dezigntechnic
signage, wayfinding & mapping

Belgrade Metro
wayfinding analysis

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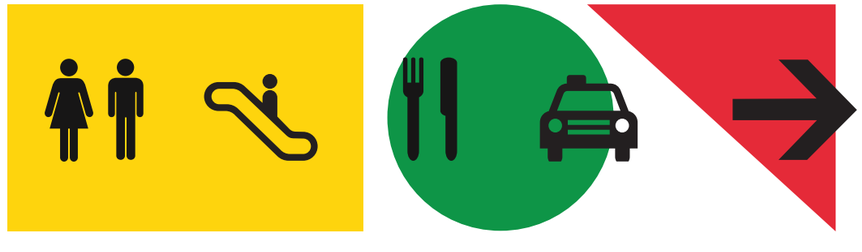


Trg Republike Station

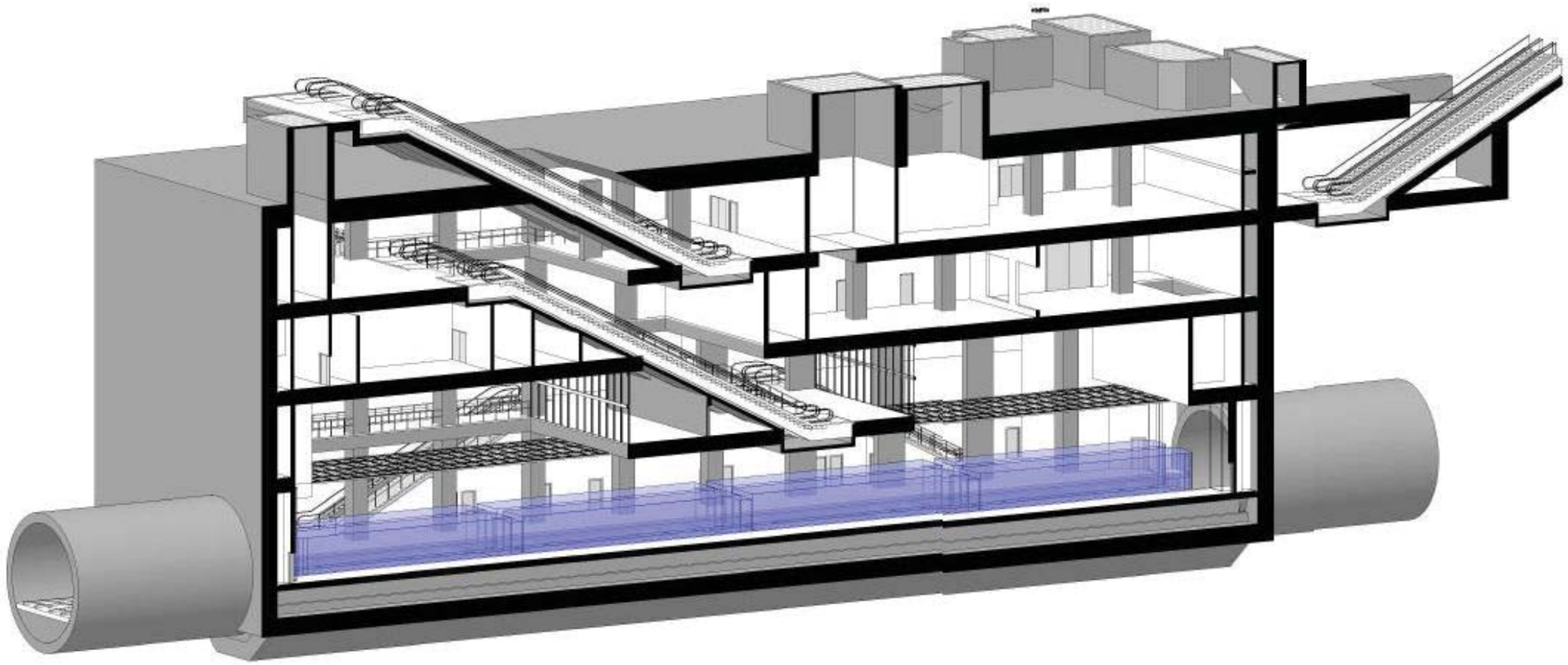
1. Projected Flows

