Mobility Pilot at AE

From: Climate Action Task Force AE
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Agreed and decided in the MT of February 8, 2022

What's the Mobility Pilot?

The Mobility Pilot is a project initiated by Green TU in 2020. The goal of the pilot is to reduce the emissions due to business trips of staff members at TU Delft. These emissions amounted to 14% of the total emissions of the campus in 2018 (TU Delft's Carbon Roadmap, A. van den Dobbelsteen and T. Blom). The Faculties of Aerospace Engineering and Civil Engineering will be the first ones to implement Mobility Pilots within the framework of the Climate Action plan at TU Delft.

The Mobility Pilot leads to new, more environmentally friendly, rules for business travel at the faculty of Aerospace Engineering.

What does the Mobility Pilot mean for you as an employee of the faculty?

The faculty asks you to comply with new rules for business travel. The responsibility for doing this is yours. Starting point: comply or explain.

The Netherlands

If you travel within the Netherlands, we strongly recommend using public transport. If you travel more than 30 minutes by train you are entitled to travel in 1st class. The Dutch railways offer a range of services to cover the last kilometres between station and your destination, including 'OV-fiets.' If public transport is really not an option, please consider using your own or a rental electric car.

Short-haul trips ((<700 km)

Land transportation is strongly recommended for *short-haul* trips. For travel to one of 17 defined cities or when the total travel time from the starting point to the destination is less than 8 hours the default is the use of the train. If you travel by car, we strongly recommend the use of an electric car, either privately owned or as a rental.

Train destinations	
London	Manchester
Paris	Lyon
Lille	Orleans
Brussels	Brugge
Frankfurt	Cologne
Berlin	Bremen
Hannover	Dusseldorf
Stuttgart	Braunschweig
Luxembourg	

Medium-haul and long-haul trips (>700 km)

It is recommended to limit both medium-haul (700 – 5.000 km) and long-haul trips (>5000 km) as much as possible. First of all by considering alternatives to travelling (e.g. online attendance to meetings and events).

For intercontinental flights there's an extra guideline: not more than one intercontinental flight per staff member per year. If you are considering booking an intercontinental flights, first discuss with your supervisor. It is up to the supervisor to determine whether such a flight is necessary for your academic career development or other organisational interests. The need for networking will of course be taken into consideration.

How do you book your international business trip?

The procedure for applying for an international business trip remain largely the same:

1. Apply for an international business trip via digiforms finance
2. After approval the business trip can be booked via BCD travel (also for international train journeys) and/or an electric car via Europcar
3. When booking, you adhere to the new rules. That means that whenever applicable you request a train trip[1] or use an electrical car.
4. If you want to deviate from the default choice of a train trip and/or use of an electrical car, you have to provide your section leader with an overview of your expected CO_2 emissions (http://www.ecopassenger.org) with a request for approval before a flight and/or fossil fuel car is booked.
5. The section leader decides on such a request. For section leaders the department chair decides, for department chairs/ director of education the dean decides.

The current framework agreement of TU Delft with a car rental service gives the option for an electric car. The use of your own electrical car for business trips more than 300km is possible for which the TUD gives a reimbursement of 19 ct/km. The choice for an international train journey is possible as part of the service of BCD.

Why are we doing this at the faculty?

The faculty wants to practice what it preaches in line with the TU Delft views on sustainability. We integrate sustainability in our primary processes, education, research, valorisation and operations, and we share our knowledge with others, knowing that change can't be achieved alone.

The top drivers for CO_2 emissions on the campus in 2018 were :
1. Food   28,8%
2. Natural gas (heating)   27,9%
3. Electricity   17,5%
4. Business travel (flights only)   13,9%

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[1] In train trips with several connections, the potential extra costs incurred by the staff member due to missed connections caused train delays can be claimed back to the department/faculty.

The Mobility Pilot at Aerospace Engineering aims to lower the faculty's carbon footprint by addressing the way we execute our business travel.

When does it start? When is it evaluated?

Start date: 1 March 2022.

The pilot will be evaluated after six months and again after a year. Depending on the results the policy can be renewed or modified.

