ADDITIONAL INFORMATION FOR THE SIMULATION OF THE QAOA

The information used to determine the fixed and variable cost for the QAOA simulations in this work is shown in Table I. The table shows the fuel consumption and cost per 100 km, the price of the chassis, and loading capacity [1] for the two truck types we consider in Fig. 3 in the main text: a rigid truck (rt) and a tractor semitrailer (ts).

Table I. Fuel consumption $f$ and corresponding cost $c_{\text{road}}$ per 100 km, the price $c_{\text{chass}}$ of the chassis as well as the loading capacity $m_{\text{max}}$ for each of the two different truck types considered in the simulations of this paper. Note that the loading capacity does not take into account the size or weight of items that can be carried by the truck. The information in this table is used to determine the variable and fixed costs in Eq. (14) in the main text.

|       | rt   | ts   |
|-------|------|------|
| $f$ [l/100 km] | 28.6 | 34.5 |
| $c_{\text{road}}$ [€/100 km]$^a$ | 34.32 | 41.4 |
| $c_{\text{chass}}$ [€] | 75,000 | 150,000 |
| $m_{\text{max}}$ [items] | 3 | 4 |

$^a$ The price per liter is taken to be 1.2 € [4].

[1] T. Ghandriz, Transportation Mission Based Optimization of Heavy Vehicle Fleets including Propulsion Tailoring, Licentiate thesis, Chalmers University of Technology (2018).

[2] “Average fuel consumption in Australia,” (2020).

[3] U. Clausen, H. Friedrich, C. Thaller, and C. Geiger, eds., Commercial Transport: Proceedings of the 2nd Interdisciplinary Conference on Production Logistics and Traffic 2015, Lecture Notes in Logistics (Springer International Publishing, 2015).

[4] “Germany Diesel prices, 09-Mar-2020,” (2020).