP ČR (www.schp.cz, www.chemmultimodal.upce.cz), project brochure, journals Nebezpečný náklad and Logistic News.
Lessons learned from the implementation of the pilot action and added value of transnational cooperation

The check of experience reached in the 1st pilot project phase enables to improve the tools already developed within the project and to prepare the Action plan for the Czech Republic establishing the follow up steps in implementation of the tested processes and their implementation also after the completion of the project.

- Chemical companies are interested to increase the utilisation of MM transport especially regarding the security of the transportation and reduction of costs
- The problems identified related to the infrastructure are of a long-term character, it is not possible to solve the in a short time
- Operational burdens as - non existing connections, time of the transportation, reliability
- There is the potential for MM transport development in Eastern Europe, the problems are especially in long time of transportation, insufficient infrastructure, high costs, (the transportation roads are fully operated, there is the mixture of passenger and cargo transportation
- Specific problems of the product - necessity of special equipment

The following graph shows the present structure of commodities transported by multimodal transportation and shows, the chemical industry is not a crucial player in the organisation of MM transport because its need of transport is low. Is it clear form this structure, that the increase of multimodal transport of chemical commodities is possible regarding to the percentage (cca 10 % of the total MM) of its share only in relation with the other non-chemical commodities. It shows the basic role of operators of the multimodal transport in searching the appropriate flows of the goods in all spectrum of the imported and exported commodities and destinations in shuttle network.
Key point for Pilot project success was cooperation with all Stakeholders representing carriers and chemical companies. Photo from the Kick-off Meeting:

- **Main links:**
  - https://www.schp.cz/info/aktivity
  - http://www.speedchain.eu/cz/

The best example of the interest towards the possibilities of the multimodal shift was the yearly largest CE Logistic conference SpeedCHAIN, see Photo: SpeedCHAIN 2019 - plenary session/Pilot project presentation and from presentation of Saxony-Anhalt:

During the individual company meetings and Project meetings where the final decisions were made for the pilot routes and identification of another potentials, fruitful discussion and ambient were relevant as a big support to achieve the project goals.
In the course of the Pilot Actions the Toolbox was tested and revised according to the experiences made. The final toolbox elements (D.T1.2.6 It Visualisation of transport flows, D.T1.2.7 Planning Guidelines for increasing multimodal transport, D.T1.2.8 Consulting Services for chemical companies to improve multimodal transport, D.T1.2.9 Measuring CO2 footprint of chemical logistics) are available on the project website:

https://ifsl50.mb.uni-magdeburg.de/chemmultimodal/

The results of the regional Pilot Actions (D.T2.5.5 Final implementation report Czech Republic) are available on the project website:


The comprehensive Pilot Phase report (D.T2.9.3 Evaluation report on results and achievements of pilot projects) is available on the project website: