# Title Project : Delocalisation industrielle

Created by: trhgtg thtrhrt

Type : Correction

Departement : D. Indus

### **Probability Scale**

| Relative conce | 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            |
|----|-------------------|-----|--------------|---------------|
| F1 | 1.0               | 4.0 | 3.0          | 0.5           |
| F2 | 0.25              | 1.0 | 0.5          | 0.125         |
| F3 | 0.333333333333333 | 2.0 | 1.0          | 0.14285714285 |
| F4 | 2.0               | 8.0 | 7.0000000035 | 1.0           |

#### **E2**

|    | F1  | F2  | F3   | F4  |  |
|----|-----|-----|------|-----|--|
| F1 | 1.0 | 3.0 | 0.25 | 0.5 |  |

|    | F1                 | F2               | F3        | F4            |  |
|----|--------------------|------------------|-----------|---------------|--|
| F2 | 0.3333333333333333 | 1.0              | 0.1111111 | 0.14285714285 |  |
| F3 | 4.0                | 9.00000090000009 | 1.0       | 2.0           |  |
| F4 | 2.0                | 7.0000000035     | 0.5       | 1.0           |  |

# **E3**

|    | F1                | F2  | F3                  | F4  |
|----|-------------------|-----|---------------------|-----|
| F1 | 1.0               | 4.0 | 0.33333             | 2.0 |
| F2 | 0.25              | 1.0 | 0.125               | 0.5 |
| F3 | 3.000030000300003 | 8.0 | 1.0                 | 7.0 |
| F4 | 0.5               | 2.0 | 0.14285714285714285 | 1.0 |

#### **E4**

|    | F1                  | F2                | F3  | F4  |
|----|---------------------|-------------------|-----|-----|
| F1 | 1.0                 | 2.0               | 4.0 | 7.0 |
| F2 | 0.5                 | 1.0               | 3.0 | 5.0 |
| F3 | 0.25                | 0.333333333333333 | 1.0 | 2.0 |
| F4 | 0.14285714285714285 | 0.2               | 0.5 | 1.0 |

### **E5**

|    | F1                 | F2                | F3               | F4              |
|----|--------------------|-------------------|------------------|-----------------|
| F1 | 1.0                | 6.0               | 8.0              | 2.0             |
| F2 |                    | 1.0               | 3.0              | 0.33333         |
|    | 0.1666666666666666 |                   |                  |                 |
| F3 | 0.125              |                   | 1.0              | 0.1666666666666 |
|    |                    | 0.333333333333333 |                  |                 |
| F4 | 0.5                |                   |                  | 1.0             |
|    |                    | 3.000030000300003 | 6.00000000000024 |                 |

#### **E6**

|    | F1                | F2                  | F3  | F4  |
|----|-------------------|---------------------|-----|-----|
| F1 | 1.0               | 0.33333             | 3.0 | 4.0 |
| F2 | 3.000030000300003 | 1.0                 | 5.0 | 7.0 |
| F3 | 0.333333333333333 | 0.2                 | 1.0 | 2.0 |
| F4 | 0.25              | 0.14285714285714285 | 0.5 | 1.0 |

# Calculation of the risk factor concentration for each undesirable event

| Undesirable event | Linked risk<br>factor<br>category | Factors of category | Weighting:Yi    | Xi*Yi | Fraction of total Eq | Probability of<br>Occurence | Max<br>Impact | Level of<br>Risk |
|-------------------|-----------------------------------|---------------------|-----------------|-------|----------------------|-----------------------------|---------------|------------------|
| E1                | F1                                | 7                   | 4.0             | 28.0  |                      |                             |               |                  |
|                   | F4                                | 7                   | 3.0             | 21.0  |                      |                             |               |                  |
|                   |                                   |                     | Sub-Total<br>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<br>E2 | 55.0  | 0.26190478           | 0.5                         | 9.0           | 4.5              |
| E3                | F3                                | 3                   | 2.0             | 6.0   |                      |                             |               |                  |
|                   |                                   |                     | Sub-Total<br>E3 | 6.0   | 0.028571429          | 0.1                         | 7.0           | 0.7              |
| E4                | F4                                | 7                   | 3.0             | 21.0  |                      |                             |               |                  |
|                   |                                   |                     | Sub-Total<br>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<br>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<br>E6 | 30.0  | 0.14285715           | 0.1                         | 8.0           | 0.8              |
|                   |                                   |                     | Total           | 210.0 | 100 %                |                             |               |                  |

# Result:

|                  | 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            |  |  |