vehicle arrives at a station, passengers scheduled to descend exit taking one time step each. Then passengers waiting at the station board taking one time step each until the vehicle is full or leaves the station.

Results for a homogeneous scenario, with equidistant stations and initial positions of vehicles and equal passenger demand (λ) at stations, are shown in Figure 3 for four different passenger demands. The headways in the default method collapse (as seen by the high standard deviations of intervehicle frequencies) leading to very high waiting times. Surprisingly, the self-organizing method, even when headways are not maintained (although the system does not collapse), produced waiting times even lower than those of the maximum method, which maintained equal headways. Theory would tell us that waiting times are optimal for an equal headway configuration, meaning that the self-organizing method delivers supraoptimal performance. Still, when passenger waiting times are separated between total waiting times and waiting times at stations, the maximum method indeed has the minimum waiting times at stations, which is what the theory tells us. However, the theory assumes that travel times are independent of waiting times at stations, and they are not. In order to keep equal headways, some vehicles must idle, while others must leave some passengers behind. The self-organizing method is flexible enough so that headways are not maintained but neither collapsed, while passengers at stations are served on demand. Thus, even when waiting times at stations are higher, the total waiting times are lower.

Results for a non-homogeneous scenario, with non equidistant stations nor initial positions of vehicles and unequal passenger demand (λ) at stations, are shown in Figure 4. The default method collapses as well. The maximum method is not able to recover from the unequal initial headways and maintains them, leading also to high waiting times, even at stations, although not as high as for the default method. The self-organizing method is able to adapt to the non-homogeneous demands in this scenario and delivers a performance similar to that of the homogeneous scenario.

The self-organizing method is better than the theoretical optimum because of a slower-