



## How to work with heatmaps?

Visualize speed, acceleration, stationary time, object density or safety analysis through heatmap or gridmap

Heatmaps are another way how to **visualize data in your video**. Thanks to heatmaps or gridmaps available in SWISSTRAFFIC.ai Viewer you can visualize data such as **velocity, acceleration, stationary time, object density or time to collision**.

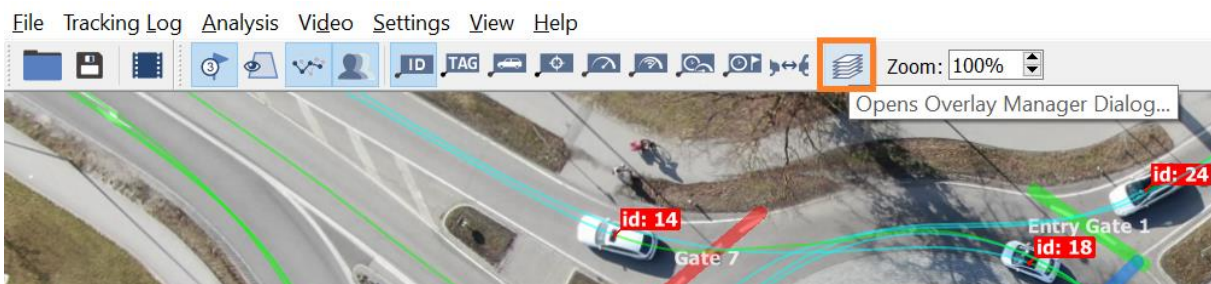
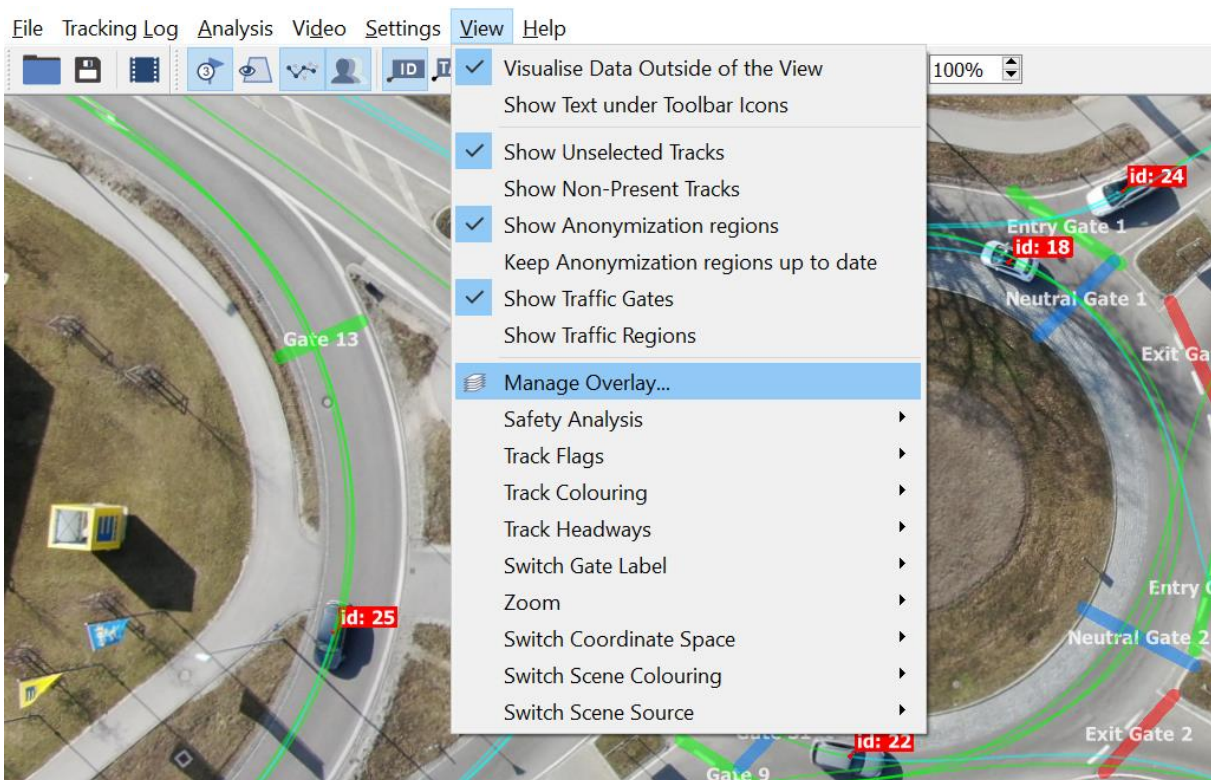


See the description of each parameter below:

- **Velocity** – Absolute size of object velocity vector.
- **Total Acceleration** – Absolute size of immediate acceleration vector
- **Tangential Acceleration** – Only in DRONE mode. Positive value means acceleration and negative value means deceleration.
- **Lateral Acceleration** – Only in DRONE mode. Positive value means acceleration to the right and negative value means acceleration to the left.

