User Manual

for

Tool Bus Schedule

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Version 1.0

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Contents

Starting Tool

To start the bus schedule tool, insert https://bussie-on-its-way.streamlit.app/ into browser.

KPI

The tool uses a total of three metrics to determine the efficiency of a circulation. The total time that a bus stands idle is measured, as well as the time a bus is driving. Driving time is then separated in two, one for the time people are transported and one for when they are not. To determine the efficiency of a circulation the time of transporting people gets divided by the total time.

Starting Tool

Tool

Upload Schedule

To upload the bus circulation planning, the planning must be an Excel file with the following format:

- Index: Unique identifier for each row.
- Start location: Starting location for the activity.
- End location: End location for the activity.
- Activity: A description of the activity between starting and ending locations.
- Bus line: The number of the bus line related to the activity.
- Energy consumption: The energy consumption of the activity in kWh.
- Start time: The date and time when starting the activity.
- End time: The date and time when ending the activity.
- Circulation number: The circulation number associated with the activity.

To upload the bus timetable, the timetable must be an Excel file with the following format:

- Start location: Starting location of the bus line.
- Start time: Starting time of the bus line from the starting location.
- End location: End location of the bus line.
- Bus line: The number of the bus line.

When the correct data is uploaded, the 'next' button appears.

Input Bus Schedule

Upload circulation planning

| ☁ Drag and drop file here
Limit 200MB per file • XLSX | Browse files |

📄 omloop planning.xlsx 56.4KB   ✕

Upload timetable

| ☁ Drag and drop file here
Limit 200MB per file • XLSX | Browse files |

📄 Connexxion data - 2023-2024.xlsx 25.8KB   ✕

Select starting value battery in kW-h
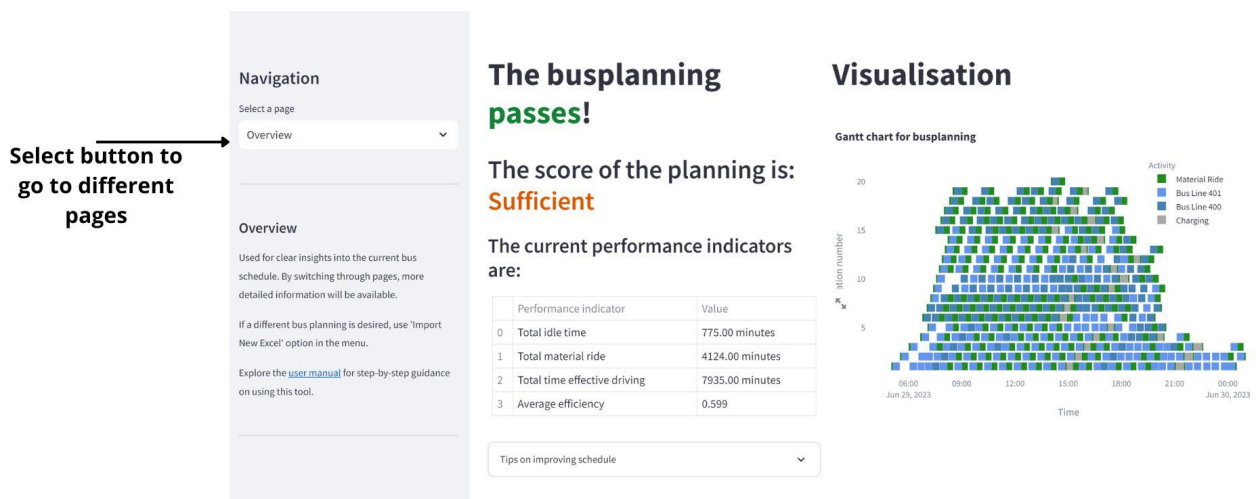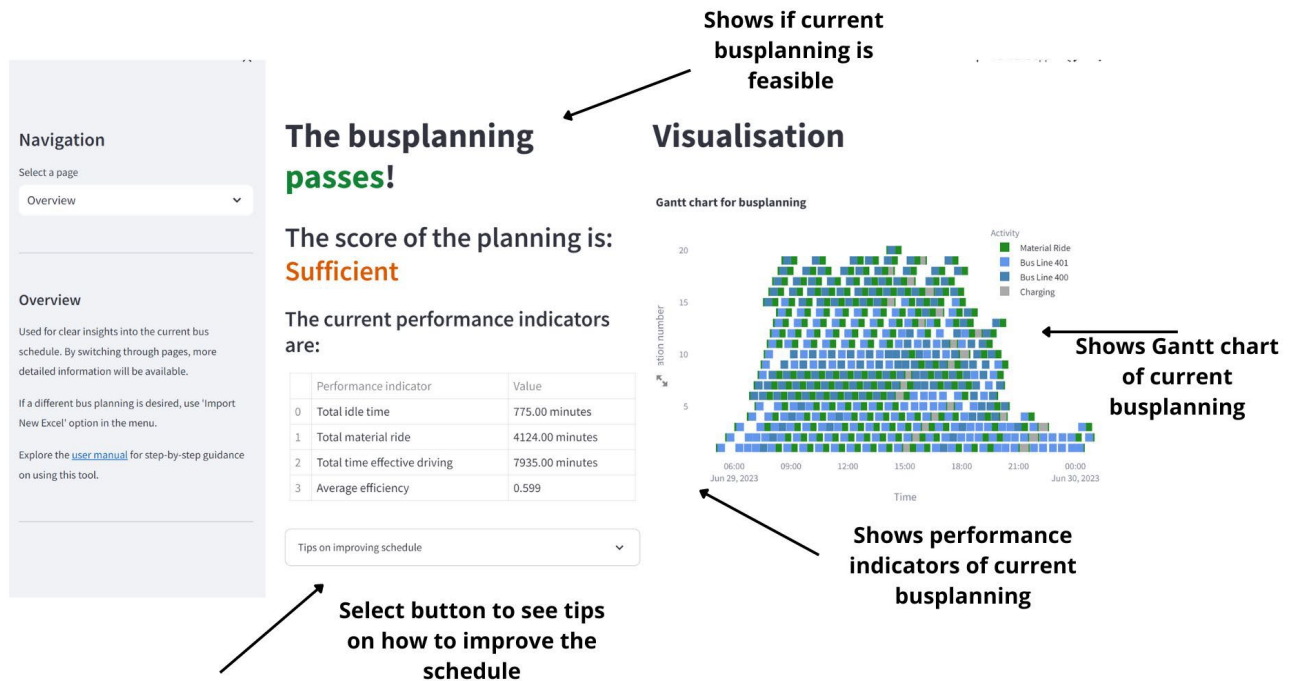
270

255   285

Data upload successful.

Timetable is correct and in the right format, proceed to next page.

Next   ←——— **Select button to proceed to the next page**

Overview

After selecting the 'Next' button, the overview screen appears.

Shows if current busplanning is feasible

Shows Gantt chart of current busplanning

Shows performance indicators of current busplanning

Select button to see tips on how to improve the schedule

Select button to go to different pages

Navigation

Select a page

Overview	⌄

Overview
Bus Specific Schedule
Gantt Chart
Import New Excel

Select button to go to a schedule of a specific bus line →

schedule. By switching through pages, more detailed information will be available.

If a different bus planning is desired, use 'Import New Excel' option in the menu.

Explore the user manual for step-by-step guidance on using this tool.

The busplanning passes!

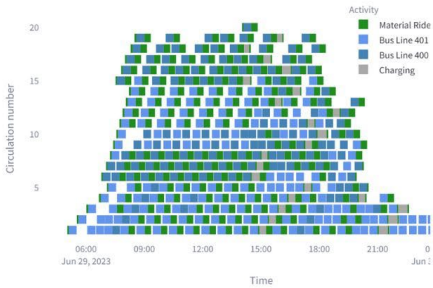## The score of the planning is: Sufficient

The current performance indicators are:

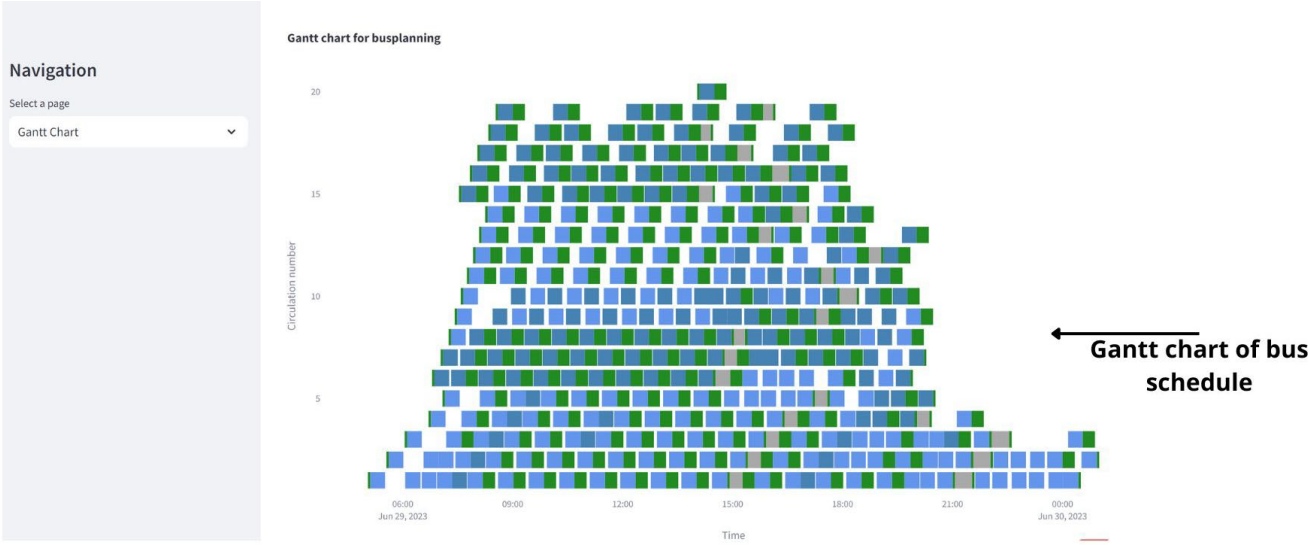|	Performance indicator	Value
0	Total idle time	775.00 minutes
1	Total material ride	4124.00 minutes
2	Total time effective driving	7935.00 minutes
3	Average efficiency	0.599

