

## Assignments

**1** As a team of three, select two supermarkets and individually assess them against the criteria listed in the section 'Specific factors influencing location decisions – the choice of site'. Then review each of your individual ratings against each others, discuss and list the key areas of agreement and disagreement.

**2** As a team of three, individually select one of the following facilities to review: a large retail chemist, a large bookstore and a multiplex cinema.

(a) In your team agree for each location the factors to be used to review each site.

(b) As individuals assess one of the three locations using the agreed factors.

(c) Discuss the three sets of findings and then identify the two most important factors that each facility shares and the two most important factors that are facility-specific.

**3** Complete a similar exercise to the last assignment, but this time analyse the layout of each location with particular reference to customer flows and the type of layout used. Compare and contrast your results. What were the key determinants on layout design for each outlet?

**4** A US-based engineering firm has been awarded a contract to build the assembly and fabricating facilities for a new automobile plant in Mexico. The need to complete the project on time is critical, given the proposed vehicle launch, and, as with all such assignments, staying within budget is essential. For these reasons the project manager needs to be continuously kept up to date. The client has assigned its own on-site staff to handle issues as they arise. The desired relationships for the specialist areas involved in completing the project are given below. The space allocated to the project team comprises an office for each of the seven sections (see below), together with an office for the client's own staff.

(a) Using a relationship chart complete a suggested layout.

(b) Give reasons for your layout proposal.

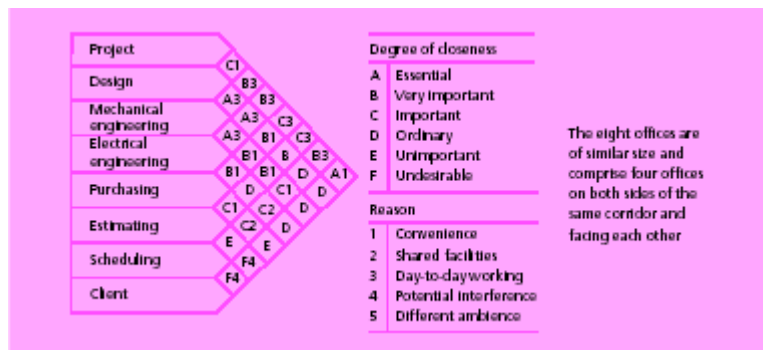
(c) Why do the reasons above differ to the reasons used in the chapter example, Exhibit 7.16?

**5** Electronic Controls International (ECI), a US-based technology group, has narrowed down its location choices to four possible sites in Europe. ECI will need to train relevant staff, and the key factors, their weights and ratings for each location are shown in the table opposite. High scores represent favourable values.

(a) Calculate the weighted-factor score for each of the four sites.

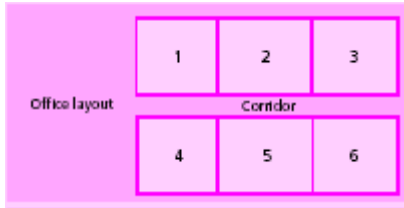
(b) Which site would you choose?

(c) Would you reach the same conclusion if the weightings for operating costs and labour costs were reversed?



Factor	Weighting	Location			
		A	B	C	D
Staff availability	15	7	8	7	8
Operating costs	25	8	6	8	6
Government incentives	15	8	8	7	6
Land, construction, other set-up costs	15	7	6	7	7
Labour costs	10	8	8	6	6
Local technical infrastructure	10	4	7	8	7
Transport	10	4	8	8	7

6 The accountancy firm Thomas and Mason comprises six main sections. Due to the growth of the business over the last five years, the partnership is planning to move into new premises. These comprise six offices of equal size on each side of a corridor, as shown. The distance between the six offices is shown, as are the number of trips between each sector. From this information, assign each of the six sections to an office in a way that minimizes the total distance travelled.



Distance between offices (metres)	Office 1	2	3	4	5	6
1	-	8	16	24	16	8
2		-	8	16	8	16
3			-	8	16	24
4				-	8	16
5					-	8
6						-

# trips between offices	Office 1	2	3	4	5	6
1	-	26	31	82	64	14
2		-	45	29	40	101
3			-	20	39	27
4				-	30	46
5					-	56
6						-