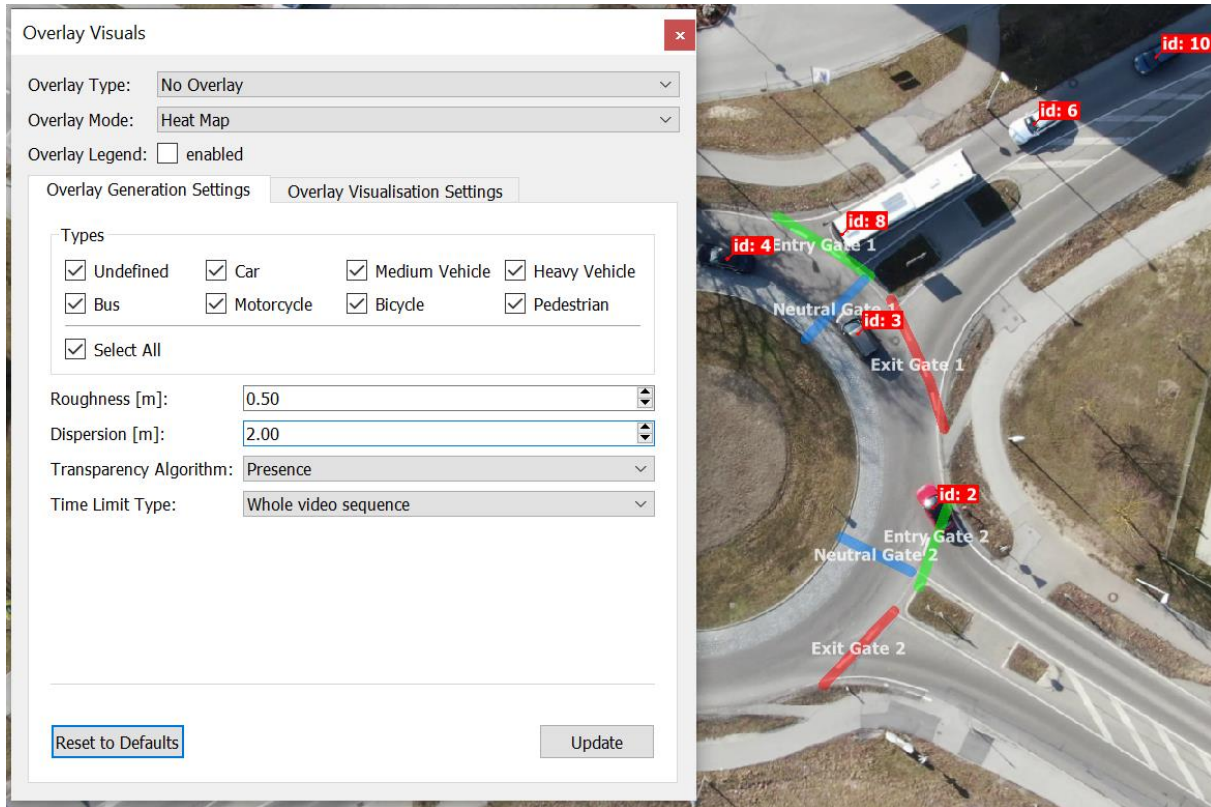
- **Total Stationary Time** – Visualizes areas where vehicles are considered stationary. For defining a stationary vehicle check Flag Dynamics Settings.
- **Object Density** – Visualizes the density of occurring objects.
- **Safety Analysis** – To view this overlay, you must first perform a Safety Analysis. Visualizes the conflict density of the selected type of Safety Analysis.

To set your heatmap or grid map, go to **Manage Overlay** option under View in main menu or on main panel.



