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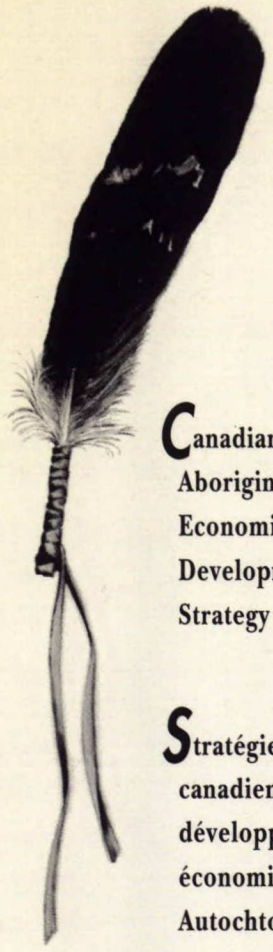

A DO-IT-YOURSELF FEASIBILITY STUDY:

New Motel/Hotel/Resort Ventures

Canadian Aboriginal Economic Development Strategy

Stratégie canadienne de développement économique des Autochtones

Canada

A DO-IT-YOURSELF FEASIBILITY STUDY:

New Motel/Hotel/Resort Ventures

SECTOR
Services
Tourism
Accomodations

SECTEUR
Services
Tourisme
Hébergements

• *Introduction*

This book is one of a series of five business feasibility guides written and prepared by *The Manitoba Institute of Management Inc.* They have been produced through funding from Industry, Science and Technology Canada for the Research and Advocacy Program of the *Canadian Aboriginal Economic Development Strategy*, and are designed to assist Aboriginal people across Canada to assess possible business opportunities. The titles in the series are:

- Retail Ventures
- Construction/Contracting Ventures
- Motel/Hotel/Resort Ventures
- Restaurant Ventures
- Manufacturing Ventures

These guides are available by contacting an Aboriginal Business Development Program Officer in your region about your proposed business project.

THIS FEASIBILITY GUIDE IS DESIGNED TO ASSIST THE READER TO DEVELOP A SOUND NEW VENTURE FEASIBILITY ANALYSIS, BUT CANNOT GUARANTEE EITHER SUCCESS IN OBTAINING FINANCIAL ASSISTANCE OR SUCCESS IN BUSINESS.

NOTE THAT THE EXAMPLES USED ARE NOT OF ANY ACTUAL BUSINESS AND ARE PROVIDED SOLELY FOR THE PURPOSES OF EXPLAINING THE ELEMENTS OF A FEASIBILITY STUDY.

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HELPING YOU TO HELP YOURSELF

• *What This Book is All About*

As a businessperson with a new venture idea, it's very likely that you're prepared to take some risk and to make some serious financial commitments. Probably, you will be asking others to share these risks if you intend to get the venture off to a good start. The big question in everyone's mind; "Is the venture feasible?"

How do you find out? Some people never take the time to do the necessary investigations and they find themselves in financial difficulties that could have been avoided. Still others are lucky enough to make a go of it in spite of not having done their homework first. Many more will have hired accountants and consultants to prepare financial projections for them. There is still another group that would like to do an analysis on their own but they don't know how to go about working out a venture feasibility study.

If you're in the last category, this workbook will help.

• *How This Book Helps*

This book is one tool available to you to help analyse and assess your idea. Whether or not you call on the help of professionals such as accountants, bank managers, consultants, or lawyers, the basic knowledge provided in this book will help you avoid financial problems in the future.

Before you go ahead with any new venture you will have to find answers to two basic questions.

(1) Is the idea workable?
(2) If it's workable, will it be profitable?

To help you find answers to these questions, this guide takes you through a sequence of important questions and answers for a motel hotel resort.

Section A
MARKET FEASIBILITY

<table>
<tr><th colspan="2">QUESTIONS</th><th>ANSWERS</th></tr>
<tr><th>SITUATION A</th><th>SITUATION B</th><td rowspan="8">Step 1: Total Market Potential</td></tr>
<tr><td>(planning a motel/hhotel/resort in an area where facilities currently exist)</td><td>(planning a motel/hotel/resort in an area where no facilities currently exist)</td></tr>
<tr><td>1. What is the current supply of motel/hotel/resort rooms in the area?</td><td rowspan="2">1. What will the supply of rooms be over the next few years?</td></tr>
<tr><td>2. What will the supply of rooms be over the next few years?</td></tr>
<tr><td>3. What percentage of these rooms is currently occupied on average for the area?</td><td rowspan="3">2. What is the demand likely to be over the next few years?</td></tr>
<tr><td>4. How quickly will demand grow over the next few years?</td></tr>
<tr><td>5. How many rooms will be needed to meet this demand?</td></tr>
<tr><td>6. How big is the gap between supply and demand for rooms? How big should my motel be?</td><td>3. How big is the gap between supply and demand for rooms? How big should my motel be?</td><td>Step 2: Market Share</td></tr>
<tr><td>7. What will my gross revenue be from the rental of rooms?</td><td>4. What will my gross revenue be from the rental of rooms?</td><td rowspan="3">Step 3: Gross Revenue</td></tr>
<tr><th colspan="2">SITUATIONS A AND B IN COMMON</th></tr>
<tr><td colspan="2">5. What will my gross revenue be from the sale of food?</td></tr>
<tr><td colspan="2">6. What will my total gross revenue be from the overall operation?</td></tr>
</table>

