REVIEW OF THE DEMAND
FOR THE
MILLENNIUM EXHIBITION

Project No.12069
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Prepared for:
Millennium Central

Prepared by:
Economics Research Associates

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SECTION I

INTRODUCTION

The Millennium Exhibition is being planned for a site on Greenwich peninsula. To progress the development, the Millennium Exhibition Project Team was set up (since renamed Millennium Central). Millennium Central is currently preparing a business plan for the exhibition for presentation to the Millennium Commission.

In May 1996, Economics Research Associates (ERA) prepared a report on the potential for the Millennium Exhibition for Imagination. This report examined the markets, initial concept ideas, previous Expos and other events, and prepared estimates of attendance, physical planning parameters and initial revenue estimates for the event.

As part of the ongoing business planning process in autumn 1996, ERA was commissioned to undertake primary market research to test the appeal of the concept, to review the earlier work in the light of the concept and site developments and re-assess the demand potential for the event.

This report summarises our previous and most recent work and has been prepared under the administrative supervision of John Robinett (Vice President, London) by David Camp (Senior Associate, London) and Ben Martin (Associate, London).

Primary market and concept testing research undertaken as part of the project evaluation was provided by MORI Ltd under the guidance of Lyn Roseaman and Sally-Ann Mathie. The findings of this aspect of the study are summarised within this report and detailed separately.

SECTION II

OVERVIEW OF MARKETS

INTRODUCTION

Attendance levels at attractions and events are a function of the available markets, the extent and nature of competitive facilities, and the quality of the attraction. At the Millennium Exhibition, visitors will be derived from two source markets: residents within day trip travel distance of the site; and tourists to London. The sizes of these markets are summarised in this section.

MARKET SIZE

Resident Market

As part of our May 1996 study, ERA commissioned a drive-time catchment analysis from CACI Ltd. The total catchment market available for the Millennium Exhibition currently totals some 26.6 million people. This encompasses just under half of the population of the UK, and almost two thirds of the population of England. By 2000, the population is expected to have grown to 27.2 million.

Tourist Market

International Tourists

London received a record 12.5 million overseas tourists in 1995 and forecasts indicate that 13 million foreign tourists will visit the capital this year. Extrapolation of the recent historic trends to the turn of the century would suggest a total of 13.5 million overseas tourist visits to London in 2000.

Domestic Tourists

The domestic tourist market to London fluctuates considerably year on year, but despite these fluctuations the overall pattern over the period between 1989 and 1995 is flat. Typically, we would expect an attraction to derive visits from domestic tourists already visiting a location, however we consider that the Millennium Exhibition will be of such a significance that it will generate interest throughout the country and that people will make a specific visit to London to see it. We therefore consider that the potential market consists of all those residents of the UK who live outside 180 minutes day-visit travel time - currently some 31.3 million.

By 2000 this will total 32.1 million of the total forecast population of 59.3 million.

TOTAL MARKET SIZE

Table II-1 details the total market potential for the Millennium Exhibition

TABLE II-1

MARKET CATCHMENT

	1995 Population	2000 Population
Resident Market		
Local (0 - 30 mins)	2,223,700	2,398,400
Primary (30 - 60 mins)	5,289,500	5,561,300
Secondary (60 - 120 mins)	8,551,000	9,193,300
Tertiary (120 - 180 mins)	10,508,700	10,061,500
Total Resident Market	***26,572,900***	***27,214,500***
Tourist Market		
International Tourists	12,500,000	13,500,000
Domestic Tourists	31,340,000	32,100,000
Total Tourist Market	***43,840,000***	***45,600,000***
Total Market Size	**70,412,900**	**72,814,500**

Source: CACI Ltd, OPCS, Economics Research Associates

SECTION IV

CONSUMER RESEARCH

INTRODUCTION

The Millennium Exhibition will be a unique event in British history. It will be of a size and scale rarely seen in Britain - the nearest domestic comparables have been the 1951 Festival of Britain, the 1924/25 British Empire Exhibition, and the Great Exhibition of 1851.

To test the public reaction to the initial concept, a primary research programme combining both quantitative and qualitative consumer research was undertaken. This research was undertaken by MORI Ltd, and the findings of this research are reviewed within this section.

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It should be noted that as with any research programme, the quality of the results, and the relevance of their interpretation are directly related to the material used within the research programme. As the project is still at an early stage and few details are available, the analysis of the public reaction to the scheme should be tempered by the fact that the stimulus material revealed no details of the offer. Opinions expressed are therefore subjective and should be interpreted as indicative only.

