

ANNEX II. POTENTIAL INTERMODAL DEMAND

Considered weight of the demand of each Rodalies and Metro line (Source: Own construction from ATM, 2015a)

WEIGHT OF EACH RODALIES LINE IN DEMAND TERMS		WEIGHT OF EACH CONSIDERED METRO LINE IN DEMAND TERMS	
R1	31,25%	L1	37,81%
R2	32,65%	L3	30,00%
R3	5,36%	L5	32,20%
R4	30,74%		

Averaged spacing between stations of the considered Metro-lines (Source: Own construction)

	Averaged spacing between stations (km)
L1	0,691
L3	0,708
L5	0,726

R1 – Metro transfers

% of the demand in each transfer-combination (Source: Own construction)

L1-R1	37,81%
L3-R1	30,00%
L5-R1	32,20%

Allowed transfers between Rodalies R1 line and Metro (Source: Own construction)

Hospitalet Carrilet	x	o	o
Sants	o	x	x
Pl. Catalunya	x	x	o
Arc de Triomf	x	o	o
Clot	x	o	o

% Users per metro line, rodalies line and station (Source: Own construction)

		L1	L3	L5
Hospitalet	s1	4,73%		
	s2	4,73%		
Sants	s1		7,50%	16,10%

	s2		7,50%	16,10%
Pl. Catalunya	s1	4,73%	7,50%	
	s2	4,73%	7,50%	
Arc de Triomf	s1	4,73%		
	s2	4,73%		
Clot	s1	4,73%		
	s2	4,73%		
Amount of transfer-stations		4	2	1
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Hospitalet	s1	3,00		
	s2	12,00		
Sants	s1		5,00	9,00
	s2		7,00	16,00
Pl. Catalunya	s1	12,00	7,00	
	s2	2,00	13,00	
Arc de Triomf	s1	2,00		
	s2	3,00		
Clot	s1	3,00		
	s2	7,00		
Amount of transfer-stations		4	2	1
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Hospitalet	s1	1,0	0,0	0,0
	s2	2,1	0,0	0,0
Sants	s1	0,0	1,8	3,3
	s2	0,0	1,2	5,8
Pl. Catalunya	s1	2,1	1,2	0,0
	s2	0,3	4,6	0,0
Arc de Triomf	s1	0,3	0,0	0,0
	s2	0,5	0,0	0,0
Clot	s1	0,5	0,0	0,0
	s2	2,4	0,0	0,0
Average travelled length x demand weight		0,44	0,66	1,46
Averaged travelled length:		2,57km		

R2 – Metro transfers

% of the demand in each transfer-combination (Source: Own construction)

L1-R1	37,81%
L3-R1	30,00%
L5-R1	32,20%

Allowed transfers between Rodalies R1 line and Metro (Source: Own construction)

	L1	L3	L5
Sants	o	x	x
Passeig de Gràcia	o	x	o
Estació de França	o	o	o
Clot	x	o	o
Sant Andreu Comtal	x	o	o

% Users per metro line, rodalies line and station (Source: Own construction)

		L1	L3	L5
Sants	s1		7,50%	16,10%
	s2		7,50%	16,10%
Passeig de Gràcia	s1		7,50%	
	s2		7,50%	
Estació de França	s1			
	s2			
Clot	s1	9,45%		
	s2	9,45%		
Sant Andreu Comtal	s1	9,45%		
	s2	9,45%		
Amount of transfer-stations		2	2	1
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Hospitalet	s1		5,00	9,00
	s2		7,00	16,00
Sants	s1		7,00	
	s2		13,00	
Pl. Catalunya	s1			
	s2			
Arc de Triompf	s1	20,00		
	s2	9,00		
Clot	s1			

	s2			
Amount of transfer-stations		2	2	1
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Hospitalet	s1	0,0	0,0	3,3
	s2	0,0	0,0	5,8
Sants	s1	0,0	1,8	0,0
	s2	0,0	1,2	0,0
Pl. Catalunya	s1	0,0	1,2	0,0
	s2	0,0	4,6	0,0
Arc de Triompf	s1	6,9	0,0	0,0
	s2	3,1	0,0	0,0
Clot	s1	0,0	0,0	0,0
	s2	0,0	0,0	0,0
Average travelled length x demand weight		0,95	0,66	1,46
Averaged travelled length:		3,07 km		