Where do I go if I have questions?

Your manager.

The departments will be periodically informed on the numbers of business trips and the percentages of flights, train journeys and other transportation modes.

Addendum: List of cities for which train is the default option

City	CO2 [kg]		Time			Connections	
	Train	Airplane	Train (T)	Airplane (A)	T/A	Train	Airplane
UNITED KINGDOM							
London (St. Pancras)	13.6	114.9	4h 40min	4h 43min	0.99	1 (2 trains)	2 (2 trains, 1 airplane)
Manchester (Piccadilly)	31.2	114.6	7h 25min	5h 10min	1.44	2 (3 trains)	2 (2 trains, 1 airplane)
FRANCE							
Paris (Gare du Nord)	7.3	98.7	3h	5h 02min	0.60	1 (2 trains)	2 (2 trains, 1 airplane)
Lyon (Part dieu)	10.0	134.9	5h 25min	5h 27min	0.99	2 (3 trains)	2 (2 trains, 1 airplane)
Lille	5.5	88.4	2h 29min	4h 29min	0.55	1 (2 trains)	2 (2 trains, 1 aircraft)
Orleans	8.1	99.5	4h 57min	6h 11min	0.80	3 (3 trains, 1 metro)	4 (2 trains, 2 pullmans, 1 aircraft)
BELGIUM							
Brussels	4.1	86.0	1h 43min	4h 27min	0.39	2 (3trains)	2 (2 trains, 1 airplane)
Brugge	5.6	-	2h 55min	No feasible air options	<1	2 (3 trains)	-
GERMANY							
Frankfurt (Main)	17.2	135.3	5h 07min	4h 44min	1.08	1 (2 trains)	2 (2 trains 1 aircraft)
Cologne	10.5	94.6	3h 08min	4h 26min	0.71	2 (3 trains)	2 (2 trains, 1 aircraft)
Berlin (HBF)	28.6	123.4	7h 12min	4h 49min	1.50	2 (3 trains)	3 (2 trains, 1 pullman, 1 aircraft)
Bremen (HBF)	17.2	108.4	5h 21min	4h 36min	1.16	2 (3 trains)	2 (1 train, 1 tram, 1 aircraft)
Hannover (HBF)	17.8	125.6	5h 08min	4h 41min	1.10	2 (3 trains)	2 (2 trains, 1 aircraft)
Dusseldorf (City)	11.0	94.6	3h 08min	4h 26min	0.71	2 (3 trains)	2 (2 trains, 1 aircraft)
Stuttgart (HBF)	21.6	123.0	6h 44min	4h 51min	1.39	2 (3 trains)	2 (2 trains, 1 aircraft)
Brunswick (HBF)	21.9	129.0	6h 14min	5h 29min	1.14	2 (3 trains)	2 (2 trains, 1 aircraft)
LUXEMBOURG							
Luxembourg (Gare Routière)	9.7	118.7	5h 15min	4h 46min	1.10	2 (3 trains)	2 (1 train, 1 pullman, 1 aircraft)

Notes:

1. The criteria used to define this table are:
   a. The train trip should not be more than 1.75 times longer than the plane trip (door to door) and shorter than 8 hours.
   b. The number of connections is limited to 2.
2. All information was obtained from ecopassenger.org
3. Trip evaluation is always from Delft Station, one month from the date when the calculation is being made. Departure time was not specified, but it was always after 7am. The options listed in the table were chosen based on the lowest number of transfers and the shortest duration.
4. Ecopassenger.org counts for the "Train" travels the sum of the time on board of a specific train and the time waiting between connections, in case more than one train is involved.
5. Ecopassenger.org counts for the "Airplane" travels only the time of the flight and the time of the pullman/train needed, considering that all connections happen "instantaneously", so without considering the waiting time between connections, and especially not considering that for most flights a person is required to arrive to the airport at least 1 hour before the time of departure. For destinations in the UK, extra 45min for passport checking was added to the total duration of train trips and extra 2h for passport checking and security was added to the total duration of airplane trips. For destinations within Europe, extra 1h and 30min for security was added to the total duration of airplane trips.