

TAKING
COOPERATION
FORWARD



YOUMOBIL course

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RAILWAY STATIONS DESIGN, FUNCTIONS AND REINVENTION PROCESS - Part 1



YOUMOBIL, UNIZA, Janka Šestáková

CONTENT

RAILWAY
TRANSPORT

STATION HALTS
AND RAILWAY
STATIONS

STATION
BUILDINGS



The process of moving people/material/information in space and time.



RAILWAY TRANSPORT

Significant attributes:

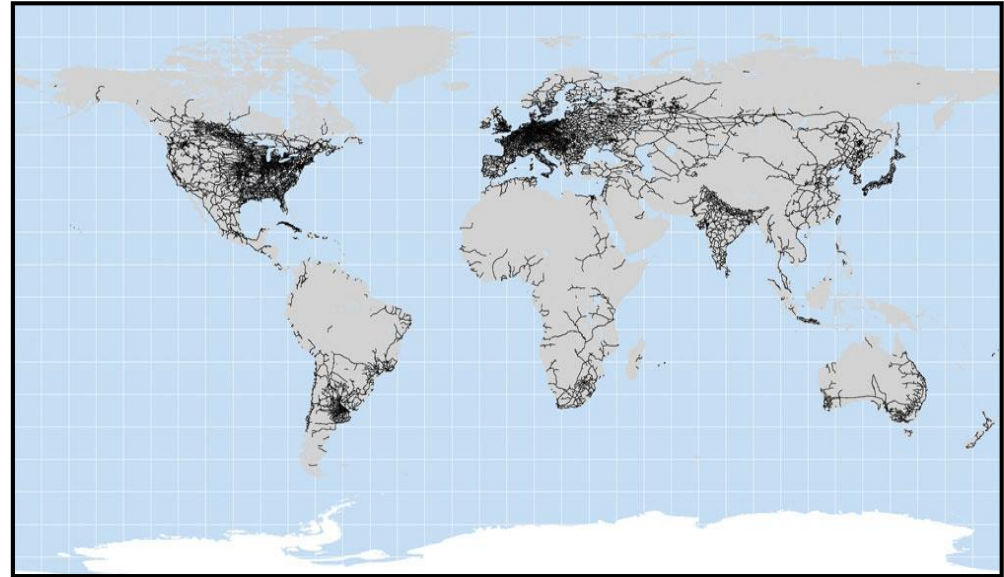
- type of transport,
- subject of transport,
- traction,
- structure of roadway,
- gauge.

Carriage outputs:

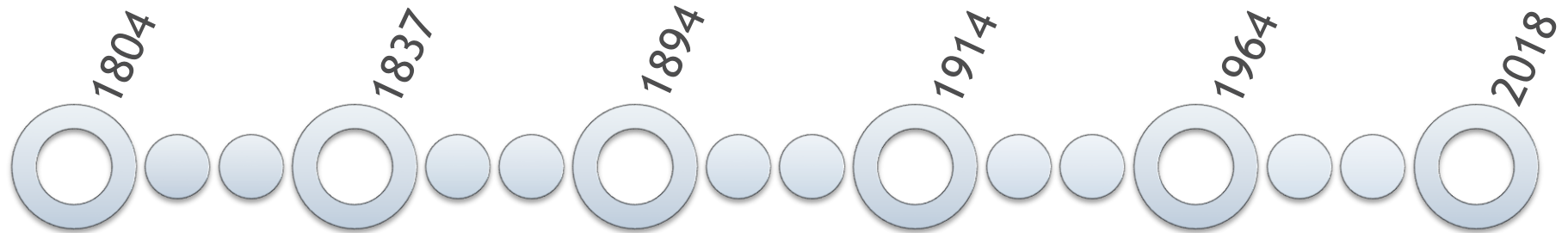
- boarding or exit the train,
- loading and unloading of shipments.