Section B
OPERATING FEASIBILITY

QUESTIONS	ANSWERS
1. What type of building, equipment, and furnishings will I need?	Step 4: Building, Equipment and Furnishings Requirements
2. How much will it cost me to run the room operation and the restaurant?	Step 5: Direct Departmental Expenses
3. What cash expenses will I have to meet other than those already worked out?	Step 6: Calculation of Cash Operating Expenses
4. What other expenses do I have to allow for? Will I have to borrow money?	Step 7: Budgeting for Other Expenses

Section C
FINANCIAL FEASIBILITY

QUESTION	ANSWER
1. After paying all expenses, how much do I make?	Step 8: Sales Less Expenses

Section D
VENTURE FEASIBILITY

QUESTIONS	ANSWERS
1. Is it worthwhile?	Step 9: Return on Investment
2. Should I go ahead with the venture?	Step 10: Final Decision

This sequence of questions and answers covers what is commonly called a feasibility study. It guides you in gathering specific information so that in the end you will be in a position to say whether or not the idea is feasible.

• *Steps in Preparing a Feasibility Study*

There are four major parts in the preparation sequence, each with its own set of questions:

Section A: **MARKET FEASIBILITY**

Section B: **OPERATING FEASIBILITY**

Section C: **FINANCIAL FEASIBILITY**

Section D: **VENTURE FEASIBILITY**

Note that there are two different situations to choose from when working through Section A for the motel hotel resort venture — the first one (Situation A) begins on page A-1 and assumes that you are planning such a venture in an area where other similar facilities already exist; and the second one (Situation B) begins on page A-11 and assumes that no such facilities currently exist in the area chosen for your proposed motel hotel resort.

For each question an answer guide and an example is provided to help you analyse the information. Numbers which appear in the left-hand margins of the example pages correspond respectively to the numbered instructions in the previous answer guide to show you how to apply the suggested methods to your own venture. At various points throughout the workbook you will be instructed to record your answers on a worksheet (example, page D-6; blank, page D-7). The completed worksheet will tie each step of the analysis together in the form of a profit and loss and cash flow statement.

A summary of the work will also be completed at the end of each Section. Blank Presentation Format Sheets are provided as an Appendix to the workbook for the preparation of your presentation to banks, potential venture partners, and other interested parties.

SECTION A
MARKET FEASIBILITY

1. Motel/Hotel/Resort — Situation A

SITUATION A
This example assumes that you are planning a motel hotel resort in an area where other similar facilities already exist. If this is not the situation, that is, you are planning a motel hotel resort in an area where no facilities currently exist, you should turn to "SITUATION B" on page A-11.

Step 1: Total Market Potential

• *Question 1*

"What is the current supply of motel hotel resort rooms in the area?"

The objective is to determine the current number of Room Nights available in the area. Include only those facilities that are competitive with the proposed motel.

• *Answer Guide*

Follow these steps to find an answer.

(1) Interview motel operators in the area, their employees, and others who may be able to provide you with information.

(2) For each motel determine or estimate:

- the number of rooms
- the number of days in the year that the motel is open
- the Occupancy Rate for available rooms
- the Average Rental Rate for occupied rooms.
  (*CAUTION:* This rate should take *multiple occupancy* into account.)

Not all the above information is needed immediately but it will be later.

$$\text{OCCUPANCY RATE} = \frac{\text{average number of rooms occupied}}{\text{number of rooms available}} \times 100$$

(3) Calculate the current supply of Room Nights as follows:

NUMBER OF ROOMS	x	NUMBER OF DAYS OPEN	= ROOM NIGHTS

• *Example: Ocean Bay Hotel*

Results of survey to determine the current supply of room nights:

FACILITY	OCCUPANCY RATE	AVERAGE* ROOM RATE	ROOMS	×	DAYS OPEN =	ROOM NIGHTS
Motel A	60%	$25.00	10		365	3 650
Motel B	70%	28.00	15		365	5 475
Resort	65%	18.00	10		160	1 600
Hotel	40%	21.00	20		365	7 300
		Total	55		Total Room Nights	18 025

**NOTE:* The Average Room Rate takes multiple occupancy into account.

• *Question II*

"What will the supply of rooms be over the next few years?"

The objective is to determine the number of available rooms in each of the next five years.

• *Answer Guide*

Follow these steps to find an answer.

(1) When you are talking to motel operators in the area, try to find out their expansion plans for the future.

(2) Check with local authorities to see if any license or building permits have been either requested or issued.

(3) Rumors about impending developments should be traced to their source to see if they have any substance.

• *Example: Ocean Bay Hotel*

Results of survey to determine the future supply of rooms:

FACILITY	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Motel A	10	10	10	20*	20
Motel B	15	15	20*	20	20
Resort	10	10	10	10	10
Hotel	20	20	20	20	20
Total	55	55	60	70	70 rooms

*NOTE: Motel B plans to add five rooms in the third year and Motel A plans to add ten rooms in the fourth year.