We recommend that further research be undertaken as the project progresses in order to test these initial reactions and the reaction of consumers to a more detailed programme of exhibits, attractions and events.

RESEARCH PROGRAMME

The research programme was designed to combine both quantitative and qualitative elements to enable examination of anticipated behaviour patterns and also to probe current public perceptions of the Millennium Exhibition. The research programme comprised the following elements:

- Eight focus groups undertaken among British residents during the period 9 to 20 November 1996. These included respondents in pre-family, family, and post-family life-stages. The focus groups lasted between one and a half and two hours and used a number of visual and verbal stimuli.
- A total of 906 quantitative in-home interviews were undertaken among UK residents. In these interviews, respondents were shown text cards and visual images of the exhibition, followed by a short video. These interviews were spread around the UK within the following travel time bands from Greenwich:
    - 0-30 minutes (96 interviews);
    - 30-60 minutes (113 interviews);
    - 60-120 minutes (157 interviews);
    - 120-180 minutes (276 interviews); and

    - beyond 180 minutes (264 interviews).

- A further 256 interviews were conducted through hall-tests among overseas tourists to London. These took the form of ten-minute, on-street interviews with show cards.

The detailed findings of the focus group and quantitative surveys are available as separate reports and tables prepared by MORI Ltd.

Questionnaire Structure

The quantitative research questionnaires were structured in a way so as to allow analysis across the various groups surveyed. This enabled us to examine a number of issues and how the different markets and segments within these markets reacted to different aspects of the concept. The questionnaires were designed to assess reactions to the concept overall, and then at a specific adult admission fee. The sample was split with one half being shown an adult admission price of £20, and the other a price of £30. Respondents who expressed interest in visiting the exhibition were asked for their anticipated method of transport, frequency of visitation, and length of stay at the event.

Sample Size

The tight timescale for the research programme, dictated by the need for results to be analysed and incorporated into the business planning process, meant that the research team were unable to complete as many questionnaires as originally planned.

While the achieved sample size of 906 UK residents was sufficient to allow analysis of the sample as a whole, the number of respondents within a number of sub-groups was low. This is most apparent in the examination of anticipated attendance by respondents within specific travel-time bands where in some cases sub-samples represent fewer than 10 people.

This opens up the question of statistical significance and margins of error, which at samples of this size are significant. We would recommend, therefore, that the overall results be used as part of the evaluation process, but the sub-group analysis should only be used as indicative of general levels support for the scheme at this stage.

By combining the overall survey results with our market penetration rate attendance analysis, we have attempted to provide a reasonable estimate of projected attendance taking into account the limited detail available on the concept to date.

Weighting

In order to ensure that the research findings are representative of the catchment population as a whole, the results were weighted. This weighting negates the impact of any bias in favour of any particular segment of the population which may have been over-or-under represented in the survey. By weighting the analysis, a more reflective examination of the population as a whole has been produced.

Qualitative Research

The qualitative research, in the form of focus groups, was conducted in a more in-depth manner and explored views and feelings in more detail than the survey. In these instances, the concept could be explained more fully and particular aspects highlighted, which was not possible in the quantitative research. As a result, respondents were able to obtain a fuller appreciation of the project than those within the quantitative research programme.

Direct links should not therefore be made between the quantitative and qualitative research. However, by examining the results from the programme as a whole, a number of important messages emerge for the design, content and marketing of the project.

Extrapolation Of Findings

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As noted earlier the results are dependent upon the stimulus material provided. One of the difficulties in researching a concept such as that planned for the Millennium Exhibition is that respondents often find it difficult to appreciate and visualise the finished product. Typically they will use the most comparable point of reference of which they have experience. In some instances this may take the form of a UK theme park, Disneyland, or Seville Expo '92, while in other instances, the point of reference may be a local museum, a dusty memory of the Festival of Britain, or a twenty-year old attraction which sounds similar to the respondent, but bears no relation to the proposed exhibition. Caution should therefore be taken when examining and extrapolating from the findings and results.

THE QUANTITATIVE RESEARCH FINDINGS

Awareness Levels

Interviewees were asked whether they were aware of the Millennium Exhibition. Two-thirds were aware of the event, but over half of these felt they knew nothing about it.