R3 – Metro transfers

% of the demand in each transfer-combination (Source: Own construction)

L1-R1	37,81%
L3-R1	30,00%
L5-R1	32,20%

Allowed transfers between Rodalies R1 line and Metro (Source: Own construction)

	L1	L3	L5
Hopitalet	x	o	o
Sants	o	x	x
Pl. Catalunya	x	x	o
Arc de Triomf	x	o	o
Sagrera	x	o	x
Sant Andreu Arenal	x	o	o

% Users per metro line, rodalies line and station (Source: Own construction)

		L1	L3	L5
Hopitalet	s1	3,78%		
	s2	3,78%		
Sants	s1		7,50%	8,05%
	s2		7,50%	8,05%
Pl. Catalunya	s1	3,78%	7,50%	
	s2	3,78%	7,50%	
Arc de Triomf	s1	3,78%		
	s2	3,78%		
Sagrera	s1	3,78%		8,05%
	s2	3,78%		8,05%
Sant Andreu Arenal	S1	3,78%		
	S2	3,78%		
Amount of transfer-stations		2	2	2
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Hopitalet	s1	3,00		
	s2	12,00		
Sants	s1		5,00	9,00
	s2		7,00	8,00
Pl. Catalunya	s1	12,00	7,00	
	s2	2,00	13,00	

Arc de Triomf	s1	2,00		
	s2	5,00		
Sagrada	s1	5,00		8,00
	s2	1,00		8,00
Sant Andreu Arenal	S1	1,00		
	S2	6		
Amount of transfer-stations		2	2	2
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Hospitalet	s1	1,0	0,0	0,0
	s2	2,1	0,0	0,0
Sants	s1	0,0	1,8	3,3
	s2	0,0	1,2	1,5
Pl. Catalunya	s1	2,1	1,2	0,0
	s2	0,3	4,6	0,0
Arc de Triomf	s1	0,3	0,0	0,0
	s2	0,9	0,0	0,0
Clot	s1	0,9	0,0	1,5
	s2	0,2	0,0	2,9
Sant Andreu Arenal	S1	0,2	0,0	0,0
	S2	2,1	0,0	0,0
Average travelled length x demand weight		0,38	0,66	0,73
Averaged travelled length:		1,77 km		

R4 – Metro transfers

% of the demand in each transfer-combination (Source: Own construction)

L1-R1	37,81%
L3-R1	30,00%
L5-R1	32,20%

Allowed transfers between Rodalies R1 line and Metro (Source: Own construction)

	L1	L3	L5
Hopitalet	x	o	o
Sants	o	x	x
Pl. Catalunya	x	x	o
Arc de Triomf	x	o	o
Sagrada	x	o	x
Sant Andreu Arenal	x	o	o

% Users per metro line, rodalies line and station (Source: Own construction)

		L1	L3	L5
Hopitalet	s1	3,78%		
	s2	3,78%		
Sants	s1		7,50%	8,05%
	s2		7,50%	8,05%
Pl. Catalunya	s1	3,78%	7,50%	
	s2	3,78%	7,50%	
Arc de Triomf	s1	3,78%		
	s2	3,78%		
Sagrada	s1	3,78%		8,05%
	s2	3,78%		8,05%
Sant Andreu Arenal	s1	3,78%		
	s2	3,78%		
Amount of transfer-stations		2	2	2
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Hopitalet	s1	3,00		
	s2	12,00		
Sants	s1		5,00	9,00
	s2		7,00	8,00
Pl. Catalunya	s1	12,00	7,00	

