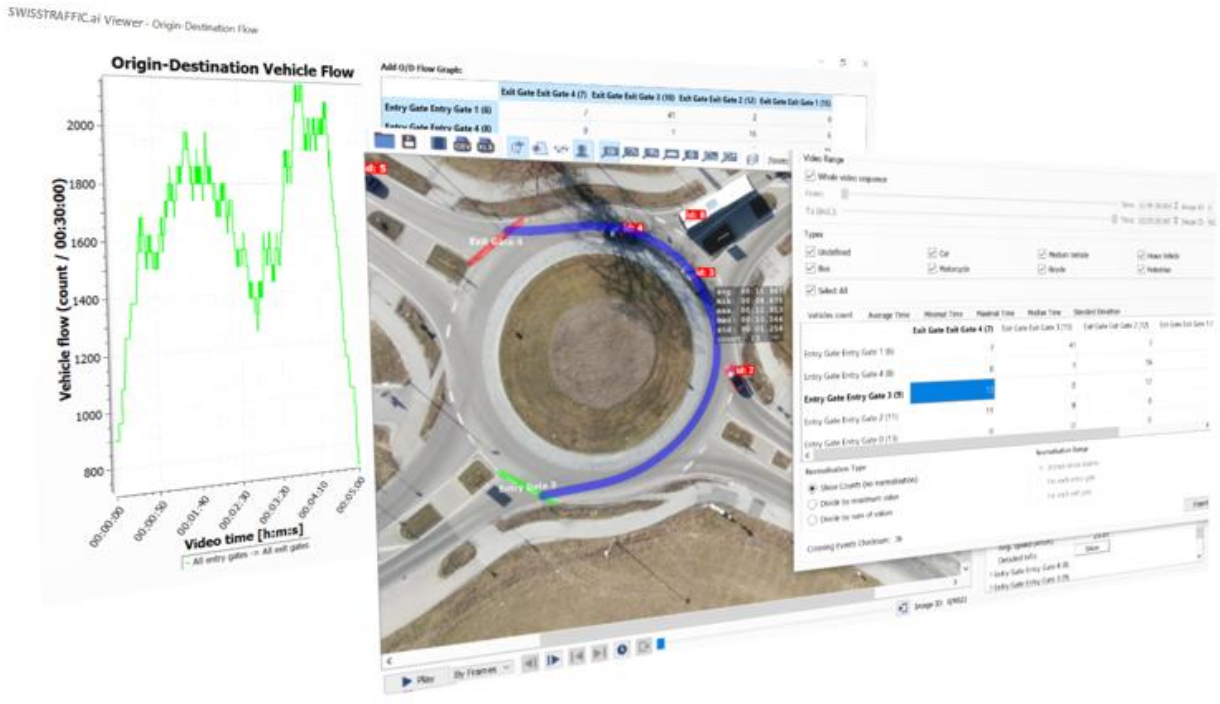
version 1.0

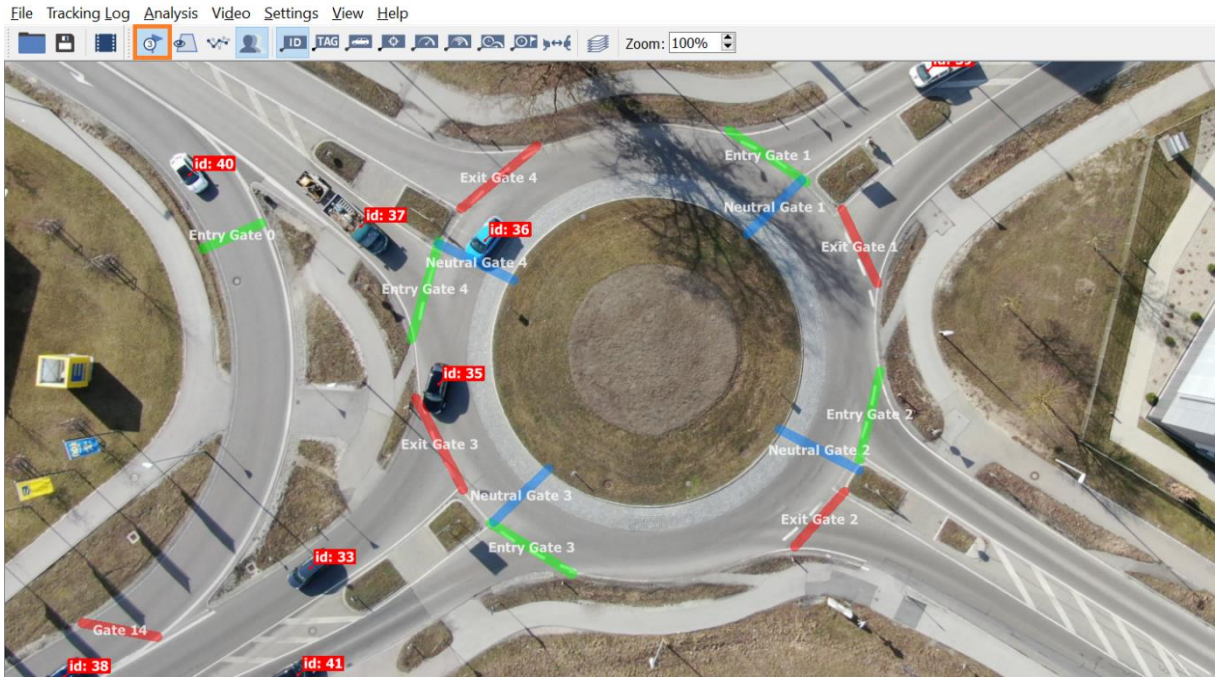
How to export Origin-Destination matrix?