Tips on improving schedule	⌄

Visualisation

Gantt chart for busplanning

Bus Specific Schedule

Chart with activity of selected bus line

Select button to select a different bus line

Chart with battery amount of selected bus line

Table with information of selected bus line

Select button to go to a bigger version of the Gantt chart

Gantt Chart

Gantt chart of bus schedule
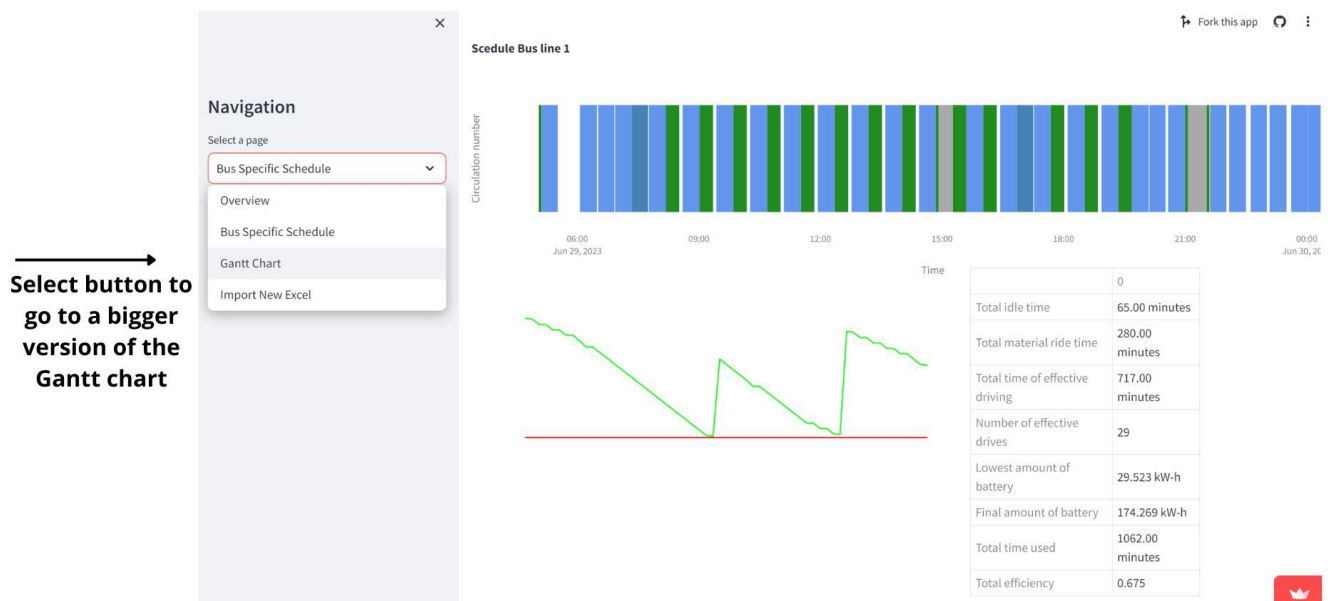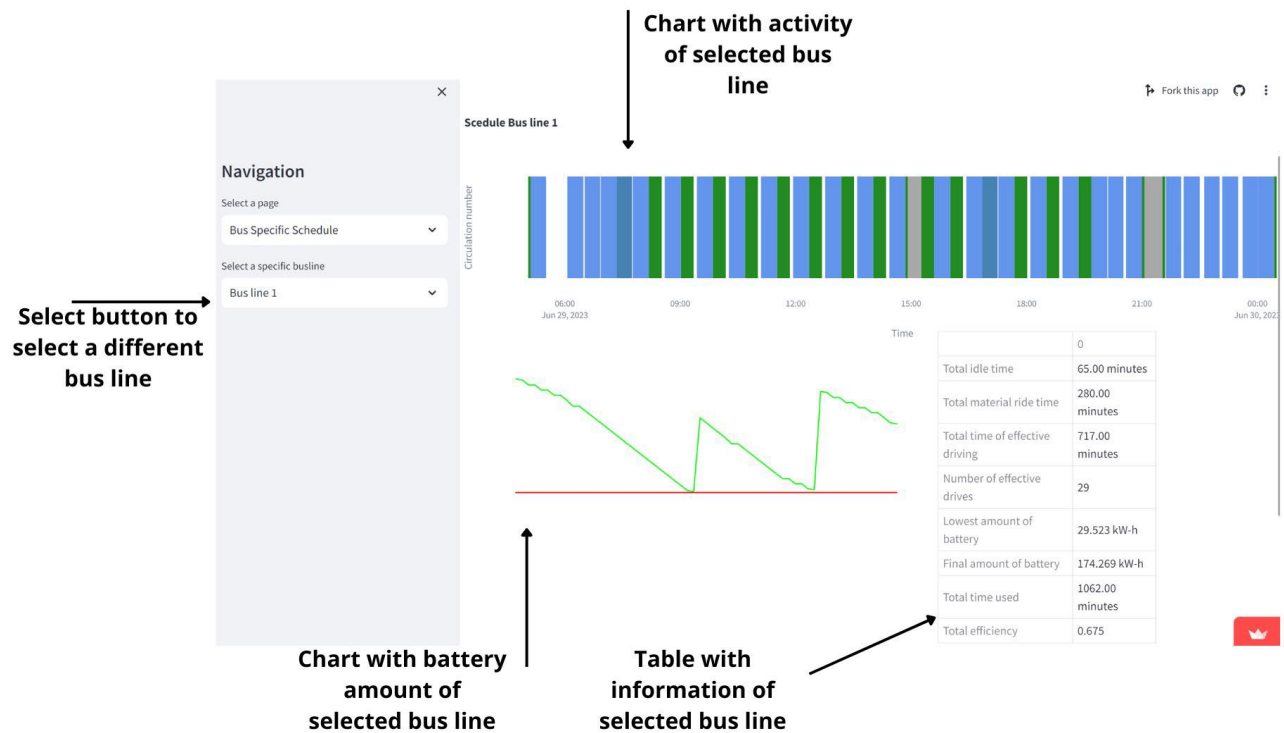
Select button to upload a new Excel file