Transport outputs:

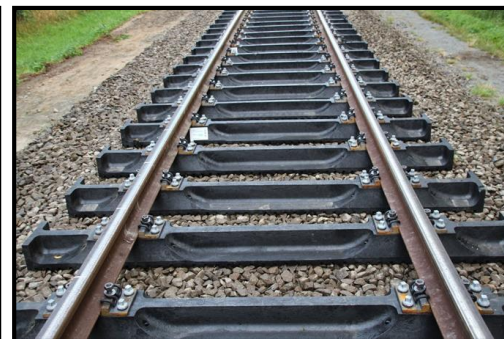
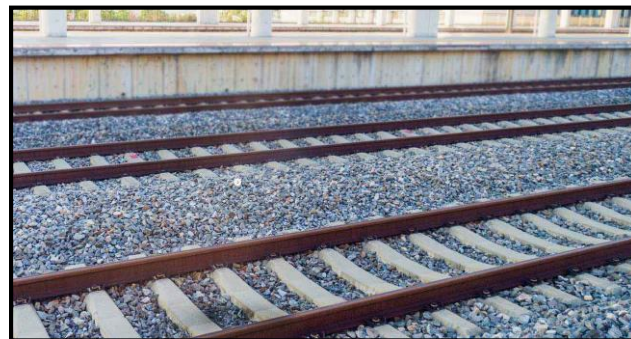
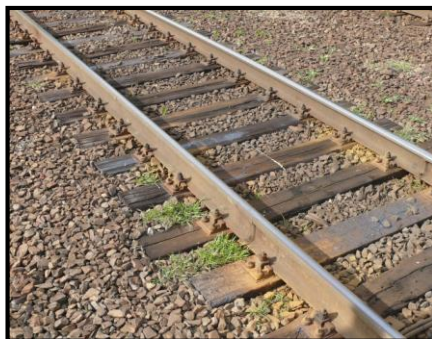
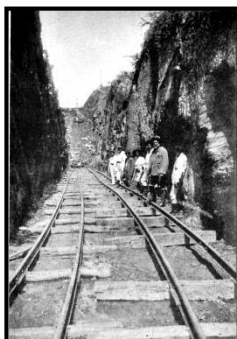
- management of trains sequence,
- crossing and overtaking of trains,
- operation of industrial tracks.



Perception in terms of track structure and traction of rolling stock.



HISTORY



Wooden
or Stone
Blocks

Wooden
Ties

Concrete
Sleepers

Steel
Sleepers

Ballastless
Track

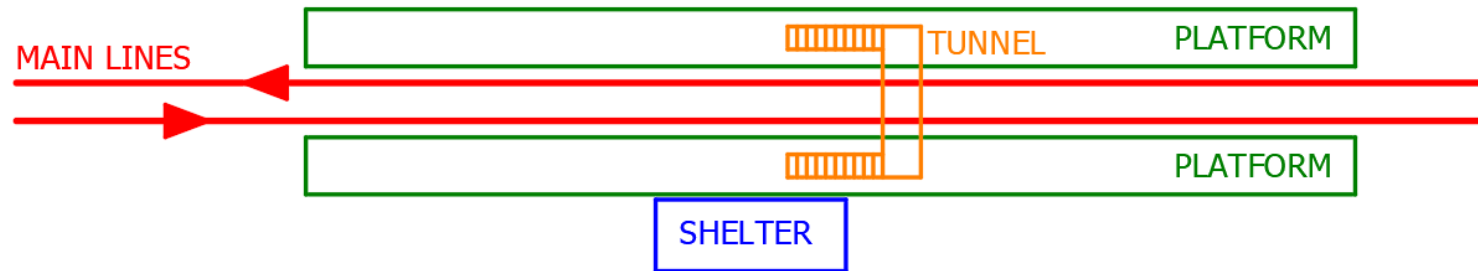
Plastic
Sleepers



STATION HALT / STOP

Place in plain line or in area of railway station which is adapted for:

- boarding and exit of passengers,
- loading and unloading of luggage.