Interest Levels

There was a high level of interest in the concept in general with over half of the people questioned expressing an interest in visiting the Exhibition. Interest was even higher among overseas tourists with two-thirds indicating that they would be interested in returning in 2000 to visit the exhibition. If it were open now, 86 percent said they would be interested in visiting, and over half said that they would be likely to return in 2000 to see the Exhibition.

Ten percent of the UK residents surveyed said that they would be certain to visit the Exhibition, as did 12 percent of overseas tourists. As expected, the level of interest in visiting varied according to distance from Greenwich and Table IV-1 reveals that interest was highest among those living locally.

TABLE IV-1

INTENTION TO VISIT MILLENNIUM EXHIBITION - NO PRICE

	Residents					
	0-30 mins	30-60 mins	60-120 mins	120-180 mins	180 mins +	Overseas Tourists (in 2000)
	%	%	%	%	%	%
Certain to Visit	31	12	10	7	3	9
Very Likely to Visit	20	29	22	15	14	18
Fairly Likely to Visit	23	28	28	30	27	27
Total Likely to Visit	73	70	60	52	43	55

Source: MORI Ltd

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Frequency Of Visit

Most respondents felt that a visit would be a special occasion rather than a regular leisure activity, and that they would visit the exhibition once or twice during the year.

Displacement Activity

Three quarters of people felt that a visit to the Millennium Exhibition would not replace a visit to another attraction, but that would be in addition to their annual leisure visits.

Party Composition

Almost 60 percent of people would visit with their spouse/partner, and a quarter would go with friends. Interestingly, 44 percent of people felt that they would visit with children, although only 32 percent of respondents would have children aged under 15 by the Millennium. This indicates that many people see the event as a multi-generational family activity where grandparents, parents and children would visit together.

Length Of Stay

There was considerable variation among respondents as to the anticipated length of stay at the Millennium Exhibition. While almost 20 percent felt that they would spend four hours or less at the event, a further 22 percent felt that they would spend more than eight hours there.

Overall, residents expressed an anticipated length of stay of just under seven hours, and tourists just over seven.

Mode Of Transport

A third of residents and over 60 percent of tourists would expect to travel to the site by underground, and just under a third would use the train. A significant proportion of these residents are likely to be the same people who would use the train to travel to London and the tube once inside the capital. Half of the residents surveyed would expect to travel by car.

Pricing

The respondents were split into two groups, each being asked their intention to visit at a specific adult admission price. One group was shown an adult admission price of £20, the other a price of £30. Table IV-2 shows the response of interviewees to the £20 price.

TABLE IV-2 RESTRICTED

INTENTION TO VISIT MILLENNIUM EXHIBITION AT £20 ADULT ADMISSION

	Residents					
	0-30 mins	30-60 mins	60-120 mins	120-180 mins	180 mins +	Overseas Tourists (in 2000)
	%	%	%	%	%	%
Certain to Visit	13	11	19	16	9	19
Very Likely to Visit	12	24	20	16	19	30
Fairly Likely to Visit	32	45	42	44	52	34
Total Likely to Visit	57	80	81	76	80	83

Source: MORI Ltd

As can be seen, this level of admission price was well received by everyone except those living within 30 minutes of Greenwich. The £20 admission price resulted in an increased intention to visit across all groups living beyond 30 minutes, suggesting that most people had believed that the event would cost more than £20 for an adult.

The results from those respondents shown a £30 admission price appear in Table IV-3.

TABLE IV-3

INTENTION TO VISIT MILLENNIUM EXHIBITION AT £30 ADULT ADMISSION

	Residents					
	0-30 mins	30-60 mins	60-120 mins	120-180 mins	180 mins +	Overseas Tourists (in 2000)
	%	%	%	%	%	%
Certain to Visit	17	10	10	9	3	10
Very Likely to Visit	21	20	9	14	22	32
Fairly Likely to Visit	34	30	35	41	49	29
Total Likely to Visit	72	60	54	64	74	71

Source: MORI Ltd

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As can be seen from this table, at a £30 admission price, there was a greater interest in visitation among local residents than at £20. The reason behind this variance is unclear and warrants further investigation as it is an unexpected response. Other groups exhibited a lower interest in visiting at a higher admission price, but the overall level of interest was still significant.

It should be noted that these percentages relate to small sample sizes, and therefore should be used for indicative purposes only. Direct extrapolation of these results into revenue or attendance projections is not possible.