• *Question III*

"What percentage of these rooms is currently occupied on average for the area?"

This will give you some idea of the current level of demand for rooms. You already have all the information you need.

• *Answer Guide*

Follow these steps to find an answer.

(1) Calculate the number of Occupied Room Nights as follows:

NUMBER OF ROOM NIGHTS × OCCUPANCY RATE = OCCUPIED ROOM NIGHTS

(2) Then calculate the Average Occupancy Rate for the area as follows:

$$\text{AVERAGE OCCUPANCY RATE} = \frac{\text{occupied room nights (demand)}}{\text{total room nights (supply)}} \times 100$$

• *Example: Ocean Bay Hotel*

(1) Occupied Room Nights

FACILITY	ROOM NIGHTS	×	OCCUPANCY RATE	=	OCCUPIED ROOM NIGHTS
Motel A	3 650		60%		2 190
Motel B	5 475		70%		3 833
Resort	1 600		65%		1 040
Hotel	7 300		40%		2 920
	18 025				9 983

(2) Average Occupancy Rate:

$$\frac{\text{occupied room nights}}{\text{total room nights (Question I)}} \times 100 = \frac{9\,983}{18\,025} \times 100 = 55.4\%$$

• *Question IV*

"How quickly will demand grow over the next few years?"

In Question II you determined the supply for each of the next five years. Now you must do the same for demand.

• *Answer Guide*

Follow these steps to find an answer.

(1) Estimate the proportion of total demand by source (e.g. (a) government or business travelers, and (b) tourists). This can be done by obtaining several estimates in your discussions with local motel operators, local ticket agents of airlines and other carriers, Provincial government department responsible for tourism, Chambers of Commerce, and other local authorities that may have some ideas. From the same interviews, determine or estimate the Annual Rate of Growth for each category.

(2) Calculate an Average Overall Rate of Growth as follows:

CATEGORY PERCENTAGE OF TOTAL DEMAND	×	CATEGORY ANNUAL RATE OF GROWTH	=	AVERAGE OVERALL RATE OF GROWTH

(3) Use the Average Annual Overall Rate of Growth to forecast demand over the next five years.

• *Example: Ocean Bay Hotel*

(1) Proportion of total demand by category and anticipated Annual Rate of Growth for each:

DEMAND CATEGORY	% OF TOTAL DEMAND	ANNUAL % GROWTH RATE
Tourist	85%	15%
Government/Business	15%	10%
	100%	

(2) Average Overall Rate of Growth:

DEMAND CATEGORY	% OF TOTAL DEMAND	×	ANNUAL % GROWTH RATE	=	AVERAGE OVERALL RATE OF GROWTH
Tourist	85%		15%		12.75%
Government/Business	15%		10%		1.50%
	100%		100%		14.25%

(3) Forecast of demand for next five years in "room nights":

Year 1: 9 983* + (9 983 × 14.25%) = 11 405 room nights
Year 2: 11 405 + (11 405 × 14.25%) = 13 030 room nights
Year 3: 13 030 + (13 030 × 14.25%) = 14 887 room nights
Year 4: 14 887 + (14 887 × 14.25%) = 17 008 room nights
Year 5: 17 008 + (17 008 × 14.25%) = 19 431 room nights

*9 983 Occupied Room Nights (Question III — page A-4)

• *Question V*

"How many rooms will be needed to meet this demand?"

This question was almost answered in Question IV where the room night demand was forecast for the next five years. However, there is still the occupancy factor to consider before the demand in "rooms" can be determined. You will recall that the current Average Occupancy Rate was calculated in Question III. You may wish to use this rate for your estimate.

• *Answer Guide*

Follow these steps to find an answer.

(1) Choose an Occupancy Rate for the next five years (the current Average Occupancy Rate has already been calculated in Question III). Before you do, however, compare the supply of rooms (Question II) in each year to the growth in forecast demand (Question IV). Remember that the proposed hotel will add to the supply of rooms. As well, some of the room supply may be for seasonal facilities, which effectively limits the supply. Having considered all these factors, if the demand for rooms is significantly greater than the supply, it is reasonable to expect the Occupancy Rate to climb over current levels.

(2) Convert demand in "room nights" to demand in "rooms" using the following formula:

$$\text{DEMAND IN ROOMS} = \frac{\text{demand in room nights (Question IV)}}{\text{occupancy rate} \times 365 \text{ days}^*}$$

**CAUTION:* Note that 365 days is used in the formula above under the incorrect assumption that all facilities are open year-round. Rather than 365 days, it would be better to use a simple average or a weighted average of the days open if some of the facilities under consideration are seasonal.

• *Example: Ocean Bay Hotel*

(1) Occupancy Rate:

$$\text{DEMAND IN ROOMS (Year 1)} = \frac{11\,405}{55.4\% \times 328}\ ^{*}$$

$$= \frac{11\,405}{.554 \times 328}$$

$$= \underline{\underline{63 \text{ rooms}}}$$

$$^{*}\text{Weighted Average Days Open} = \frac{\text{total room nights (Question I)}}{\text{number of rooms (Question II)}}$$

$$= \frac{18\,025}{55}$$

$$= \underline{\underline{328 \text{ days}}}$$

(2) Demand in Rooms

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Room Night Demand (Question IV)	11 405	13 030	14 887	17 008	19 431
Pessimistic @ 55.4% occupancy	63	72	82	94	107 rooms
Most Likely @ 60% occupancy	58	66	76	86	99 rooms
Optimistic @ 65% occupancy	53	61	70	80	91 rooms

Step 2: Market Share

• *Question VI*

"How big is the gap between supply and demand for rooms? How big should my motel be?"