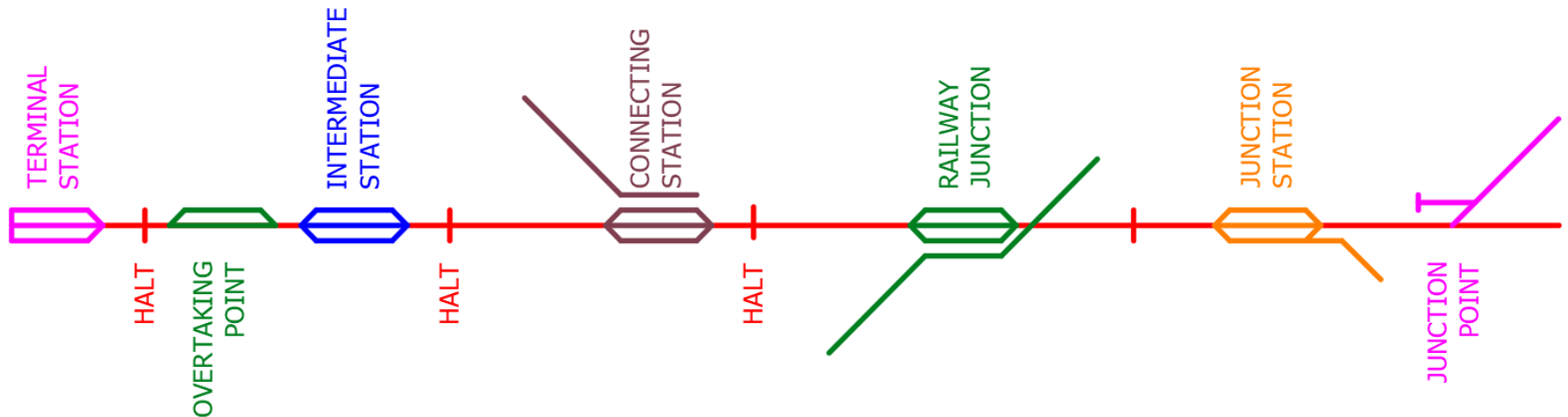
STATION HALTS / STOPS



OPERATING CONTROL POSTS

Places in railroad which are set for traffic control.

- junction points,
- overtaking stations,
- railway stations,
- ...



Only carriage functions: transportation of passengers, luggage, postal...

Work technology:

- service for passengers (tickets sale, safe boarding and exit, waiting areas, luggage offices),
- railway operating for transit, ending and outgoing trains.

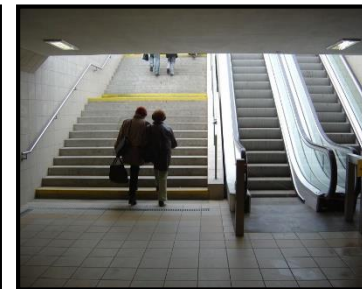
Other equipment:

- station building with halls, rooms, offices and facilities for passengers and to carry out railway operation,
- platforms, shelters, stairways, ramps, tunnels, overpasses, footbridges, lifts,
- station forecourt area for to connect with other types of transport.

