

2019/07/24 19:41:22

# Title Project : Industrial relocation

Created by : Ilyes Ben Elgharat

Type : Prevention ----- 'javascript:precise\_round(2.36321574, 2);'

Departement : Industrial

## Probability Scale

Relative concentration of risk		Probability of occurrence
0.0	0.15	0.1
0.15	0.25	0.3
0.25	0.5	0.5
0.5	0.75	0.7
0.75	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	3.0	0.25	0.5	0.139023850491032
F2	0.3333333333333333	1.0	0.11	0.14	0.04786580671065815
F3	4.0	9.090909090909092	1.0	2.0	0.5214532087793806
F4	2.0	7.142857142857142	0.5	1.0	0.29165713401892923

## 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	F1	7	4.0	28.0	--	--	--	--
	F4	7	3.0	21.0	--	--	--	--
			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