If you can calculate the gap between supply and demand for each of the next five years, it will make it much easier to decide on the size of the motel. In addition, you should be able to time construction so that demand corresponds with the capacity decided upon.

• *Answer Guide*

Follow these steps to find an answer.

(1) Compare the supply and demand for rooms (Question II — page A-3 and Question V — page A-6) and calculate the gap.

(2) Decide on the size of the motel and the timing for its construction.

• *Example: Ocean Bay Hotel*

(1) The gap between supply and demand of rooms:

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Room Demand @ 60% occupancy (Question V)	58	66	76	86	99
Room Supply (Question II)	55	55	60	70	70
Gap	3	11	16	16	29

(2) Decision

A 15-room motel will be built in the third year and the plan will accommodate an expansion to a possible 30-room motel after the fifth year.

Step 3: Gross Revenue (Rooms)

• *Question VII*

"What will my gross revenue be from the rental of rooms?"

The information on average room rates obtained earlier (Question I — page A-2) will give you some idea of the rental rate you will be able to charge.

• *Answer Guide*

Follow these steps to find an answer.

(1) Determine an average room rate for the motel. Remember this should take multiple occupancy into account if the information on rates obtained in Question I did so. In setting the rate, also remember to reflect any competitive advantage.

(2) Adjust this rate for inflation to arrive at an appropriate rate for the opening of the motel.

(3) Calculate the estimated Gross Revenue from the rental of rooms as follows:

OCCUPANCY RATE	×	AVERAGE ROOM RATE	×	NUMBER OF ROOMS	×	DAYS OPEN	=	GROSS REVENUE (ROOMS)

NOTE: Although an area Occupancy Rate was used in Question V to determine the demand for rooms, you are not compelled to use this rate to estimate Gross Revenue for your motel. You may choose a higher Occupancy Rate, perhaps assuming that your facility is much more attractive than the others. This simply means that the Occupancy Rate for the other motels in the area is correspondingly lower.

• *Example: Ocean Bay Hotel*

(1) Average Room Rate calculation (information from Question I — page A-1)

FACILITY	ROOM RATE	×	ROOMS	=	TOTAL
Motel A	$25.00		10		$250.00
Motel B	28.00		15		420.00
Resort	18.00		10		180.00
Hotel	21.00		20		420.00
					$1 270.00

$$\text{Area Average Room Rate} = \frac{\$1\ 270}{55} = \$23.09$$

After considering this calculation, the range of rates that currently exist, and your likely competitive advantage over each of the existing competitive facilities, you choose an Average Room Rate of $28.00 because of competitive advantages and multiple occupancy similar to Motel B.

(2) Adjust for inflation to the year of start-up:

Average Room Rate (Year 1)	= $28.00
Inflation @ 6%/year	= 3.46
Average Room Rates (Year 3)	= $31.46

NOTE: (1) 1 year $28.00 × 1.06 = $29.68
2 years 29.68 × 1.06 = $31.46

(2) The 6% is assumed to be the current rate of price increase for hotel rooms in the region.

(3) Estimated Gross Revenue from rooms (first year of operation, Year 3):

60%* × $31.46 × 15 rooms × 365 days = $103 346.00

**NOTE:* A 60% Occupancy Rate is assumed. This is conservative, considering that Motel B is currently achieving 70% occupancy.

The analysis for Situation A alone ends here, because the "Gross Revenue (Food)" (page A-21) and "Total Gross Revenue" (page A-24) divisions are identical for Situation A and Situation B. Pick up these divisions at page A-21, following the earlier parts of Situation B.

I. Motel/Hotel/Resort — Situation B

SITUATION B
This situation assumes that you are planning a motel hotel resort in an area where no such facilities currently exist. If this is not your situation, that is, you are planning a motel hotel resort in an area where these facilities already exist, you should begin with "SITUATION A" on page A-1.

Step 1: Total Market Potential

• *Question I*

"What will the supply of rooms be over the next few years?"

The objective is to determine the number of rooms that might be available in each of the next five years.

• *Answer Guide*

Follow these steps to find an answer.

(1) Talk to key people in the community who are likely to be aware of any plans to build motel hotel resort facilities in this area. Trace all rumors to their source.

(2) Check with local authorities to see if any license or building permits have been either requested or issued.

(3) Look for hard evidence. Do not simply assume that the supply of rooms will increase because the opportunity is present.

• *Example: The Lakeside Hotel and Convention Center*

Results of survey indicate that no competitive facilities are currently being planned.

• *Question II*

"What is the demand likely to be over the next few years?"