2. Decision Points

3. Congestion Areas

4. Conflicts

5. Wayfinding Solutions



projected passenger flows

Projected Flows

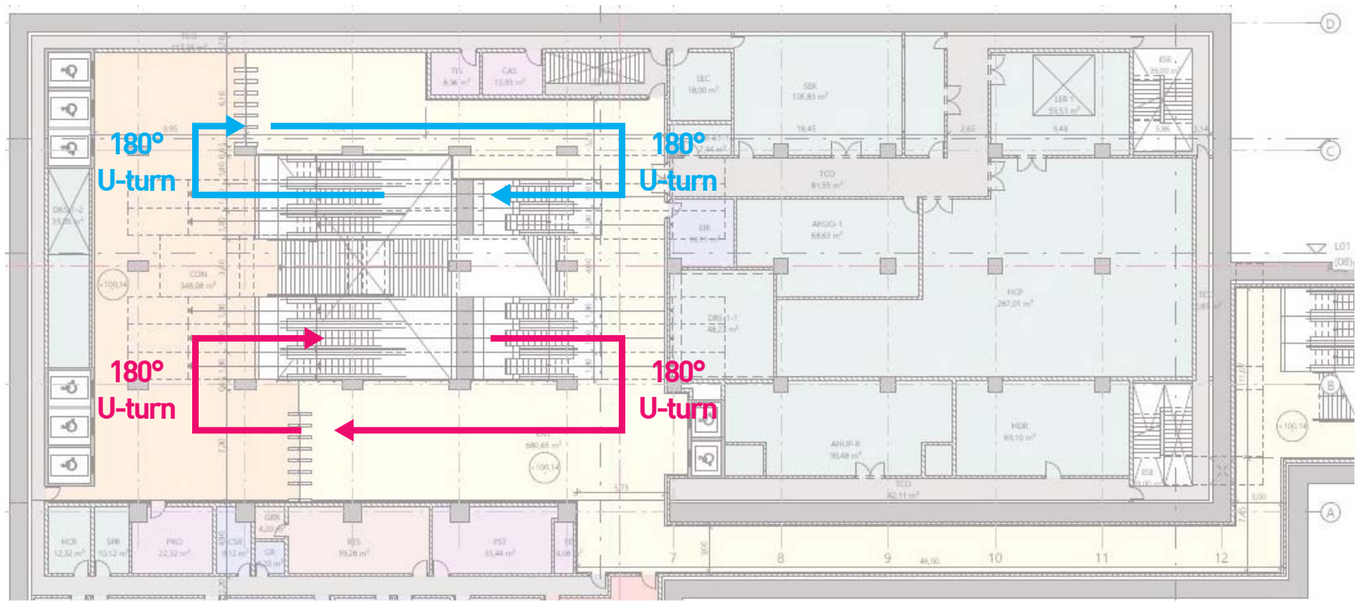
These are the flows of passengers that are expected to happen for optimal access and exit.