Level Of Support

The research revealed a positive response to the concept. With over half of respondents supporting the Exhibition, and a quarter expressing neither support or opposition. Only 17 percent were opposed to the event. Support was strongest among those living locally.

Reaction To Video

At the end of the interview, respondents were shown a short video prepared by Imagination. After viewing the video, 19 percent stated that having seen the video they would be more likely to visit the Exhibition. 72 percent said that the video would not change their intention to visit.

THE QUALITATIVE RESEARCH FINDINGS

With focus group discussions, respondents have an opportunity to consider propositions more fully than in quantitative research. As a result, they are useful in drawing out particular strengths and weaknesses of a scheme, highlighting areas that are particularly well received as well as areas of concern which need to be addressed.

Overall the respondents in the focus groups were largely in favour of the event and around half of them expressed an intention to visit. The artists impression of the dome was well received and many people felt the Exhibition would be a 'must see' event. A fuller review of the focus groups appears in a separate report by MORI Ltd.

Impressions Of The Millennium Exhibition

Most people are looking forward to the Millennium as a major landmark in their lives, and one to be celebrated in style. However, many had difficulty distinguishing the Millennium Exhibition from the New Year's Eve party and at present the Millennium is perceived as a huge party for one night rather than a year-long event.

There was some concern expressed over the size and scale of the event, and the various other uses that such a large amount of 'public money' could be put to. Additionally, people were concerned about the London bias of the event and found it difficult to relate to the regional programme when it would not be occurring during the Millennium year.

Visual Impressions

The dome provoked enormous interest, and helped people to crystallise the event in their minds. The tone of the groups changed when the visuals were introduced and some respondents in all of the groups felt that the event would be a 'must see' purely on the image of the dome.

Transport Concerns

Concern was expressed regarding the ability of Greenwich to cope with the anticipated level of cars and coaches which people expected to visit the area. River transport was seen as attractive by many people.

Price Issues

Most groups were tested with a £30 admission price to test their reactions. Despite protestations, large numbers of respondents felt that as long as the event was as attractive as the video made it sound and that it could provide a full-days entertainment of a quality comparable to that provided by Disney, then £30 for an adult would not be too much.

Concern was expressed that this level of price would exclude large groups of the population who would be unable to visit, and it was felt that there should be some way of allowing those less well off to be subsidised by those who could afford to pay full price.

RESEARCH SUMMARY

The research programme has provided a very valuable insight into the minds of the various consumer markets. Overall the scheme was very well received. Over half of those interviewed expressed an interest in visiting the scheme, and a similar proportion of those within the focus group said that they would visit. The scheme had appeal across all age and social groups.

A number of issues were raised as part of the research programme:

- Despite the limited awareness of the Millennium Exhibition and a considerable amount of negative publicity regarding the lottery and the various awards, interest and public support for the event were generally good. It will be important in the forthcoming months, as details of the event become more widely known to maintain and reinforce the current level of support.

- Even at this early stage, people felt that they would spend at least seven hours on site. As the scheme is developed and more details become available, its is possible that the anticipated length of stay could grow. Should this occur, this will have an impact on the daily on-site capacity of the event, and could impact on attendance levels.

- When asked for their initial views on transport to the site, half of respondents said that they would travel by car. This fact needs to be considered when planning the parking and transport policy, and in the public awareness phase of the build-up to the Exhibition opening. The concerns over crowding could be used to promote public transport and the river bus appears to be an attractive feature.

- There is a reduced intention to visit at a higher admission price, although the overall increase in intention to visit at a £20 adult admission price above that exhibited when no price was mentioned indicates that many respondents had expected a higher price. It should therefore be possible to increase the adult admission price above this £20 level during peak periods.

- Concern was expressed that a high pricing level would exclude a significant proportion of the public who could not afford to visit. As the project will have been funded by public money (in the eyes of the public), it is felt that the event should be accessible to all and not just those who can afford it.

SECTION V

REVIEW OF POTENTIAL DEMAND

INTRODUCTION

In our view, the most appropriate method of assessing potential demand is the market capture analysis undertaken in our original report. It is based upon an examination of comparable events and activities, and an assessment of the unique characteristics of the event and location. Market research provides useful support for this method, but should not be used as a primary method to determine attendance levels.

EXTRAPOLATION OF SURVEY RESULTS

As a supporting methodology for the market penetration analysis, the expressed intentions to visit can be extrapolated from the survey results into anticipated attendance levels. As mentioned, this needs to be done with caution due to the small sub-sample sizes.