Overall statistics about object movements within minutes!

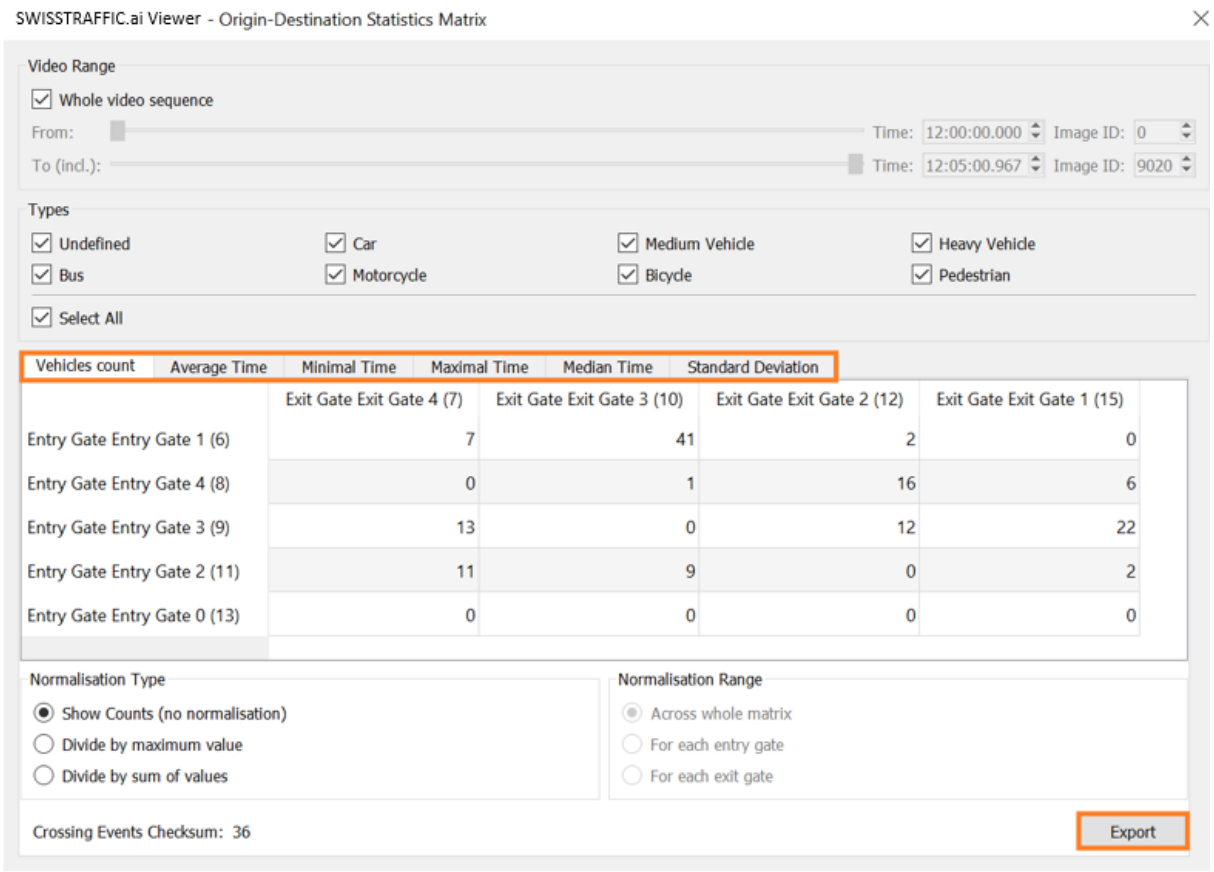
Have you **set your gates** and are you looking for possibilities how to export data? Thanks to Origin-Destination matrix data you can get not only **excel file export,** but **Origin-Destination Vehicle Flow graph** or **visual export of data between each two gates** as well. See how easy it is through the **SWISSTRAFFIC.ai Viewer** in couple of steps.