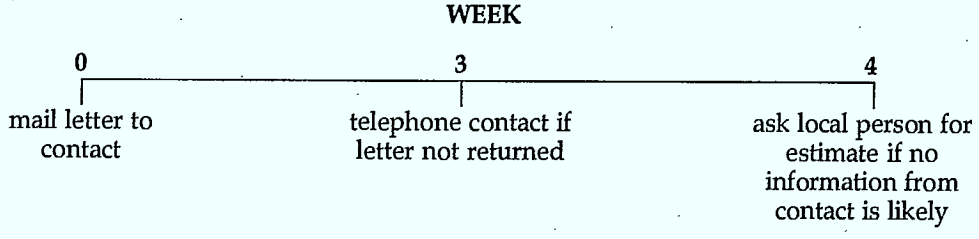
In Question I, you determined supply for each of the next five years. Now do the same for demand.

• *Answer Guide*

Follow these steps to find an answer.

(1) Approach each individual in the community who routinely associates with government or business people visiting the community. Find out who these people are and prepare a contact list. Send a letter to each and follow up with a telephone call if a reply is not received. Use a form letter with blank spaces for the information required so that the recipient can fill in the information by hand and return it without delay in the enclosed return envelope (with the correct postage). If the letter and or telephone call does not yield results, ask the individual who named the contact to provide you with his her estimates.

Use this schedule:



(2) With the information gathered from (1) above, prepare a market analysis that will indicate the likely level of demand from government and business travelers in each of the next five years.

(3) Estimate the proportion of total demand by source ((a) government or business travelers, and (b) tourists). Estimate the growth of tourist demand over the five-year period. Again, local authorities should be questioned in this regard. Tourist bureaus and travel agencies that make actual bookings should be asked to forecast use of the new facility.

(4) Total the estimates from (2) and (3) above to arrive at an estimate of total demand for each of the next five years.

• *Example: The Lakeside Hotel and Convention Center*

(1) Letter to each contact:

Northtown, Canada
October 15, 1989

Mr. W. Brown
Government Dept.
123 Fourth Street
Southtown, Canada

Dear Mr. Brown:

I am planning to add a motel to the Convention Center which I currently operate in Northtown and understand that you and or your associates visit here regularly on conferences, seminars and other business. To assist me I would be pleased if you could provide information on the following points (even if the information is estimated) and return it in the enclosed return envelope.

1. The number of person nights spent in Northtown (e.g. 3 people visiting 1 night each would be 3 person nights).

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	TOTAL
1988 (actual)													

2. What is your best estimate of total person nights for 1989?

   _____

3. Do you expect the number of visits to change after 1989?

   INCREASE ☐ DECREASE ☐ SAME AS 1989 ☐

4. Purpose of visit? _____

5. Where do you stay now? _____

6. Would you stay at the motel if available? _____

7. Do you know others (not included in your estimates in (1.) above) that I can contact?

   NAME: _____

   ADDRESS: _____

Thank you for your help.

Yours truly

Karl Smith

KMS:cv

MARKET ANALYSIS
"The Lakeside Hotel and Convention Center

ORIGIN	CONTACT	PURPOSE OF VISIT	FACILITIES NOW USED	WILL USE CENTER?	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1977 TOTAL	1978 TOTAL	FUTURE VISITS ID S*	REMARKS
Winnipeg	W. Brown Government	Conference	Hotel	Yes	2	2	2	2	2	2	2	2	2	2	2	2	24	24	S	Confirmed by Dept.
Toronto	B.W. Green Transport	Seminar	Hotel	Yes	15	15	15	15	15	15	15	15	15	15	15	15	155	155	S	
Calgary	J. White Brothers Ltd.	Business	Guest House	No	—	—	—	—	—	—	—	—	—	15	15	15	0	0	D	Discontinued operation
Montreal	N. Bergman Home Affairs	Business	Guest House	Yes	—	—	10	—	—	10	—	—	10	—	—	10	40	40	S	
Halifax	K. Campbell Teacher	Seminar	Hotel	Yes	—	—	3	—	—	3	—	—	10	—	—	5	21	30	I	No reply - local teachers provided reply
Saskatoon	H. Jones Health	Conference	Ad hoc	Yes	—	4	—	4	—	4	—	4	—	4	—	4	24	24	S	Confirmed by local Dept.
Regina	M. Henry	Business	Hotel	Yes	10	10	10	10	10	10	10	10	10	10	10	10	120	140	I	
Sudbury	W. Farley Dentists	Seminar	Ad hoc	Yes	1	4	7	9	6	3	—	—	—	—	5	6	41	50	I	
Vancouver	G. Hunter Finance	Business	Relatives	No	—	—	—	—	—	—	120	120	120	—	—	—	360	Nil	D	One time construction
Fredericton	G. Husack Finance	Seminar	Hotel	Yes	—	—	15	15	15	15	—	—	—	—	—	—	60	120	I	More activity in years ahead
Dauphin	K. Jackson Police Comm	Conference	Hotel	Yes	—	—	8	—	—	8	—	—	8	—	—	8	32	40	I	K. Heaton says time looks about right
				TOTAL ROOM NIGHTS	238	334	359	337	412	361	394	382	265	212	177	74	3 545	3 740		Survey indicates growth should continue after 1978
				MONTHLY % OF TOTAL	6.7	9.4	10.1	9.5	11.6	10.2	11.1	10.8	7.5	6.0	5.0	2.1	100%	Growth 5.5%		

*I = Increase D = Decrease S = Same

Example, cont'd.