Such research results also need to be discounted because while people may state an intention to visit, circumstances may change which will prevent this. Other people may say that they may go just to be polite but have no real intention to visit.

By applying various discounts to the anticipated visitation levels, the market research indicated that a demand for between 12 and 16 million visitors could be achieved at a £20 admission price, and between 9 and 13 million at a £30 admission price as shown in Table V-1. These figures should be viewed with some caution, but they do serve to support the market penetration rate evaluation of attendance.

REVIEW OF MARKET PENETRATION RATES

The original ERA estimates of market penetration were based upon a 12 month operating period during the year of 2000 only. In that research we identified site capacity constraints and reduced our attendance projections on the basis of anticipated over-crowding difficulties during peak times.

Following discussions undertaken as part of the ongoing business planning process, our view is that with seasonally discounted pricing, pro-active visitor management, an active events programme, slightly increased exhibition capacity and pre-booking of tickets in a similar way to that which has been successfully employed at Legoland in Windsor, a total of 13.5 million visits should be able to be accommodated. To do this however, there would need to be an active programme of in-park management and entertainment which would encourage significant numbers of visitors to leave in the afternoon and make way for a second-wave of arrivals during the early evening. This is an assumption which needs careful testing, and our concern is that, as expressed in the survey, visitors will expect to spend a long time on site and see everything. The experience at Disneyland, other major theme parks and Expos is that as a visit is a special occasion, people tend to stay on site as long as they can. Should this be the case at the Millennium Exhibition, capacity constraints may limit attendance.

Having reviewed the market research findings, and examined the levels of interest expressed among the various groups, we consider that this research supports our original levels of market penetration. The levels of interest expressed at this early stage with limited information on the concept, and general acceptance of the proposed admission prices indicates that there should be an opportunity to operate a differential pricing policy with an average admission fee of around £22.50 as anticipated by Deloitte and Touche and still maintain the anticipated attendance levels.

20 MONTH OPERATION POTENTIAL

Demand for non-essential items within a market is finite. There is only a certain proportion of any population that are pre-disposed to buy a particular product. While this can be influenced by marketing, it is relatively fixed. A prime example is the demand for an album where an artist may sell 1 million copies of an album in the UK. If the artist is particularly popular and the album release timely, then these sales can occur over a short period of say 6 months. Sales then typically fall off sharply, and of the total sales over a two year period, the majority are achieved in a few months. Video games have an even shorter shelf-life - sometimes only a few months.

Disney use this principal in selling videos and operate on a seven year cycle when a video is only available between certain dates. Video sales are higher than would be expected if it were available for a long period as people are prompted to buy as it will not be available for long.

The Millennium Exhibition is similar in that the unique selling proposition will be the year 2000. Expos achieve high market penetration and visitation levels as they are once-only six-month offers. To a lesser extent, Garden Festivals achieved the same effect. These events were summer only activities, and the fact that the Millennium Exhibition will be open for a full year means that it is already planned to expand upon this pattern.

If the Millennium Exhibition opening period is extended longer than one year, our view is that it may increase attendance a little but it is more likely to spread the same demand over a longer period. This will have the effect of considerably increasing the operating expenses without a corresponding increase in revenues, and the event runs the risk of operating at a break-even or a loss over the second season. It may be seen by the market as more as a theme park generating typical theme park demand levels rather than those of a unique event.

The only comparable in modern times is that at Seville where the Expo in 1992 attracted 42 million visits. Part of the site was reopened the following summer and attracted some three million visits - seven percent of the Expo total.

In ERA's opinion, opening the Millennium Exhibition for a second year would be likely to spread the demand over the two years and may generate a further attendance equivalent to theme park levels of attendance of 2-3 million visits per annum as shown in Table V-1.

TABLE V-1

SUMMARY OF ATTENDANCE PARAMETERS

	1 Year Operation	2 Years Operation
Low	10.9	13.4
Medium	13.5	16.0
High	16.0	18.5

Source: Economics Research Associates

RECOMMENDATION

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ERA's recommendation is that the most prudent and efficient approach would be to operate the Millennium Exhibition for 12 months.