	s2	2,00	13,00	
Arc de Triomf	s1	2,00		
	s2	5,00		
Sagrada	s1	5,00		8,00
	s2	1,00		8,00
Sant Andreu Arenal	S1	1,00		
	S2	6		
Amount of transfer-stations		2	2	2
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Hospitalet	s1	1,0	0,0	0,0
	s2	2,1	0,0	0,0
Sants	s1	0,0	1,8	3,3
	s2	0,0	1,2	1,5
Pl. Catalunya	s1	2,1	1,2	0,0
	s2	0,3	4,6	0,0
Arc de Triomf	s1	0,3	0,0	0,0
	s2	0,9	0,0	0,0
Clot	s1	0,9	0,0	1,5
	s2	0,2	0,0	2,9
Sant Andreu Arenal	S1	0,2	0,0	0,0
	S2	2,1	0,0	0,0
Average travelled length x demand weight		0,38	0,66	0,73
Averaged travelled length:		1,77 km		

FGC – Llobregat – Metro

% of the demand in each transfer-combination (Source: Own construction)

L1-Vallès	55,76%
L3-Vallès	44,24%
L5-Vallès	0,00%

Allowed transfers between Rodalies R1 line and Metro (Source: Own construction)

	L1	L3	L5
Hospitalet Carrilet	x	x	o
Pl. Espanya	x	x	o
Pl. Catalunya	o	o	o
Provença (Diagonal)	o	o	o

% Users per metro line, rodalies line and station (Source: Own construction)

		L1	L3	L5
Hospitalet Carrilet	s1	13,94%	7,50%	16,10%
	s2	13,94%	7,50%	16,10%
Pl. Espanya	s1	13,94%	22,12%	
	s2	13,94%	22,12%	
Amount of transfer-stations			2	2
% of users in the Metro-line		55,76%	44,24%	

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Hospitalet Carrilet	s1	2,00		
	s2	9,00		
Pl. Espanya	s1	2,00	7,00	
	s2	9,00	18,00	
Amount of transfer-stations			2	2
% of users in the Metro-line		55,76%	44,24%	

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Provença	s1	0,69	0,0	0,0
	s2	1,55	0,0	0,0
Pl. Catalunya	s1	1,55	2,48	0,0

	s2	6,22	6,37	0,0
Average travelled length x demand weight		0,31	1,96	
Averaged travelled length:		2,27 km		

FGC – Vallès – Metro

% of the demand in each transfer-combination (Source: Own construction)

L1-Vallès	37,81%
L3-Vallès	30,00%
L5-Vallès	32,20%

Allowed transfers between Rodalies R1 line and Metro (Source: Own construction)

	L1	L3	L5
Hospitalet Carrilet	o	o	o
Espanya	o	o	o
Pl. Catalunya	x	o	o
Provença (Diagonal)	o	x	x

% Users per metro line, rodalies line and station (Source: Own construction)

		L1	L3	L5
Provença	s1		7,50%	16,10%
	s2		7,50%	16,10%
Pl. Catalunya	s1	18,90%	7,50%	
	s2	18,90%	7,50%	
Amount of transfer-stations		2	2	2
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Provença	s1		12,00	12,00
	s2		2,00	13,00
Pl. Catalunya	s1	15,00	2,00	
	s2	14,00	12,00	
Amount of transfer-stations		2	2	2
% of users in the Metro-line		37,81%	30,00%	32,20%

Amount of stations user needs to travel until the next transfer stations or end of line (Source: Own construction)

		L1	L3	L5
Provença	s1	0,0	4,2	4,4
	s2	0,0	0,4	4,7
Pl. Catalunya	s1	5,2	0,4	0,0
	s2	4,8	3,9	0,0
Average travelled length x demand weight		2,89	1,93	1,46
Averaged travelled length:		6,28 km		