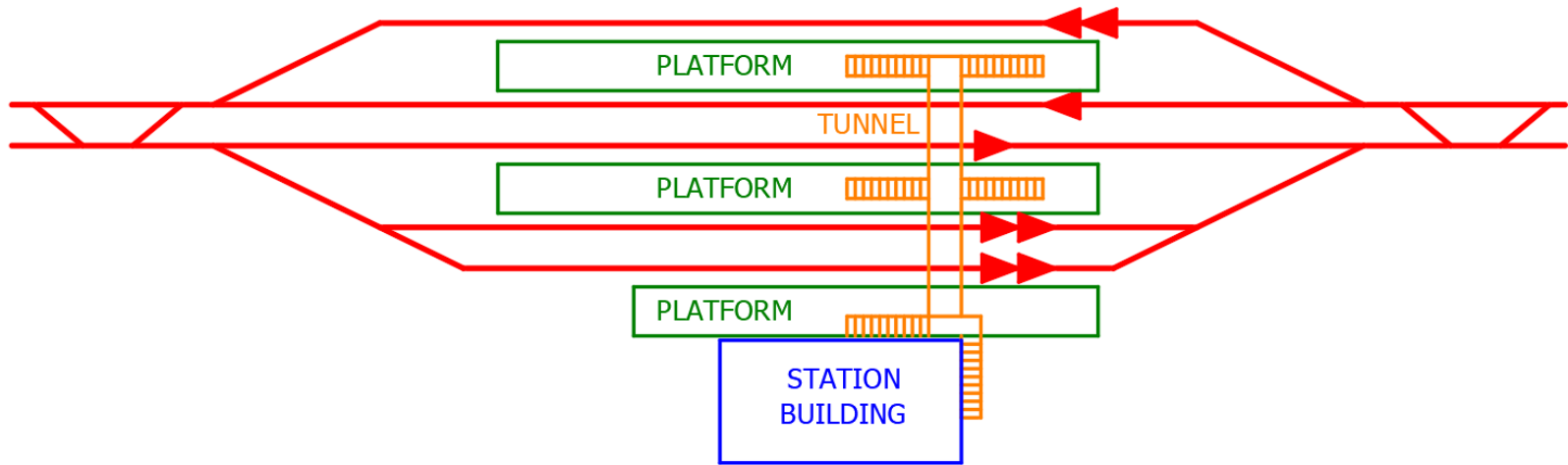


EQUIPMENT OF PASSENGER STATION

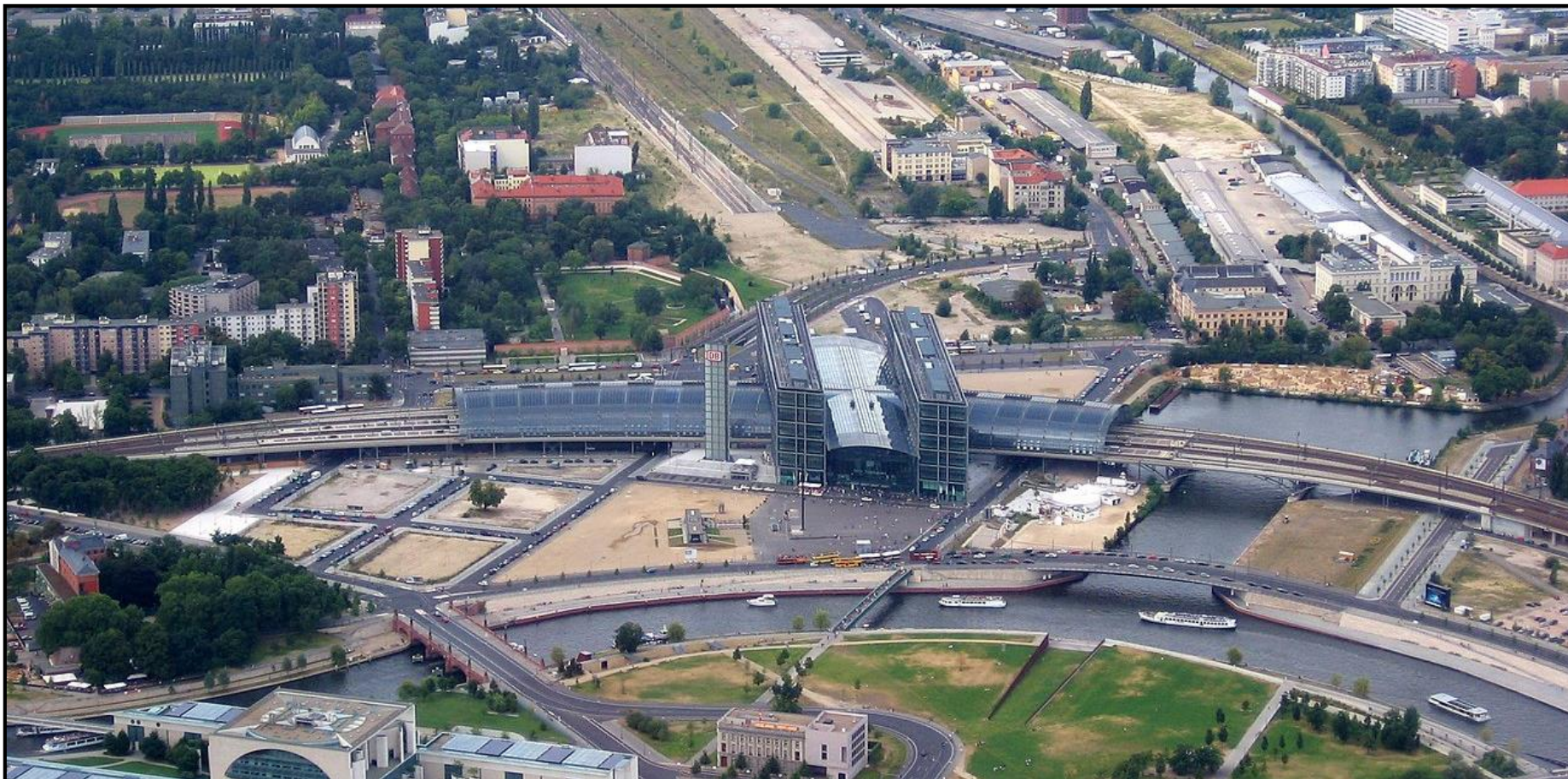
- platforms,
- shelters,
- stairways,
- ramps,
- tunnels,
- overpasses,
- footbridges,
- lifts.