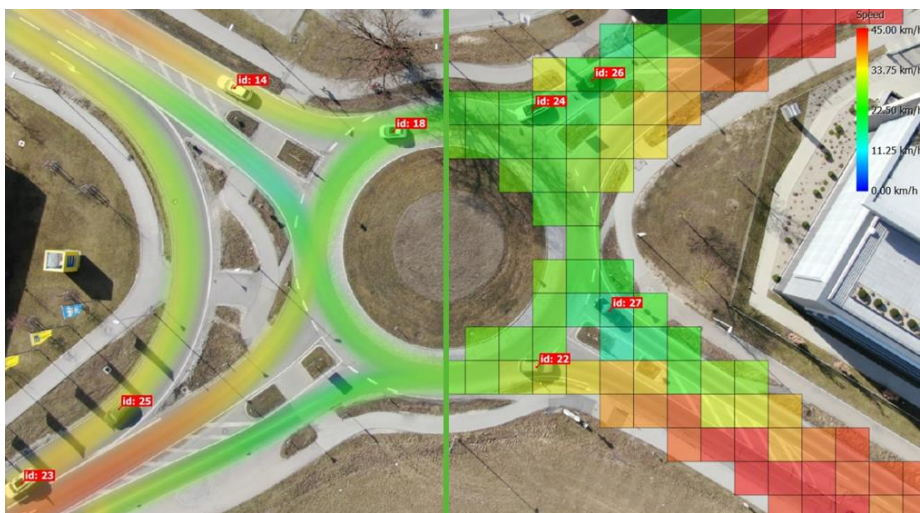
## Overlay Generation Settings

Once you open Manage Overlay settings new settings window shows. In this window you can choose what kind of data do you want to display, whether you want to display data by **heatmap** or **gridmap**, what types of objects you want to visualize and others.

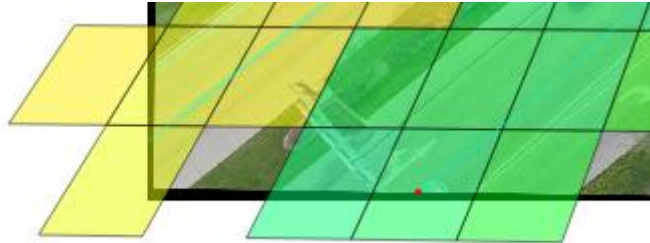


In **Overlay Visualisation Settings** you can set Colour Map of displayed overlay, transparency of displayed trajectories and heatmap value range, that allows you to change the sensitivity of the displayed overlay.

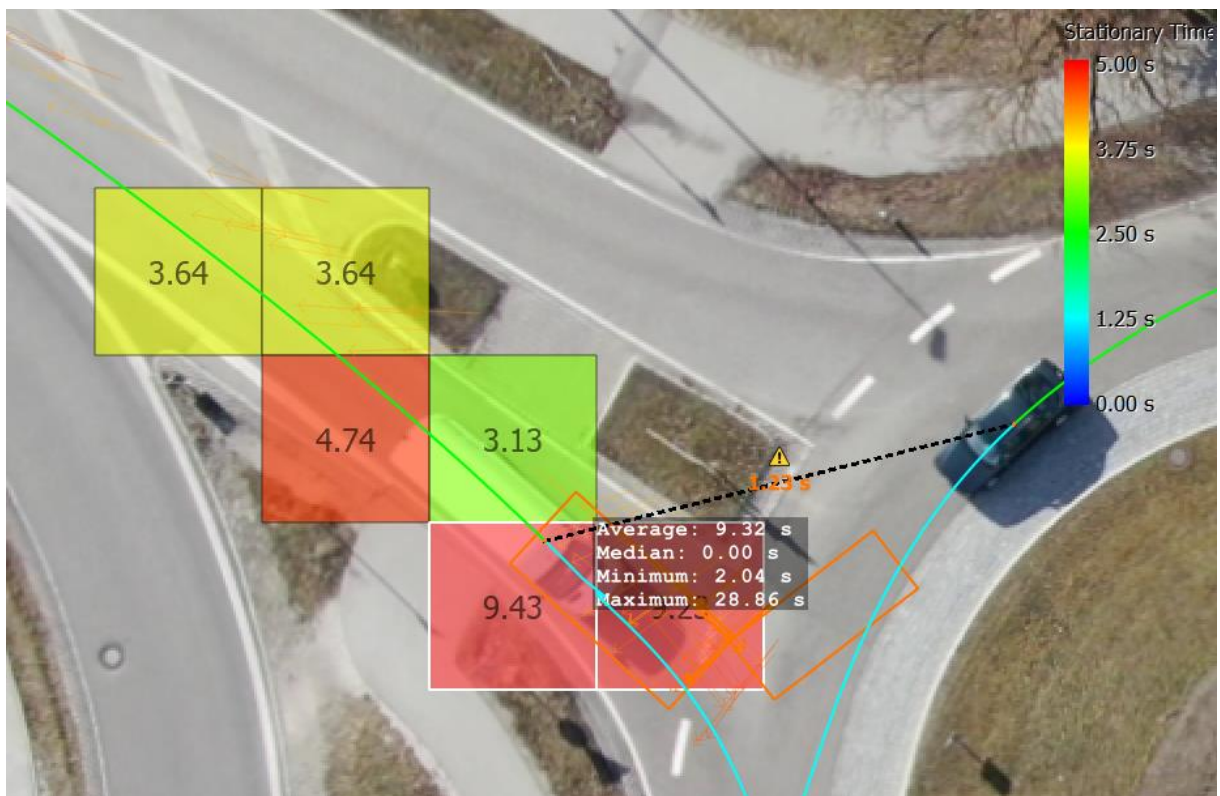
See the **difference** between visualization of speed by **heatmap** (left) and **gridmap** (right) through SWISSTRAFFIC.ai Viewer.



