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People counter demo implementation in Merano 2000

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Preliminary notes and end-points information

Systems has installed on behalf of Tech Transfer Automotive two people counter monitoring systems in Merano 2000.

The data is made available via a MQTT broker, similarly as the on-street parking data in Merano. The reference topic is people_flow/1dd13058-f04c-f011-8f7d-000d3a3a9b4a. The Data Collector can be then implemented starting from this reference implementation.

Some examples of data records:

```
{"type":"people_flow","data":{"name":"Digiway - Kamera KI","direction":"In","timestamp":"2025-07-31T09:28:13.700404Z"}}
```

```
{"type":"people_flow","data":{"name":"Digiway - Kamera KI","direction":"In","timestamp":"2025-07-31T09:31:19.272564Z"}}
```

```
{"type":"people_flow","data":{"name":"Digiway - Kamera KI","direction":"In","timestamp":"2025-07-31T09:34:22.400982Z"}}
```

The system is configured so to trigger with push logic the delivery of a new record for every new person detection. The only information available for each detection is timestamp and direction of travel.

Integration in the Open Data Hub

The proposal is to integrated in the “structured part” of the Open Data Hub core just an elaboration of these counts, i.e. the counting of people detected within a certain time window (e.g. 10 minutes) for both direction of travels. The following mapping is proposed.

STATIONS

Data stream fields	Open Data Hub parameters
Last part of the MQTT topic	stationcode
name	name
-	METADATA
-	Position

Additional comments / requirements:

- **Positions** of the sensors is not available through the MQTT broker. Needs probably to be hardcoded.
- **Stationcode** of the station should be set with the last part of the MQTT topic, e.g. “000d3a3a9b4a”
- **StationType** should be set as “**PeopleCounter**” (new)

DATA TYPES AND MEASUREMENTS

It is proposed to foresee a new data type called “**countPeople**”, similar to existing data type “countVehicle”.

Values should be stored as **measurements** (numeric), with an aggregation temporal window of 10 minutes.