THROUGH STATION



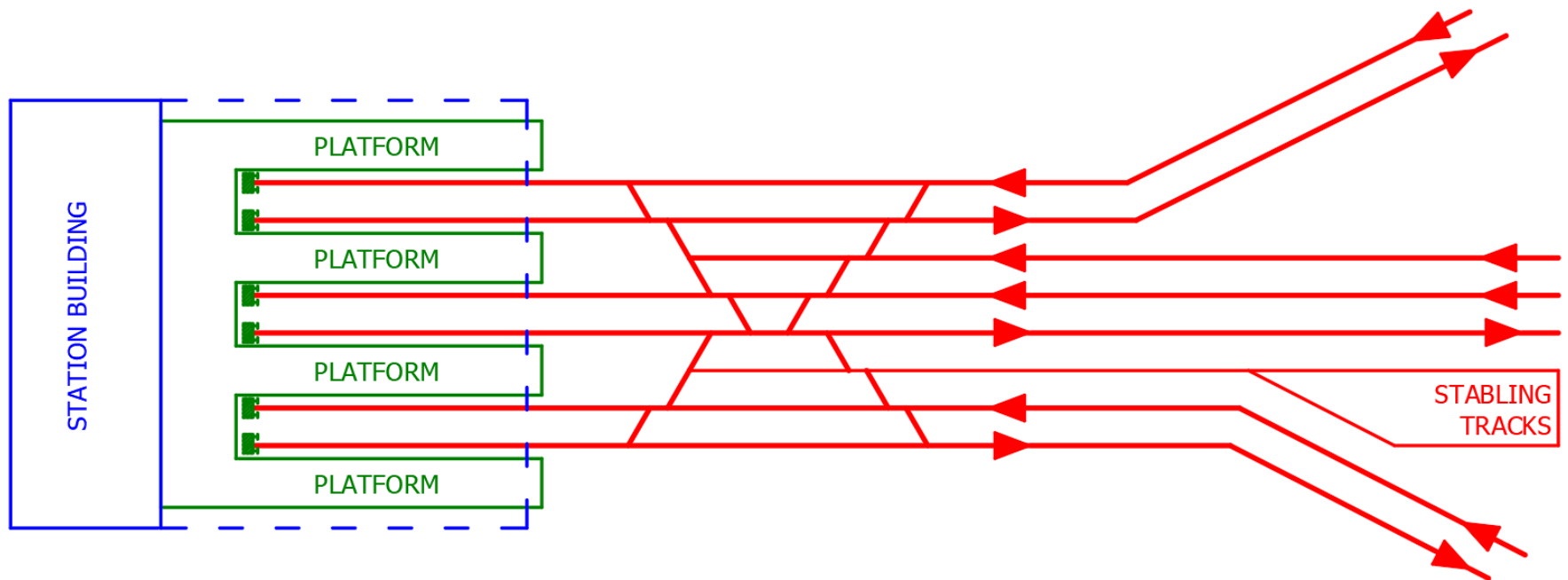
THROUGH STATION



Source: www.wikiwand.com/de/Berlin_Hauptbahnhof

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TERMINAL STATION



TERMINAL STATION

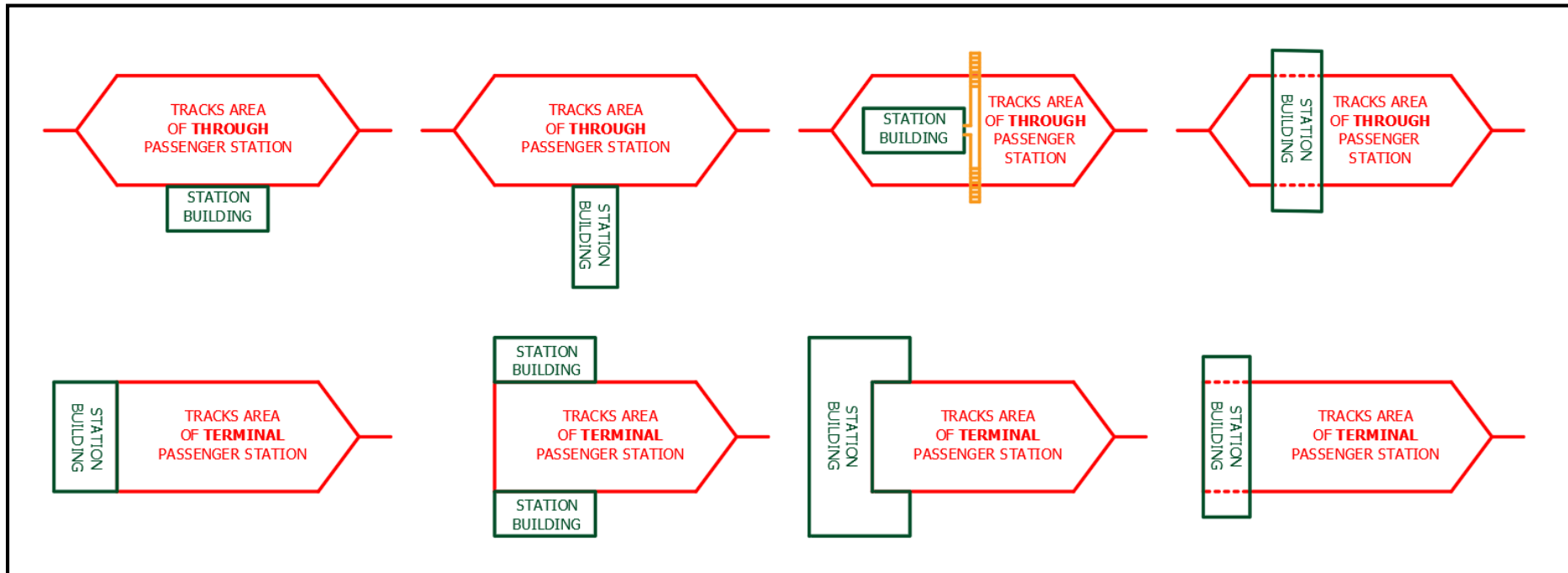


Source: www.franceculture.fr/emissions/la-conclusion-daurelien-bellanger/la-gare-montparnasse

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STATION BUILDING AND TRACKS AREA



Layout:

- the shortest and most comfortable way for passengers to board or exit the train,
- sequence of passenger activities:
 - activities with a time sequence (basic): entrance to the building - ticket purchase - registration of luggage - moving to the platform,
 - non-sequential activities (other): waiting for the train, refreshments, shopping ...

Number of passengers:

- peak frequency (maximum number of passengers within 1 hour) = total number of boarding, exiting and accompanying persons,
- transition frequency (passengers using prepaid tickets).