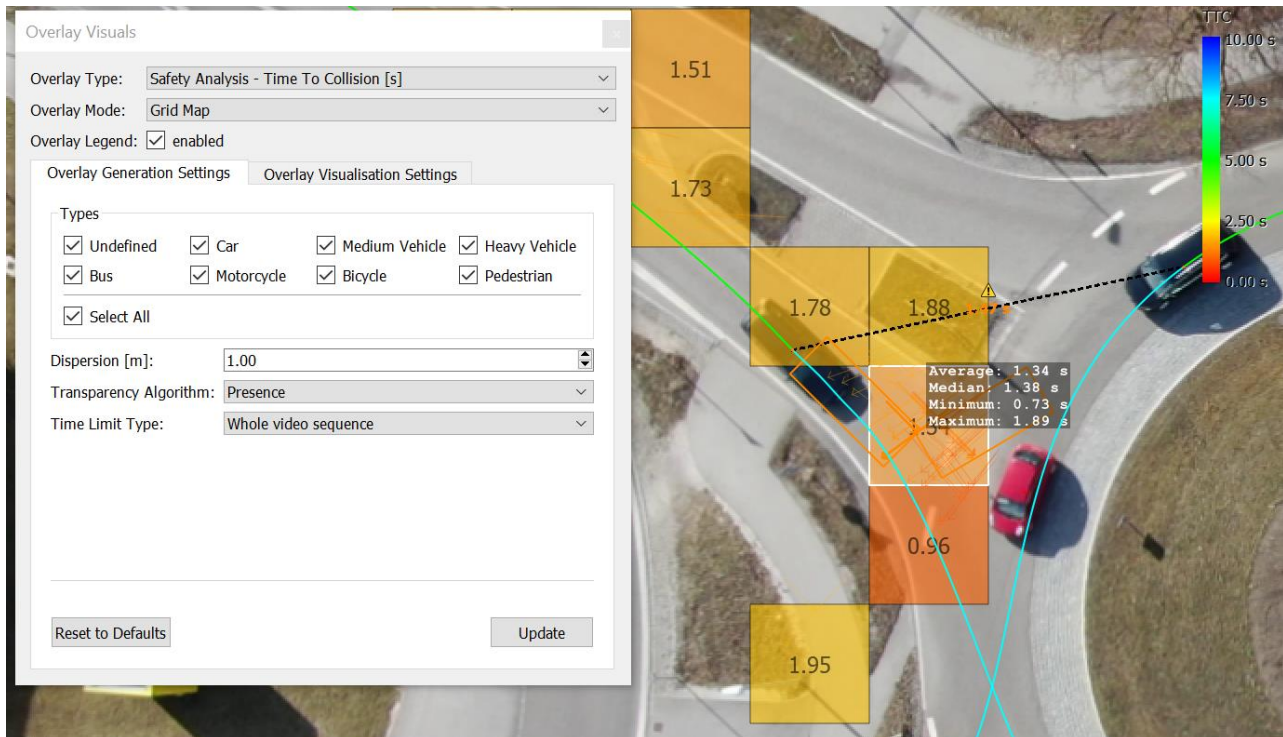
In case of **gridmap** you can **set size** of each grid and **range value** for setting sensitivity of displayed overlay. Gridmap respects the angle of the camera and traffic as well. In case angle between your camera and traffic is not 90°, **gridmap will respect this visualization** and keep real distance in the video.



You can decide whether to **show any specific value** in each grid and which one. To get statistic data about specific area choose grids, where you expect this information. **New flag with these information shows**. In case of stationary gridmap you do get average, median, minimum maximum stationary time within selected region.



Visualize **Time to Collisions**, that is part of our **Safety analysis**, by heatmap or gridmap as well! By clicking to each of grid, you can get **more statistic information about the area**. By selecting more grids, get **overall statistics for selected grids**.



To see other visualization possibilities, see the article [How to visualize data in the video](#) and [How to make a visual export from SWISSTRAFFIC.ai Viewer](#).