

Autonomous shuttle data management

User manual

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Purpose

This application collects, analyses and preserves the operating data of the autonomous shuttles being trialled within the municipal area. Each day of service produces files that are uploaded here: the system checks them, derives the quantities of interest, produces a PDF report and archives everything permanently.

The purpose is to document the trial: original data is never altered and remains available for any future reprocessing.

Signing in

Access requires personal credentials. In the user field you may enter either your user name or your email address.

First activation. When an administrator creates an account, an email arrives with an activation link valid for 48 hours and usable once. The password is chosen by the account holder: nobody else knows it, not even whoever created the account.

Forgotten password. From the sign-in page, “Password dimenticata?” asks for your email address and sends a link valid for 30 minutes. For privacy reasons the on-screen message is always the same, whether or not the address is registered.

Passwords must be at least 12 characters. A phrase you can remember is stronger than a short word full of symbols. When the password changes, every open session is closed, including the current one.

Roles and permissions

Each account has exactly one role. The role determines what is visible and what can be done; menu entries that are not permitted are not shown.

Function	Administrator	Technician	Read-only
View dashboard, processing runs and archive	✓	✓	✓
Download reports and archived files	✓	✓	✓
Upload shuttle files	✓	✓	✗
Read and export the activity log	✓	✗	✗
Manage accounts	✓	✗	✗

Several administrators may coexist. The system prevents being left without one: the last active administrator cannot be suspended, archived or demoted.

Uploading a day of data

Each shuttle produces two files per day, one per on-board computer. The two files must be uploaded **together**: one holds vehicle telemetry, the other localisation, and only combined do they yield a complete report.

Packaging is not uniform across shuttles: some deliver `_pc1.tar.gz` and `_pc2.tar.gz`, others `_pc1.zip` and `_pc2.zip`. Both forms are accepted, nothing needs converting.

Drag them onto the dashboard drop area, or pick them with “scegli dal computer”. You may drop files from several shuttles or several days at once: they are grouped automatically by name, one processing run per shuttle per day.

Alternatively the `.zip` file bundling the two `.tar.gz` of a day is also accepted.

File names. They must be the ones produced by the extractor: `<shuttle>_<date>_<VIN>_<date>_<time>`. Shuttle, vehicle and day are read from there, so files must not be renamed.

Automatic check. Before queueing the work the system verifies that the archives are not damaged. If all of them are unreadable the upload is rejected immediately, with a note to request the files again from the supply chain. If only one is damaged, processing continues on the rest and the gap is reported.

Do not close the page while files are being transferred: the browser will warn you. Once they have arrived, processing continues on the server even if you navigate elsewhere, and the dashboard updates itself when you return.

Reading the report

Every processing run produces a PDF report, downloadable from the Report page individually or all together as a compressed archive.

Autonomous and manual driving. The split is computed on actual running time and on distance, not on the number of samples: the vehicle is stationary for most of the day, so counting samples would mostly measure which mode it was parked in.

Main quantities:

Quantity	Meaning
Distance travelled	derived from position; the on-board odometer, where available, confirms it
Acceleration and braking	derived from the speed measured on board, not from position, which would be too noisy
Rotational speed	derived from speed and wheel geometry; until the reduction ratio is known the figure refers to the wheel, and the report states so
Pitch	longitudinal inclination, measured while the vehicle is moving
Positioning quality	reliability of the navigation system and age of the satellite corrections

Any findings appear at the end of the report: missing data, damaged archives, samples discarded as implausible.

Archive

The Archive entry lets you browse the storage space and download any archived file. It is read-only: nothing can be uploaded or deleted from here.

Folder	Contents
originali/	the files as delivered, never altered
elaborati/	the data with the computed quantities
registro/	activity history, administrators only

Organisation is by shuttle and by **the day the data refers to**, not by upload date: a file uploaded late still sits next to the others of its day.

Activity log

The log records who did what and from which address: successful and rejected sign-ins, uploads, downloads, account changes. It is restricted to administrators and can be exported as CSV, ready to open directly in Excel.

The most recent months stay on screen. Each completed month is copied to the archive in compressed form and kept there indefinitely: the copy is always verified before entries are removed from the on-screen view.

Account management

Restricted to administrators. No password is chosen on behalf of anyone: an invitation is sent and the holder chooses it.

Action	Effect
Suspend	blocks access immediately; reversible
Archive	removes the account from use while keeping historical references to its work intact
Unblock	clears the lockout after too many failed attempts
Send recovery	delivers a password link
Change role	takes effect immediately on open sessions

Accounts are not deleted: references from work already carried out would break and traceability would be lost. They are archived instead.

Frequently asked questions

I only uploaded one file for the day. It works, but the report covers that on-board computer only. Uploading the other one later produces a second, separate processing run.

The upload was rejected. There are three possible reasons: extension not accepted, name not matching what the extractor produces, or unreadable archives. The on-screen message says which.

Processing failed. The reason is shown on the dashboard. The uploaded files remain on the server and the operation can be repeated.

My credentials are not accepted. Check you have not exceeded the allowed attempts: after a few failures the account locks for some minutes. An administrator can unlock it immediately.