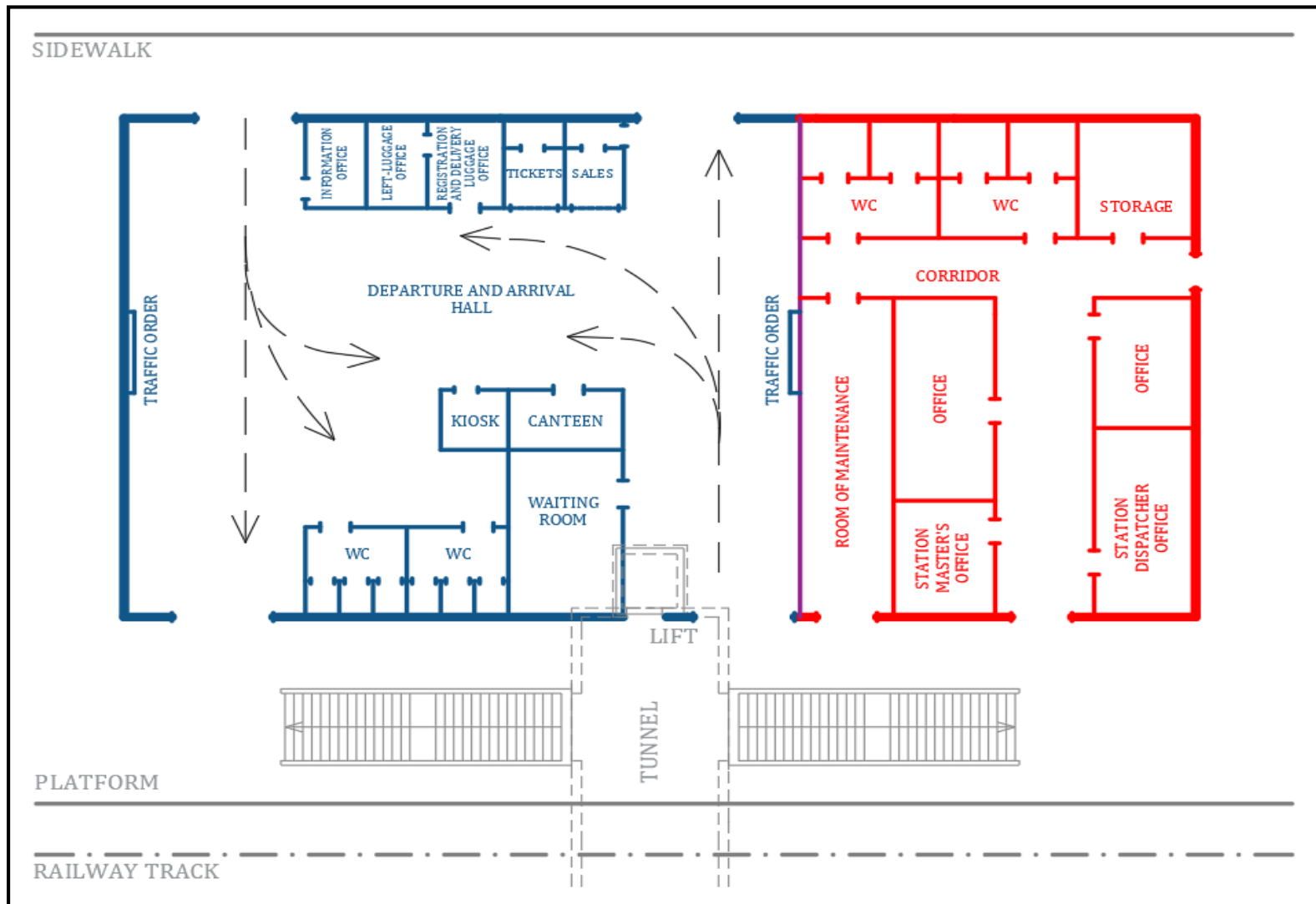


LAYOUT OF STATION BUILDINGS AREA

| | | peak frequency (passengers per hour) | | | |
|---------------|--|--------------------------------------|----------|------------|-------------------------------------|
| | | low | medium | high | |
| | | to 500 | to 1 500 | over 1 500 | |
| public part | departure hall | ✓ | ✓ | ✓ | service for passengers |
| | arrival hall | | | ✓ | |
| | tickets sales | ✓ | ✓ | ✓ | |
| | registration and delivery luggage office | ✓ | ✓ | ✓ | |
| | left-luggage office | ✓ | ✓ | ✓ | |
| | waiting room | | ✓ | ✓ | waiting for trains, travel dispatch |
| | information office | | ✓ | ✓ | |
| | canteen | | ✓ | ✓ | |
| | restaurant | | | ✓ | |
| | restrooms | ✓ | ✓ | ✓ | |
| | kiosk | | ✓ | ✓ | |
| | post office | | | ✓ | |
| | commercial services | | | ✓ | other services |
| | shops | | | ✓ | |
| | medical service | | | ✓ | |
| unpublic part | railway police | | | ✓ | railway operating |
| | cleaning rooms | ✓ | ✓ | ✓ | |
| | space for cleaning machines | | | ✓ | |
| | space for battery trolleys | ✓ | ✓ | ✓ | |
| | station dispatcher room | ✓ | ✓ | ✓ | |
| | service offices | ✓ | ✓ | ✓ | |
| | restrooms | ✓ | ✓ | ✓ | |



LAYOUT OF STATION BUILDING



PUBLIC PART OF STATION BUILDING



STATION FORECOURT AREA

Place for the fluent continuity of the flow of passengers from (to) the railway transport area to (from):

- public transport and suburban transport,
- car transport,
- pedestrian paths.

Created organized flows of passengers on arrival at the station building.

Safe access to individual types of transport.

Clear orientation and the shortest possible passenger ways.

Defined and clearly marked positions of individual types of transport.



STATION FORECOURT AREA



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CONTACT



Janka Šestáková
University of Zilina
YOU MOBIL



svf.uniza.sk



janka.sestakova@uniza.sk



+421 41 513 5807