SECTION VI

PHYSICAL PLANNING PARAMETERS

INTRODUCTION

In our previous report, ERA prepared estimates of the physical planning parameters which would be required within the Millennium Exhibition for the anticipated attendance patterns to meet the needs of the visitors. Having revised our original estimates of weekly attendance patterns and space requirements based upon the assumption that a seasonal differential pricing policy is adopted, along with pro-active visitor management and an active events programme, we have derived the following revised physical planning parameters for the event.

In planning for an event such as the Millennium Exhibition, the site and its components must be designed in such a way as to achieve the optimal relationship between capacity and utilisation. Since daily attendance levels vary, however, optimum site utilisation cannot be expected every day. Thus, it would not be practical to plan a site for the potential maximum utilisation that peak-day attendance would represent, as this would result in over-provision of activities. Neither would it be practical to provide capacity sufficient only to accommodate crowds during a day of average attendance as this would lead to over-crowding, extensive queues and dissatisfied visitors during busy periods. Therefore, it is necessary to determine the level of daily attendance for which the site should be planned, to afford both the best use of development capital and provide adequate physical capacity for visitors.

A satisfactory relationship between capacity and potential utilisation is one that can accommodate levels of attendance falling somewhere between the peak day and the average day. This intermediate level of daily attendance for which the site is specifically planned is known as the "design day" and the following section derives this for the event.

OPERATING SEASON AND ATTENDANCE PATTERNS

Leisure attractions exhibit strong demand and attendance patterns which, despite considerable efforts from operators, have been extremely difficult to change. These patterns are dictated by school and public holidays, work patterns, tourist patterns and weather.

With the Millennium Exhibition planned to operate all year round, and a significant proportion of the activities under cover, we consider that attendance will follow the patterns exhibited by London attractions (which exhibit a relatively flat seasonal admissions profile) more than previous Expos and theme parks which, for financial and other reasons, are operational primarily during summer periods. This pattern will be supported by the planned year-round programme of events within the exhibition, and the fact that Easter will fall in late April in 2000.

To achieve a smooth annual attendance distribution, we have assumed that a considerable amount of visitor management and pre-booking will be implemented, along with a differential pricing structure, a strong events programme, and the development of additional entertainment capacity within the site. These will be essential as the event will need to spread the load to a greater degree than at Expos and theme parks in order to achieve the annual attendance projections. Projected monthly and daily attendance estimates are detailed in Table VI-1.

ESTIMATED DESIGN DAY ATTENDANCE

Evaluation of the design-day attendance and peak in-grounds attendance is based upon the projected attendance levels in the peak month. As shown on Table VI-1 attendance in the peak month of August is expected to equate to 15 percent of the total attendance or some 2 million people under the medium attendance estimate. Assuming visitor management, booking programmes and differential pricing policies, and taking into account the weekly spread of visitors at Expos, we consider that it should be possible to spread attendance across the week, with a peak demand weekend day attracting 15 percent of the total weekly attendance, and each weekday attracting 14 percent. This pattern spreads the load considerably more than at other UK attractions.

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This would generate a design day attendance during the peak month of August under the medium attendance scenario of just over 68,000, as shown in Table VI-2,

We believe that the Exhibition will generate a long length of stay of at least 7 hours. This is borne out by the market research. An evening events programme, and the development of a number of evening entertainment attractions should enable a second-wave of admissions to be generated in the evening as occurred in Seville. Assuming that this occurs we would expect that the peak in-grounds attendance would equate to 70 percent of total daily attendance or just under 48,000 persons in our medium estimate.

EXHIBIT AND ENTERTAINMENT REQUIREMENTS

At indoor attractions, between 2.5 and 3.5 sqm per visitor is generally regarded as the minimum requirement to provide visitors with sufficient space to enjoy the attraction. At Expos, this can be somewhat reduced as there is generally a higher provision of theatres and shows (which can accommodate more people in a smaller space), and greater queuing areas. As shown earlier, Expos typically provide around 16 sq ft (1.6 sqm per person) of exhibit space. Accordingly we consider that 1.5 sqm of exhibition space per visitor should be provided as a minimum requirement as detailed in Table VI-3, which would equate to a minimum requirement for almost 72,000 sqm of exhibit space at the medium attendance level.

Entertainment capacity is the term used to describe the number of units of entertainment which are required to provide visitors with an enjoyable visit. At theme parks this can range from 1.2 to 2.0 units per hour. We consider that a level of 1.5 entertainment units per hour (which would provide visitors with three rides/films or shows every two hours) would be appropriate. On a peak on-site attendance of almost 48,000 people 72,000 entertainment units would need to be provided each hour as shown in Table VI-4.