To be able to get OD matrix, you must set **virtual entry, exit or neutral gates** through the **SWISSTRAFFIC.ai Viewer** to your video. See step-by-step manual how to set gates in **this article.**



Once you set your own virtual gates within the video you can export OD matrix. Click on the Analysis menu and select **Show Origin-Destination Statistics**. The Origin-Destination Statistic Matrix menu appears.



Here you can **set the required parameters** for your Origin Destination Matrix.

- **Check box "Whole video sequence"** – By unchecking this option, you can select a specific part of the video.
- On the **Types** menu, select the objects for which you want to perform statistics.
- And now the **Statistics Matrix**: here you can choose what data you want to export. You can choose between: Vehicle counts, Average Time, Minimal Time, Maximal Time, Median Time, Standard Deviation

Vehicles Count - Normalisation Type section :

- **Show Counts (no normalisation)** – Only the numbers of objects passed from each entry gate to each exit gate are listed in the matrix.
- **Divide by maximum value** – The numbers in the matrix indicate the ratio between the maximum number of objects and the number of objects that have passed through the given pair of gates listed.
- **Divide by sum of values** – The numbers in the matrix indicate the ratio between the total number of objects and the number of objects that have passed through the pair of gates listed.

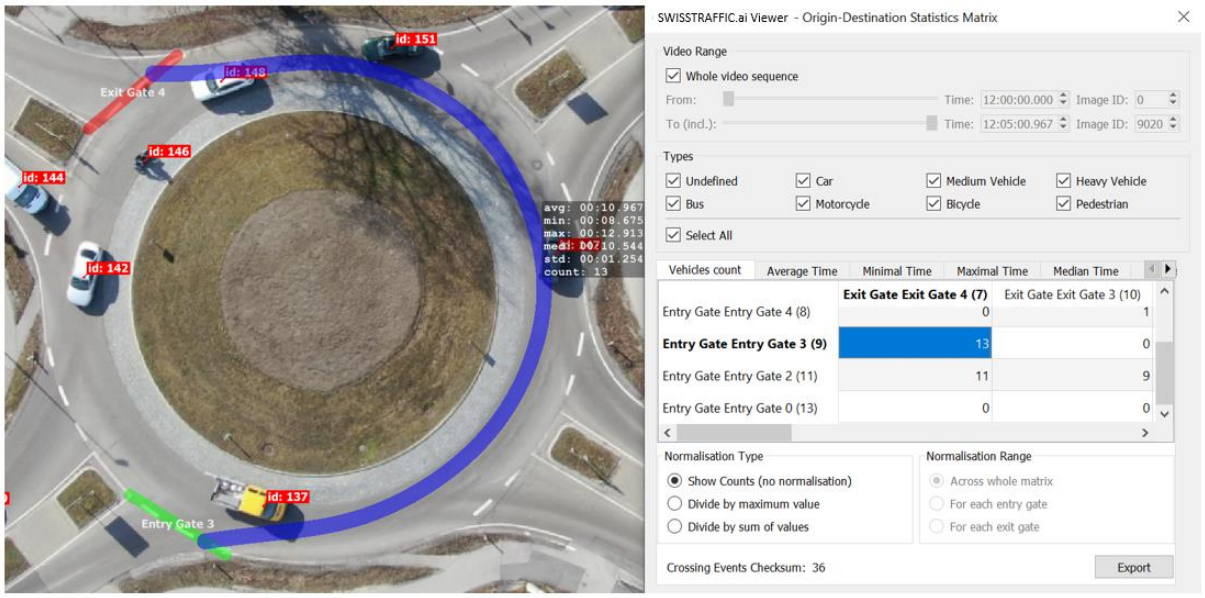
These options have additional sub-options:

- **Across whole matrix** – In this case, the ratio will be applied to the entire matrix.
- **For each entry gate** – In this case, the ratio will be relative to each entry gate separately.
- **For each exit gate** – In this case, the ratio will be relative to each exit gate separately.

