

The Challenge

Help us to develop a user-friendly mapping tool for humanitarian logisticians for

- Assessing the status quo: document and represent
 - Suppliers and sources,
 - Warehouses and assisted facilities
 - Transportation: hubs, routes and flows of goods.
- Decision support: model and plan the logistics network

The tool should be easy to install and maintain. It should require a minimum of training and should be usable without expertise on mapping or GIS systems.

In and Out(put)

The tool should have ready to use interfaces that allow for

- easy uploading of large amounts of data, for example from an Excel file, and
- manual changes and updates in menus that capture all features which appear on a map without the need for any "manual" drawing, ideally from a single table.

Collaborative work of several logisticians on the same map should be possible.

Building of separate layers, which can be exchanged with other users in a standard format (kml/kmz) and viewed with different mapping applications (for example Google Earth or Maps). The tool should allow customizing and printing maps with the usual features (title, legend, bar scale etc.).

The ideal tool should provide

- **World map**, which can be panned, moved, rotated and zoomed into (from the globe down to street level) that generates an overview and enables planning of large-scale logistics networks.
- **Heat map feature** to highlight trends or challenges, for example according to the annual budget or the appropriateness as logistics base. The entire surface of countries or provinces can be changed according to the value of a parameter that is specified externally.
- **Customizable markers** that enable entering limited text to individual markers (pins), for example name of facility
 - for each assisted *health care* facility: icons according to type such as hospitals, clinics etc. with size according to value of donated goods, frequency of supply, number of beds etc.
 - International ports (land, sea, air) with a number attached to the marker, indicating importation time in days, separately for around 10 different types of goods (for example IT, vehicles, fuel, medical, shelter, engineering etc.
 - Warehouses: icons according to
 - Type (storage, contingency, transshipment)
 - Facility (cold chain, counter-balanced forklift trucks, vehicle workshop etc.)
 - Size according to surface area, stock value etc.
 - Base of aircraft and heavy vehicles.
 - Blocked border crossing, ports and transportation routes.
- **Arrows** indicating the direction of flows, the width indicating value/weight/volume of flows.
- **Connectors** between sites for indicating transportation paths,

- Colour and line type indicating mode of transportation,
 - Label in the middle of connectors indicating transportation time and cost.
 - Indicator if surface transportation should be "snapped" to road or water (to indicate exact routing and detours needed for security reasons).
- **In- and Output**
- Two dimensional printing of any selection of the world map.
 - Uploading (Excel) tables with all places (which are automatically geocoded and displayed on a world map) as well as all above features (heat map, markers, arrows and connectors).