Descending flow

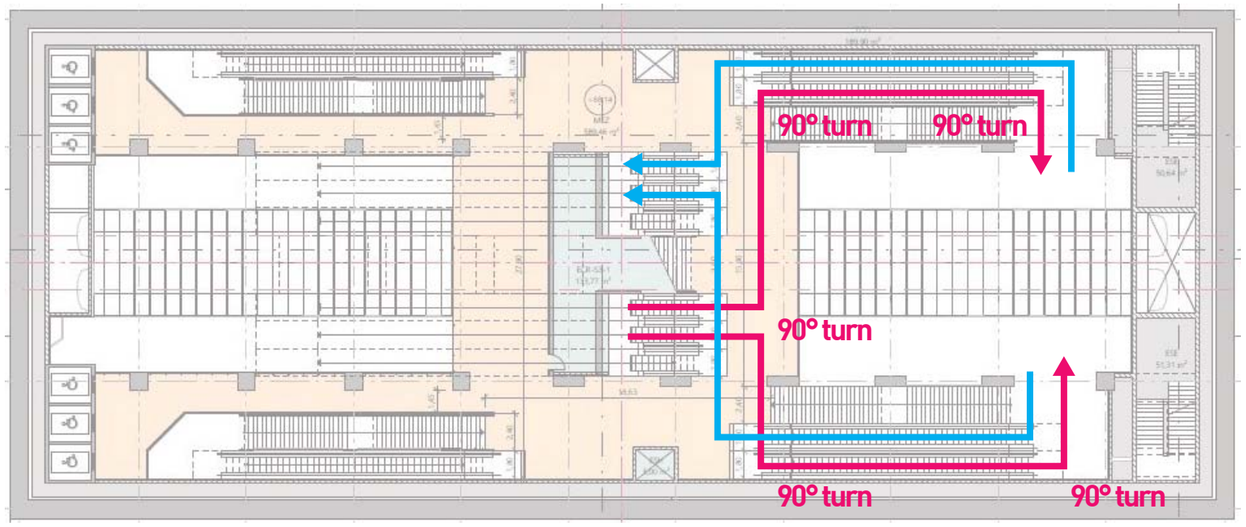
Ascending flow

Desired Flow

Level -1



Level -2



decision points

Decision Points

There are 6 to 7 decision points along passenegrs' path, both in ascending and descending direction.

At each decision point the passenger needs to collect and process wayfiding information then take a decision as to his next move.

Passengers can take 4 main decisions:

- Take the desired projected direction
- Take an undesired direction
- Go back
- Stand in place incapable of taking a decision

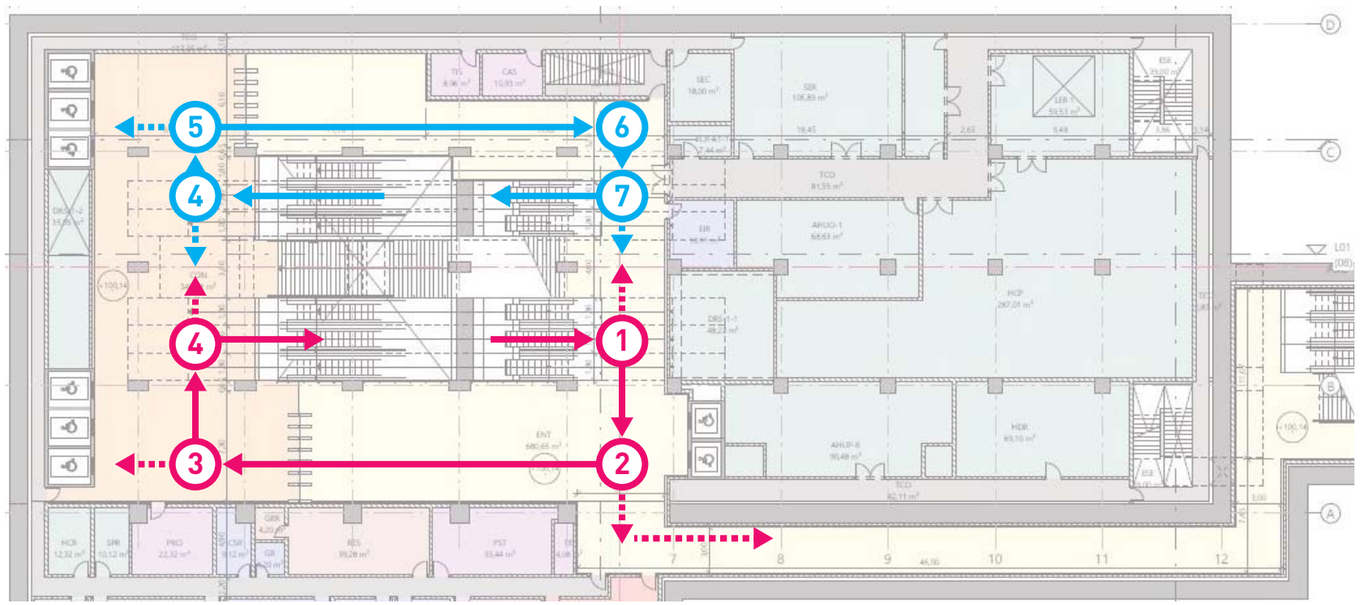
Each decision point is a potential congestion area. Each decision point can lead to a passenger getting stranded or lost creating frustration and disrupting the flows.

The multiplication of decision points makes necessary the implementation of suggestive and/or coercive architectural and signage elements in order to direct the passeneer flow.

