

2019/07/16 14:36:33

Title Project : Delocalisation industrielle

Created by : Ilyes Ben Elgharat

Type : Correction

Departement : D. Indus

Probability Scale

Relative concentration of risk		Probability of occurrence
0.0	0.15	0.1
0.16	0.25	0.3
0.26	0.5	0.5
0.56	0.75	0.7
0.76	0.9	0.9

Estimation of Impact

	Impact : IP	Impact : IC	Impact : ID	Impact : IE
E1	7	7	3	1
E2	9	7	6	1
E3	7	6	6	1
E4	6	6	4	5
E5	7	5	2	9
E6	7	7	7	8

Les Matrices AHP

E1

	F1	F2	F3	F4	Weight
F1	1.0	5.0	3.0	0.5	0.28399639469803273
F2	0.2	1.0	0.5	0.13	0.05860181631781908
F3	0.3333333333333333	2.0	1.0	0.14	0.09579574540112974
F4	2.0	7.692307692307692	7.142857142857142	1.0	0.5616060435830185

E2

	F1	F2	F3	F4	Weight
F1	1.0	4.0	0.25	0.5	0.14872127986060976
F2	0.25	1.0	0.11	0.14	0.044361770306215194
F3	4.0	9.090909090909092	1.0	2.0	0.5189009923457543
F4	2.0	7.142857142857142	0.5	1.0	0.28801595748742065

E3

	F1	F2	F3	F4	Weight
F1	1.0	4.0	0.33	2.0	0.21739181139952285
F2	0.25	1.0	0.13	0.5	0.061592599959238735
F3	3.0303030303030303	7.692307692307692	1.0	7.0	0.6156968868571177
F4	0.5	2.0	0.14285714285714285	1.0	0.10531870178412082

E4

	F1	F2	F3	F4	Weight
F1	1.0	2.0	4.0	7.0	0.5093201086157916
F2	0.5	1.0	3.0	5.0	0.3080435997204182
F3	0.25	0.3333333333333333	1.0	2.0	0.11854757507297145
F4	0.14285714285714285	0.2	0.5	1.0	0.06408871659081858

E5

	F1	F2	F3	F4	Weight
F1	1.0	6.0	8.0	2.0	0.5427266918939231
F2	0.16666666666666666	1.0	3.0	0.33	0.11098424562978977
F3	0.125	0.3333333333333333	1.0	0.17	0.05063739197677129

	F1	F2	F3	F4	Weight
F4	0.5	3.0303030303030303	5.88235294117647	1.0	0.2956516704995158

E6

	F1	F2	F3	F4	Weight
F1	1.0	0.33	3.0	4.0	0.2525456624186355
F2	3.0303030303030303	1.0	5.0	7.0	0.5747914666838356
F3	0.3333333333333333	0.2	1.0	2.0	0.10760738795087073
F4	0.25	0.14285714285714285	0.5	1.0	0.06505548294665812

Calculation of the risk factor concentration for each undesirable event

Undesirable event	Linked risk factor category	Factors of category X_i	Weighting: Y_i	$X_i \cdot Y_i$	Fraction of total Eq	Probability of Occurrence	Max Impact	Level of Risk
E1	F4	7	3.0	21.0	--	--	--	--
	F1	7	4.0	28.0	--	--	--	--
			Sub-Total E1	49.0	0.23333333	0.3	7.0	2.1000001
E2	F1	7	4.0	28.0	--	--	--	--
	F3	3	2.0	6.0	--	--	--	--
	F4	7	3.0	21.0	--	--	--	--
			Sub-Total E2	55.0	0.26190478	0.5	9.0	4.5
E3	F3	3	2.0	6.0	--	--	--	--
			Sub-Total E3	6.0	0.028571429	0.1	7.0	0.7
E4	F4	7	3.0	21.0	--	--	--	--
			Sub-Total E4	21.0	0.1	0.1	6.0	0.6
E5	F4	7	3.0	21.0	--	--	--	--
	F1	7	4.0	28.0	--	--	--	--
			Sub-Total E5	49.0	0.23333333	0.3	9.0	2.7
E6	F1	7	4.0	28.0	--	--	--	--
	F2	2	1.0	2.0	--	--	--	--
			Sub-Total E6	30.0	0.14285715	0.1	8.0	0.8
			Total	210.0	100 %			

Result : Limit ACCEPT = 2.5

Accepted Risks	
Code	Description
E1	Work-related illness
E3	Drop in quality
E4	Inadequate design
E6	Explosion and fire

Risks à reduire	
Code	Description
E2	Drop in productivity
E5	Pollution