TABLE VI-1
PROPOSED OPERATING SEASON AND MONTHLY ATTENDANCE DISTRIBUTION

	Operating Days			Monthly & Weekly Attendance			Daily Attendance Analysis			
							Average Weekend Day		Average Week Day	
	Weekend Days	Week Days	Total Days	Distribution (Percent)	Monthly Attendance	Weekly Attendance	Percent of week	Visitors	Percent of week	Visitors
January	10	21	31	6.0%	807,400	182,320	20.0%	36,460	12.0%	21,880
February	8	21	29	5.0%	672,840	168,210	20.0%	33,640	12.0%	20,190
March	8	23	31	8.0%	1,076,540	243,090	20.0%	48,620	12.0%	29,170
April	10	20	30	10.0%	1,345,670	313,990	20.0%	62,800	12.0%	37,680
May	8	23	31	8.0%	1,076,540	243,090	18.0%	43,760	12.8%	31,120
June	8	22	30	9.0%	1,211,100	282,590	16.0%	45,210	13.6%	38,430
July	10	21	31	11.0%	1,480,240	334,250	15.0%	50,140	14.0%	46,790
August	8	23	31	15.0%	2,018,510	455,790	15.0%	68,370	14.0%	63,810
September	9	21	30	9.0%	1,211,100	282,590	18.0%	50,870	12.8%	36,170
October	9	22	31	8.0%	1,076,540	243,090	20.0%	48,620	12.0%	29,170
November	8	22	30	5.0%	672,840	157,000	20.0%	31,400	12.0%	18,840
December	10	20	30	6.0%	807,400	182,320	20.0%	36,460	12.0%	21,880
Total	106	259	365	100.0%	13,456,720					

Source: Economics Research Associates

TABLE VI-2
DESIGN-DAY PLANNING CRITERIA

	Low	Medium	High
Annual Attendance	10,905,080	13,456,720	16,008,350
Peak Month Attendance at 15 percent	1,635,760	2,018,510	2,401,250
Weekly Attendance at 22.6 percent of peak month	369,370	455,790	542,220
Design-Day Attendance at 15 percent of week	55,410	68,370	81,330
Peak On-Site Attendance at 70 percent of design-day	38,790	47,860	56,930

Source: Economics Research Associates

TABLE VI-3
EXHIBITION SPACE REQUIREMENTS

	Low	Medium	High
Peak In-Grounds Attendance	38,790	47,860	56,930
Exhibition Space Required per Visitor (sq m)	1.5	1.5	1.5
Total Exhibition Space Required (sq m)	58,185	71,790	85,395

Source: Economics Research Associates

TABLE VI-4
ENTERTAINMENT CAPACITY REQUIREMENTS

	Low	Medium	High
Peak On-Site Attendance	38,790	47,860	56,930
Ratio of Entertainment Capacity to Peak In-Grounds Attendance	1.5	1.5	1.5
Required Hourly Units of Entertainment Capacity	58,185	71,790	85,395

Source: Economics Research Associates

LAND AREA REQUIREMENTS

On the basis of a peak-in-grounds attendance of 48,000, and a planning guideline of 800 visitors per acre (the maximum figure which we consider would be acceptable to the public), a total of 60 acres of on-site visitor area would be required to cater for the 13.5 million visitors.

In addition to this, ancillary and support areas would be required. The minimum which would be acceptable at a major attraction would be an additional 20 percent of space, or 12 acres. It may be possible for some of the activities (such as food preparation) to be housed away from the site and brought in as required, but many support services such as administration, cleaning, landscaping, maintenance, storage and first aid would need to be on site or adjacent to the site.

RESTRICTED

This would indicate a total requirement for 72 acres to cater for the anticipated level of demand.

SUMMARY OF PHYSICAL PLANNING PARAMETERS

Table VI-5 summarises the physical planning implications of the mid-range attendance estimates.

TABLE VI-5

SUMMARY OF MARKET DRIVEN ATTENDANCE AND PHYSICAL PLANNING PARAMETERS

Total Attendance (median estimate)	13,500,000 visitors
Design-Day Attendance	68,400 people
Peak On-Site Attendance	47,900 people
Exhibition Space Requirements	71,800 sq. m
Entertainment Units Required	71,800 units
In-Grounds Area	72 acres

Source: Economics Research Associates