An Average Annual Growth Rate of 5% is assumed for government and business travel, with the exception of the first year, for which a Growth Rate of 10% is assumed.

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
3 740	4 114	4 320	4 536	4 762
	10% ↑	5% ↑	5% ↑	5% ↑

(3) Demand by Source

- Government & Business:

  95% of Total Demand — growth rate 5% annually

- Tourist:

  5% of Total Demand — growth rate 2% annually

- Therefore:

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Tourist	197*	201**	205	209	213 room nights

$$\text{*Tourist Demand (Year 1)} = \frac{\text{government \& business demand (year 1)}}{.95} \times .05$$

$$= \frac{3\,740 \times .05}{95}$$

$$= \underline{\underline{197}} \text{ room nights}$$

$$\text{**Tourist Demand (Year 2)} = \text{tourist demand (year 1)} \times 1.02$$

$$= 197 \times 1.02$$

$$= \underline{\underline{201}}$$

(4) Total Demand

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Government & Business	3 740	4 114	4 320	4 536	4 762
Tourist	197	201	205	209	213
Total Demand (room nights)	3 937	4 315	4 525	4 745	4 975

Step 2: Market Share

• *Question III*

"How big is the gap between supply and demand for rooms? How big should my motel be?"

If you can calculate the gap between supply and demand for each of the next five years, it will make it much easier to decide on the size of the motel.

• *Answer Guide*

Follow these steps to find an answer.

(1) Compare the supply and demand (Question I and Question II). Since the supply for each of the next five years is estimated in rooms, convert each estimate to "room nights" using the following approximation formula:

NUMBER OF ROOMS	×	DAYS OPEN	×	OCCUPANCY RATE (say, 70%)	= ROOM NIGHTS

(2) Decide on the size of the motel and the timing for its construction.

• *Example: The Lakeside Hotel and Convention Center*

(1) The gap between demand and supply:

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Supply (Question I)	—	—	—	—	—
Demand (Question II)	3 937	4 315	4 525	4 745	4 975
Gap (room nights)	3 937	4 315	4 525	4 745	4 975

(2) Decide on size of Motel:

DECISION TRIAL TABLE					
NUMBER OF ROOMS	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**
@ 100% OCCUPANCY	11	12	12	13	14
@ 90% OCCUPANCY	12*	13	14	14	15
@ 80% OCCUPANCY	13	15	15	16	17
@ 75% OCCUPANCY	14	16	17	17	18
@ 70% OCCUPANCY	15	17	18	19	19
@ 65% OCCUPANCY	17	18	19	20	21
@ 60% OCCUPANCY	18	20	21	22	23
@ 55% OCCUPANCY	20	21	23	24	25

$$\text{*NUMBER OF ROOMS} = \frac{\text{room nights}}{\text{occupancy rate} \times \text{days open}}$$

$$= \frac{3\,937}{.90 \times 365}$$

$$= 12 \text{ rooms}$$

A decision is made to build a 16-unit motel now. There are reasonable alternatives. Perhaps a 16-unit motel should be built now with an expansion to 20 units or more after the fifth year. The seasonality factor will enter into the decision as well (market analysis from Question II — page A-3). The monthly room night demand will be compared to the chosen room number (e.g. monthly room nights for July = 395 divided by 31 = 13 rooms) to see whether or not a high proportion of the demand can be satisfied. The multiple occupancy factor will also enter into this part of the analysis.

Step 3A: Gross Revenue (Rooms)

• *Question IV*

"What will my Gross Revenue be from the rental of rooms?"

To answer this question, you will have to make some assumptions about Occupancy Rates and Average Room Rates for the model.

• *Answer Guide*

(1) Follow these steps to find an answer.

(2) Determine the Average Room Rate for the motel. This should take multiple occupancy into account. Contact motel operators in similar communities to get some idea of the rates charged for single and multiple occupancy. Adjust this rate for inflation to the opening year of the motel if this is other than Year 1 (see Question VII — page A-9 Situation A).

(3) Calculate the estimated Gross Revenue from the rental of rooms as follows:

OCCUPANCY RATE	×	AVERAGE ROOM RATE	×	NUMBER OF ROOMS	×	DAYS OPEN	=	GROSS REVENUE (ROOMS)

• *Example: The Lakeside Hotel and Convention Center*

(1) Room Occupancy Rates:

$$\text{OCCUPANCY RATE} = \frac{\text{supply \& demand gap in room nights (Year 1)}}{\text{number of rooms x days open}} \times 100$$

$$= \frac{3\,937}{16 \times 365} \times 100$$

$$= \frac{3\,937}{5\,840} \times 100$$

$$= \underline{\underline{67.4\%}}$$

$$\text{OCCUPANCY RATE (Year 2)} = \frac{4\,315}{16 \times 365} \times 100$$

$$= \underline{\underline{73.9\%}}$$

Example, cont'd.

