

Annexe 5 : Relaxations pour chaque cas (Schroeder & al., 2012) :

Cas 1 : distance totale sans utilisation d'un centre logistique

Model Run	Carrier 1	Carrier 2	Carrier 3	Carrier 4	Total
1	368,400	368,400	184,200	548,600	1,469,600
2	184,200	0	366,400	903,000	1,453,600
3	184,200	184,200	368,400	722,800	1,459,600
4	550,600	188,200	190,200	542,600	1,471,600
5	0	362,400	730,800	364,400	1,457,600
6	368,400	366,400	184,200	544,600	1,463,600
7	184,200	544,600	364,400	366,400	1,459,600
8	366,400	184,200	184,200	720,800	1,455,600
9	184,200	184,200	184,200	905,000	1,457,600
10	0	364,400	550,600	544,600	1,459,600

Cas 2 : distance totale sans utilisation d'un centre logistique

Model Run	Carrier 1	Carrier 2	Carrier 3	Carrier 4	Total
1	0	0	380,400	0	380,400
2	0	0	380,400	0	380,400
3	0	0	0	206,200	206,200
4	0	0	0	206,200	206,200
5	0	0	186,200	202,200	388,400
6	0	0	0	206,200	206,200
7	184,200	0	378,400	0	562,600
8	0	0	380,400	0	380,400
9	0	0	0	206,200	206,200
10	0	0	0	206,200	206,200

Cas 2 : distance totale avec utilisation d'un centre logistique

Model Run	Carrier 1	Carrier 2	Carrier3	Carrier 4	Total
1	0	0	32,000	202,200	234,200
2	0	26,000	0	206,200	232,200
3	24,000	0	24,000	204,200	252,200
4	28,000	0	0	206,200	234,200
5	0	26,000	26,000	204,200	256,200
6	0	30,000	0	206,200	236,200
7	0	0	24,000	206,200	230,200
8	0	0	24,000	206,200	230,200
9	0	0	24,000	206,200	230,200
10	24,000	0	32,000	208,200	264,200

Cas 3 : distance totale sans utilisation d'un centre logistique

Model Run	Carrier 1	Carrier 2	Carrier 3	Carrier 4	Total
1	0	0	380,400	0	380,400
2	0	0	380,400	0	380,400
3	0	0	380,400	0	380,400
4	0	0	380,400	0	380,400
5	0	0	380,400	0	380,400
6	0	0	380,400	0	380,400
7	0	0	380,400	0	380,400
8	0	0	380,400	0	380,400
9	0	0	380,400	0	380,400
10	0	0	380,400	0	380,400

Cas 3 : distance totale avec utilisation d'un centre logistique

Model Run	Carrier 1	Carrier 2	Carrier 3	Carrier 4	Total
1	0	0	62,000	180,200	242,200
2	26,000	28,000	56,000	180,200	290,200
3	0	34,000	56,000	180,200	270,200
4	0	26,000	58,000	180,200	264,200
5	32,000	0	58,000	180,200	270,200
6	24,000	28,000	54,000	180,200	286,200
7	0	28,000	54,000	180,200	262,200
8	32,000	0	58,000	180,200	270,200
9	34,000	26,000	54,000	180,200	294,200
10	24,000	26,000	58,000	180,200	288,200

Cas 4 : distance totale sans utilisation d'un centre logistique

Model Run	Carrier 1	Carrier 2	Carrier 3	Carrier 4	Total
1	0	0	380,400	0	380,400
2	0	0	380,400	0	380,400
3	552,600	186,200	0	0	738,800
4	0	0	380,400	0	380,400
5	186,200	0	376,400	0	562,600
6	0	0	380,400	0	380,400
7	0	0	380,400	0	380,400
8	0	0	380,400	0	380,400
9	0	0	380,400	0	380,400
10	0	0	380,400	0	380,400

Cas 4 : distance totale avec utilisation d'un centre logistique

Model Run	Carrier 1	Carrier 2	Carrier 3	Carrier 4	Total
1	50,000	58,000	0	180,200	288,200
2	76,000	28,000	0	180,200	284,200
3	0	48,000	54,000	180,200	282,200
4	72,000	28,000	0	180,200	280,200
5	54,000	0	36,000	180,200	270,200
6	56,000	48,000	24,000	180,200	308,200
7	44,000	76,000	0	180,200	300,200
8	30,000	76,000	0	180,200	286,200
9	0	0	386,400	0	386,400
10	96,000	26,000	0	180,200	302,200