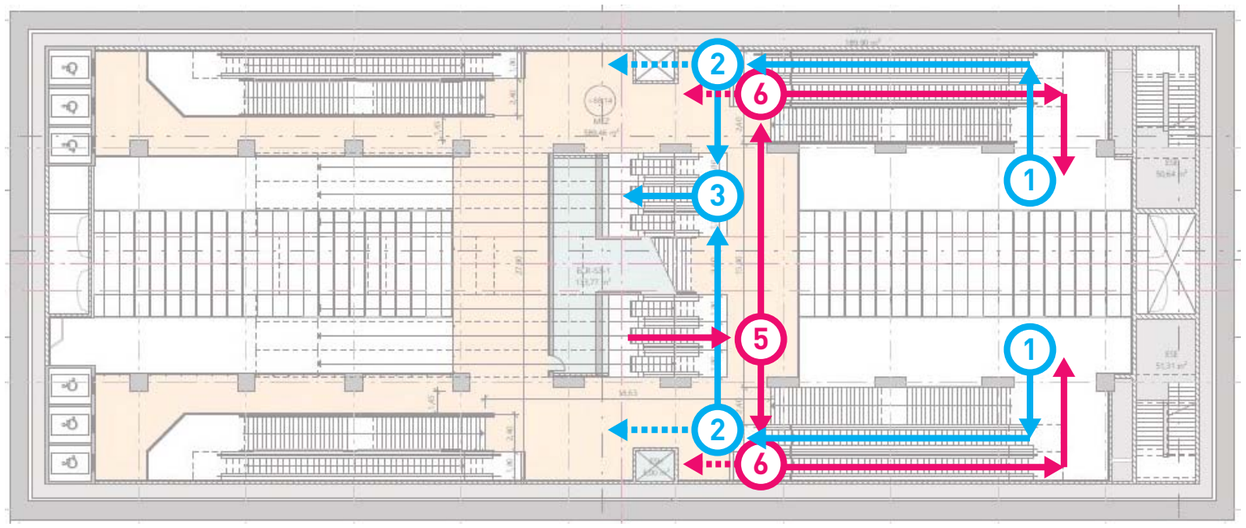
A reduction of the number of decision points is to be privileged.

	Descending flow	Ascending flow
Decision Point #	1	1
Desired Flow	→	→
Undesired Flow	⇢	⇢

Level -1



Level -2



congestion areas

Congestion Areas

Congestion happens due to a shift in space or time: space is reduced and creates a bottleneck or the pace of passengers shifts thereby disrupting the movement flow.

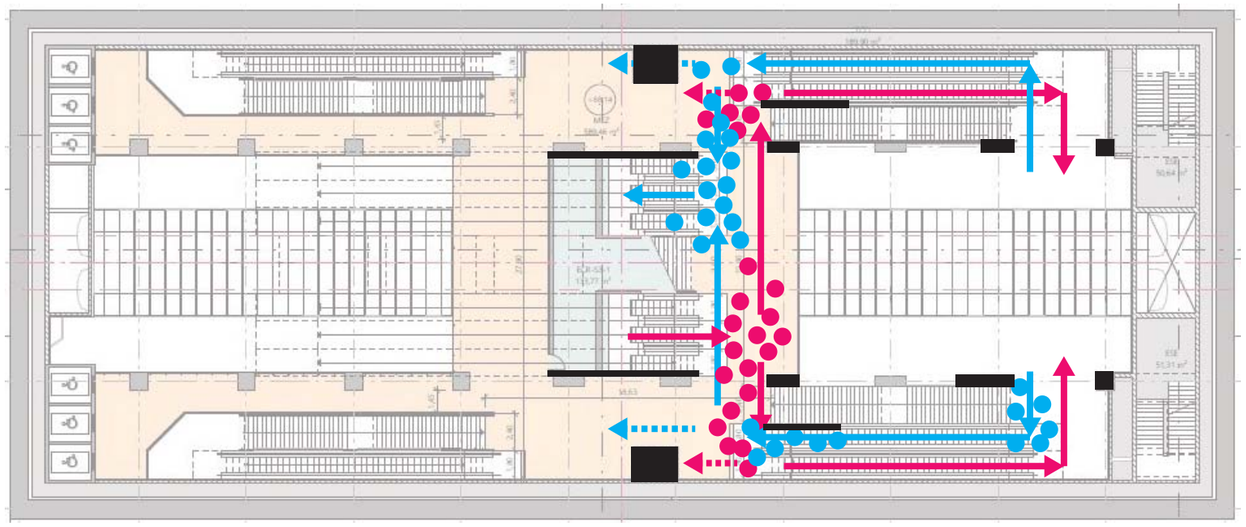
Possible congestion areas:

- Decision points where the passenger pace shifts
- Access/exit from escalators where the pace shifts
- Reduction in transportation capacity (example from 2 escalators to one)
- Reduction in walking area
- Physical obstacles (pillars, payment barrier...)
- Change in the direction of travel

	Descending flow	Ascending flow
Congestion Area		
Desired Flow		
Undesired Flow		

Level -1

Level -2



conflicts

Conflicts

Conflicts arise when different flows intersect each other or congestion areas overlap on each other.

Conflicts give rise to dangerous situation where overcrowdning and flow disruption are compounded by eash new passenger entering the area.

In conflict areas passengers lose freedom of movement as well as sight and orientation and cannot behave anymore in the way that is expected from there.

Conflict areas are to be avoided and if this proves impossible then their effects must be mitigated.

Mitigation is achieved through space and time improvements:
- enlarged spatial area for movement
- organized rhythm of low and intermittent occupancy

Conflict Area

Descending flow

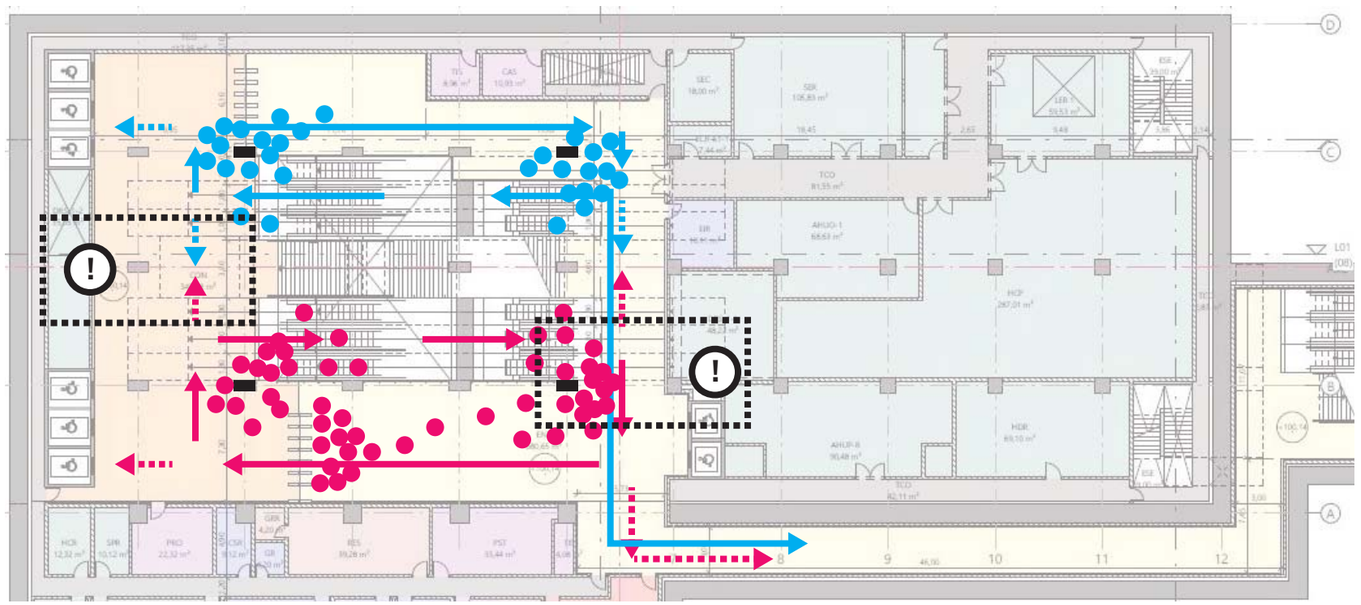
Ascending flow

Congestion Area

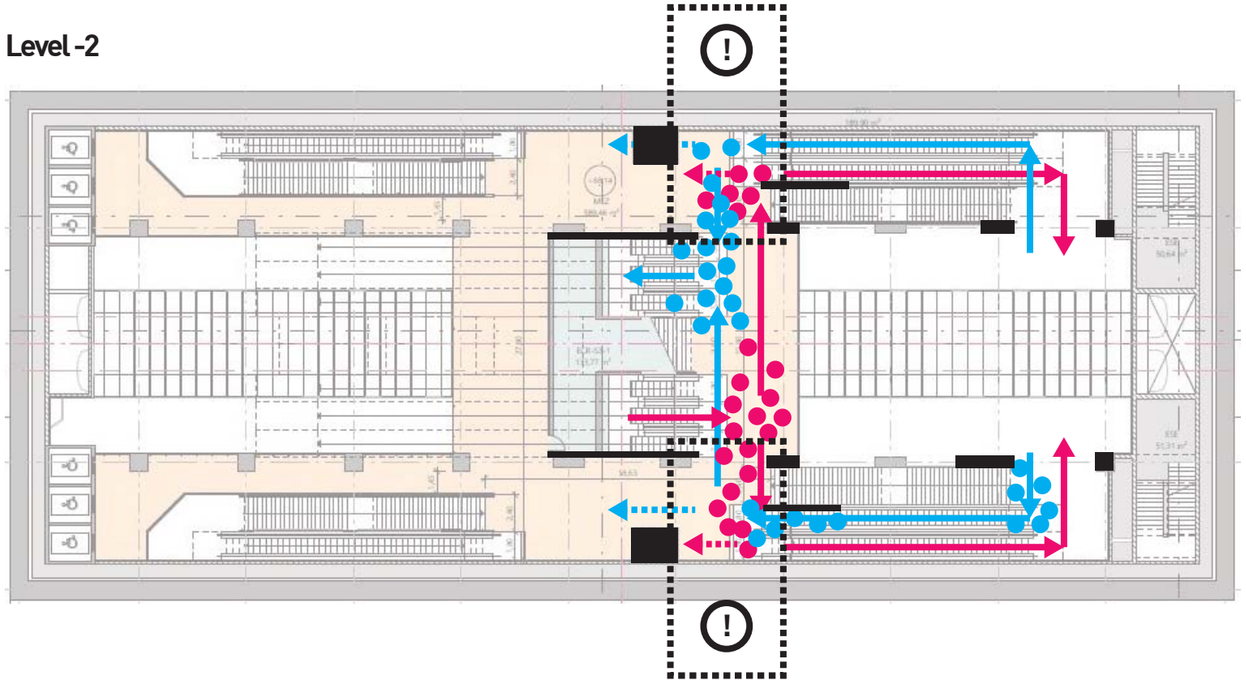
Desired Flow

Undesired Flow

Level -1



Level -2



wayfinding solutions

Wayfinding Solutions

Solutions to wayfinding issues -decision points, congestions, conflicts - can be implemented before construction, during construction or after construction.

They are of 3 primary types:

- Architectural intervention in the spatial layout
- Architectural/furniture elements
- Signage

It is recommended to implement solution as early as possible in the project as this will ensure a smooth functionning from the get go.

It is better to amend the project in the early phases, especially when ailments are well known, then to try to patch it later on.