$$\text{OCCUPANCY RATE (Year 3)} = \frac{4\,525}{16 \times 365} \times 100$$

$$= 77.5\%$$

$$\text{OCCUPANCY RATE (Year 4)} = \frac{4\,745}{16 \times 36} \times 100$$

$$= 81.3\%$$

$$\text{OCCUPANCY RATE (Year 5)} = \frac{4\,975}{16 \times 100} \times 100$$

$$= 85.2\%$$

(2) Average Room Rate

The market survey indicates the highest peak load month is May, with 412 room nights. Making the assumption that demand is constant throughout the week (this may not be so, considering the high proportion of government and business travel), this converts to 13 rooms (412 divided by 31 days). If growth in demand is 5% annually, the load for May in Year 5 will be 502 room nights or 16 rooms. The same calculation for July, August, and June (the peak load months next in line) is 16, 15 and 14 rooms respectively. In the remaining months, the motel capacity will satisfy demand in all five years. This leads to an assumption that there will be low multiple occupancy.

CAUTION: If most demand occurs from Monday to Friday, the picture changes drastically — e.g. rather than 13 rooms for May, it would be 18 rooms (412 divided by 13 days).

After checking with motel operators in similar circumstances in other communities, a decision is made to use an Average Room Rate of $30.00.

(3) Estimated Gross Revenue From Rooms:

Year 1: 67.4% × $30 × 16 rooms × 365 days = $118 100*
Year 2: 73.9% × $30 × 16 rooms × 365 days = $129 500*
Year 3: 77.5% × $30 × 16 rooms × 365 days = $135 800*
Year 4: 81.3% × $30 × 16 rooms × 365 days = $142 400*
Year 5: 85.2% × $30 × 16 rooms × 365 days = $149 300*

*Rounded to nearest $100.

NOTE: Although a constant average room rate of $30 may seem unrealistic over a five year period, it is kept constant so that the calculation is conservative.

From this point on, the analysis for Situation B — the "Gross Revenue (Food)" (page A-21) and "Total Gross Revenue" (page A-24) divisions — applies to Situation A as well.

Step 3B: Gross Revenue (Food)

• *Question V*

"What will my Gross Revenue be from the sale of food?"

If you don't plan a special market study, a number of assumptions will be necessary to estimate Gross Revenue from the sale of food.

• *Answer Guide*

Follow these steps to find an answer.

(1) Estimate the sale of food to guests of the motel as follows:

Guest Revenue (food) = average price of meal × room occupancy rate × number of rooms × multiple occupancy factor × percentage of guests using motel for meals × days open

(2) Estimate the sale of food to non-residents of the motel.

(3) Find Gross Revenue from food by adding 1 and 2 above.

(4) Check to see if the capacity of the restaurant is sufficient to yield the above revenue estimates.

• *Example: The Lakeside Hotel and Convention Center*

(1) Guest Revenue (Food):

- BREAKFAST REVENUE (Year 1) = $1.75 × 67.4% × 16 rooms × 1.25 people × 90% × 365 days

  = $7 749.00

- LUNCH REVENUE (Year 1) = $2.50 × 67.4% × 16 rooms × 1.25 people × 90% × 365 days

  = $11 070.00

- DINNER REVENUE (Year 1) = $4.50 × 67.4% × 16 rooms × 1.25 people × 90% × 365 days

  = $19 927.00

- GUEST REVENUE — Food (Year 1) = $38 746.00

NOTE: Assuming that the same number of guests will take each meal of the day may be unrealistic if competitive facilities exist.

Similar calculations for the remaining years:

- GUEST REVENUE — Food (Year 2) = $8 494 + $12 134 + $21 841

  = $42 469.00

- GUEST REVENUE — Food (Year 3) = $8 903 + $12 719 + $22 894

  = $44 516.00

- GUEST REVENUE — Food (Year 4) = $9 345 + $13 350 + $24 031

  = $46 725.00

- GUEST REVENUE — Food (Year 5) = $9 797 + $13 997 + $25 195

  = $48 989.00

Example, cont'd.

(2) Non-Resident Revenue (Food):

Assumption: Non-resident revenue from food is 10% of resident revenue from food.

- NON-RESIDENT REVENUE — Food (Year 1) = 10% × $38 746
  = $3 875.00
- NON-RESIDENT REVENUE — Food (Year 2) = 10% × $42 469
  = $4 247.00
- NON-RESIDENT REVENUE — Food (Year 3) = 10% × $44 516
  = $4 452.00
- NON-RESIDENT REVENUE — Food (Year 4) = 10% × $46 726
  = $4 673.00
- NON-RESIDENT REVENUE — Food (Year 5) = 10% × $48 989
  = $4 899.00

(3) Gross Revenue (Food):

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Guest Revenue (food)	$38 746	$42 469	$44 516	$46 726	$48 989
Non-Resident Revenue (food)	3 875	4 247	4 452	4 673	4 899
Gross Revenue (food)*	$42 600	$46 700	$49 000	$51 400	$53 900

*Rounded to nearest $100.