Average Time, Minimal Time, Maximal Time, Median Time, Standard Deviation

- The average driving times from the entry gate to the exit gate will be entered in the matrix.
- The other times will be listed with other options like Minimal Time, Maximal Time, Median Time and Standard Deviation.

If you click on a **combination of gates** in the Origin-Destination Matrix, you will see a table that contains **all the path data** between chosen gates (object counts, average times, etc.).



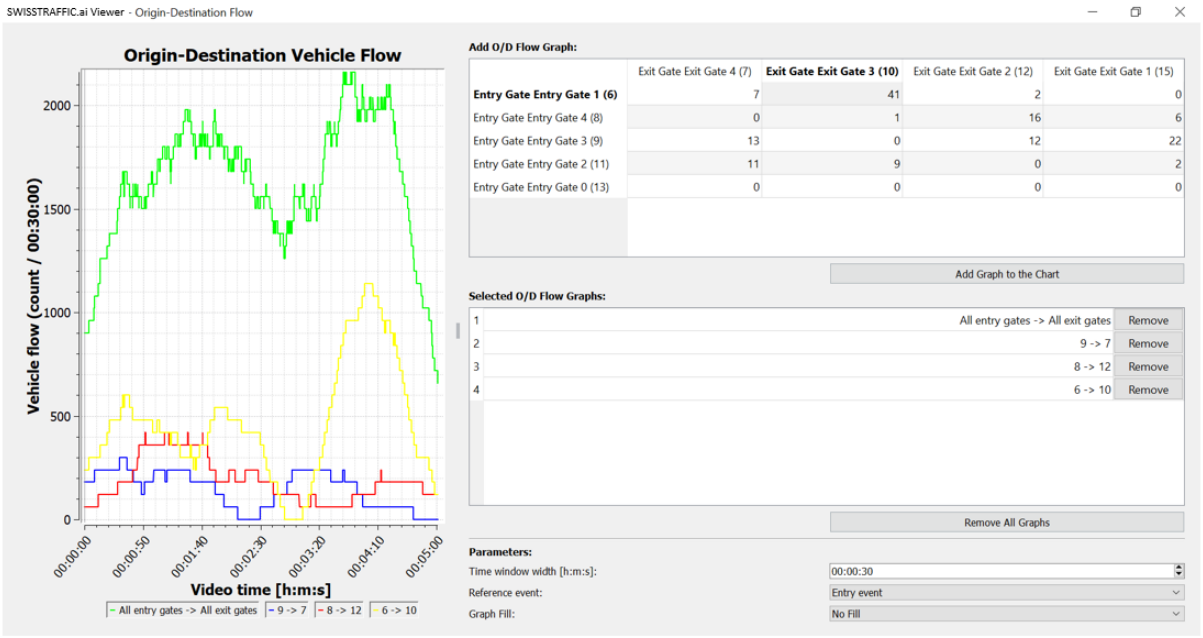
Click the **export** button to export .CSV file that you can open by Microsoft Excel. See export of Vehicle count set to Show Counts (no normalisation) below:

	Exit Gate 7 (tag: Exit Gate 4)	Exit Gate 10 (tag: Exit Gate 3)	Exit Gate 12 (tag: Exit Gate 2)	Exit Gate 15 (tag: Exit Gate 1)
Entry Gate 6 (tag: Entry Gate 1)	7	41	2	0
Entry Gate 8 (tag: Entry Gate 4)	0	1	16	6
Entry Gate 9 (tag: Entry Gate 3)	13	0	12	22
Entry Gate 11 (tag: Entry Gate 2)	11	9	0	2
Entry Gate 13 (tag: Entry Gate 0)	0	0	0	0

Origin-Destination Flow Graphs

Flow Graphs are used to display the **number of objects passed through the Gates over time.**

By default, the Flow Graph displays the **total number of objects that passed between the gates in the entire video sequence.** In the Add O/D Flow Graph field you can mark a specific pair of gates for which you want to generate a Flow Graph. You can also display a **graph for multiple pairs of gates at once.** Press CTRL and click on the desired pair of gates, then click **Add Graph to the Chart.**



In the Parameters field you can set:

- **Time window width [h:m:s]** - Adjust the vertical axis sensitivity.
- **Reference Event** - Based on what event the graph will be displayed. (entry, exit).
- **Graph Fill** - Graph fill appearance.