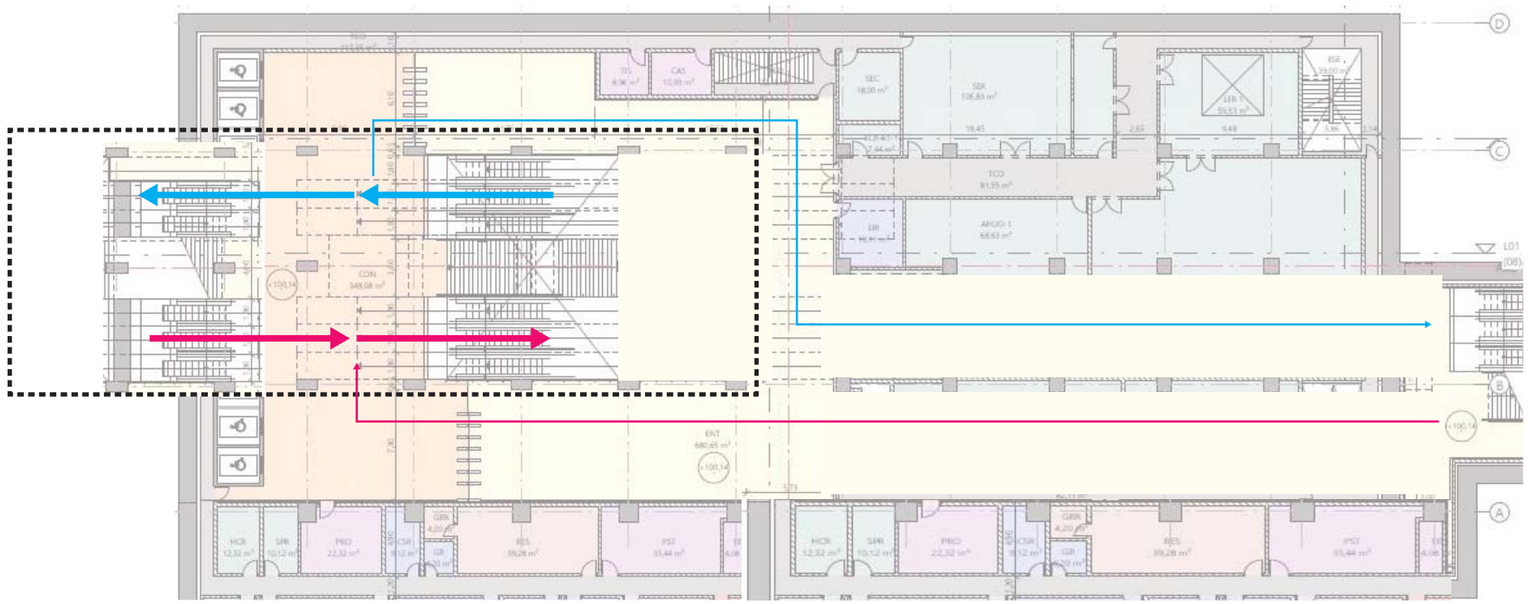
Solution Area

Descending flow Ascending flow

Desired Flow

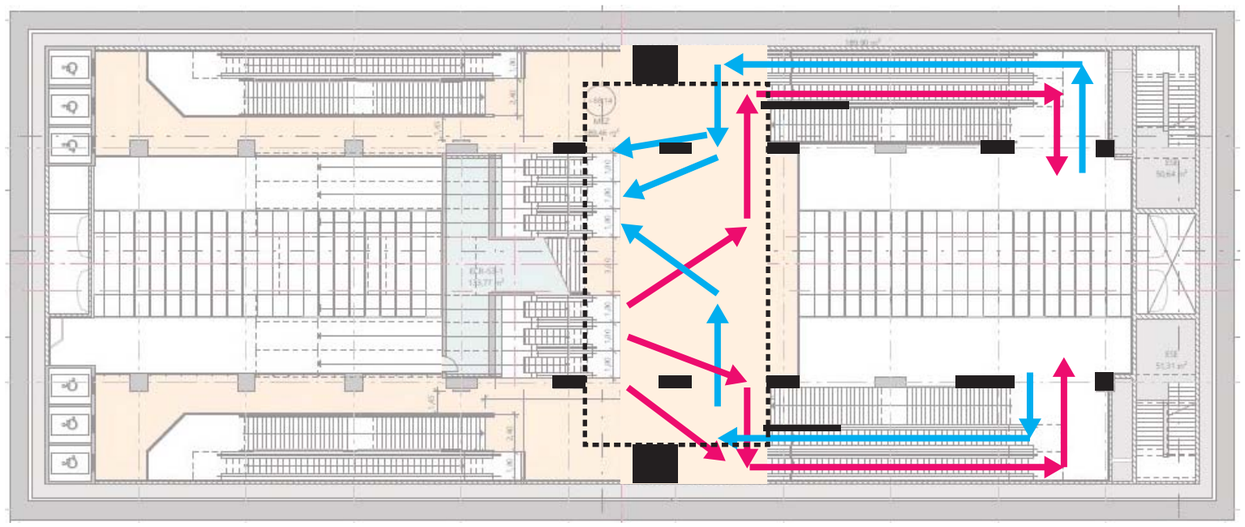
Undesired Flow

Level -1



Remove unnecessary decision points and U-turns by creating a straight path flow. Here the escalatorsare aligned instead being superimposed. Conflicts, congestion and decision points are eliminated.

Level -2



Dilute the conflicts by expanding the maneuver area thus reducing congestion and allowing for more flexible paths. Here the mezzanine is double in size. Conflicts are mitigated by extra space.

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