(4) Capacity Check:

Guests for each of breakfast, lunch, and dinner:

number of rooms × multiple occupancy factor × room occupancy rate × percentage of guests using restaurant

16 rooms × 1.25 people × 67.4% × 90% = 12.13 people

- Non-residents for each of breakfast, lunch and dinner:

  10% × 12.13 people = 1.21 people

- Total number of people for each of breakfast, lunch and dinner:

  12.13 + 1.21 = 13.3 people

Approximately 13 people will be present for breakfast, lunch and dinner if the above revenue is to be generated. This should give you some ideas for planning the number of seats in the restaurant. Remember that if the number of people is high (say 40 people) more than one sitting for each meal is possible. This will reduce the capacity requirement.

Step 3C: Total Gross Revenue

• *Question VI*

"What will my total Gross Revenue be from the overall operation?"

There may be revenue other than from rooms and food operations (e.g. telephone charges). In gathering the revenue from all sources, additional estimates must be made for these.

• *Answer Guide*

Follow these steps to find an answer.

(1) Total the Gross Revenue from rooms and the Gross Revenue from food (as well as additional revenue sources if applicable) to determine Total Gross Revenue for each of the five years.

(2) Make the first entry to the worksheet on page D-6.

• *Example: The Lakeside Hotel and Convention Center*

(1) Total Gross Revenue

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Gross Revenue (rooms)	$118 100	$129 500	$135 800	$142 400	$149 300
Gross Revenue (food)	42 600	46 700	49 000	51 400	53 900
Other	—	—	—	—	—
Total Gross Revenue	$160 700	$176 200	$184 800	$193 800	$203 200

(2) Worksheet Entry

Now turn to the worksheet example for The Lakeside Hotel and Convention Center (page D-6) and see that "line 1 — Total Gross Revenue" has been completed. Keep the example folded out before you so that you can continue referring to it. If you are presently working on your own analysis, enter "line 1 — Total Gross Revenue" on the blank worksheet on page D-7.

Section A. Summary

• *Summary*

Now that you have completed Section A of the study, you should summarize your answers in the form of an overall presentation. You will have to convince many people (e.g. bankers, government authorities) that your ideas are sound. You can start doing this by preparing a good presentation.

The example for The Lakeside Hotel and Convention Centre has been completed on the following pages. Blank summary sheets are provided in the Appendix to help you to prepare your own summary.

The analysis for the venture is continued in "Section B OPERATING FEASIBILITY" on page B-1.

INTRODUCTION

The Lakeside Hotel and Convention Centre Limited is planning to establish a sixteen-unit motel and restaurant facility. At present no such facilities exist in the area. However, our research indicates that a motel of the proposed size can be supported. The purpose of this analysis is to examine whether this new venture is workable and profitable.

SECTION A
MARKET FEASIBILITY

1. TOTAL MARKET POTENTIAL (Page A-16)

   A market analysis has been prepared which estimates the actual number of nights that government and business travelers routinely spend in this area. This information was obtained through letters and interviews with these and other people. After adding a factor for tourist demand, the Total Market Potential in room night demand for the next five years in indicated as follows:

MARKET POTENTIAL (ROOM NIGHTS)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Government and Business	3 740	4 114	4 320	4 536	4 762
Tourist	197	201	205	209	213
Total Demand (room nights)	3 937	4 315	4 525	5 745	4 975

2. MARKET SHARE (Page A-18)

   Our investigation indicates that no competitive facilities are currently planned. The demand levels indicated no competitive facilities are likely to be developed if the proposed 16-unit motel is operated successfully. Therefore, we have assumed a 100% Market Share in selecting our targets.

3. VALUE OF SALES (Page A-24)

   Based on the above and reasonable estimates of room occupancy rates, average room rates, and average meal prices, we have estimated Gross Revenue over the next five years as follows:

TOTAL GROSS REVENUE ESTIMATE

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Room Sales	$118 100	$129 500	$135 800	$142 400	$149 300
Food Sales	42 600	46 700	49 000	51 400	53 900
Total	$160 700	$176 200	$184 800	$193 800	$203 200

SECTION B
OPERATING FEASIBILITY

Step 4: Building, Equipment, and Furnishings Requirements

• *Question I*

"What type of building, equipment and furnishings will I need?"

Now that you know the size requirements for the motel, it is time to decide on the building, and requirements for equipment and furnishings.

• *Answer Guide*

Through interviews and correspondence with contractors, realtors and government authorities that may be providing assistance, obtain the following information:

- cost of land and acquisition
- cost of site preparation
- cost of building construction
- cost of equipment and furnishings

• *Example: The Lakeside Hotel and Convention Center*

A plan is chosen and the following information is accumulated from contractors, suppliers, realtors, and government authorities:

Land and Building		
Land and acquisition costs	$3 000	
Site preparation (clearing, excavating, backfill, landscaping	5 000	
Building (720 square meters) FOB plant	230 000	
Transportation and handling (truck and barge)	35 000	
Site work (erection, hook-ups)	15 000	
Building foundation	21 000	
Professional fees	6 000	
Insurance	5 000	
		$320 000
Equipment and Furnishings		
Motel unit (beds, box springs, mattresses, mirrors, luggage stand, lamps, drapes, etc.) @ $1 000 per unit for 16 units	$16 000	
Restaurant (chairs, tables, stools, coffee bar, display cabinet, etc.)	2 500	
Kitchen (refrigerator, dishwasher, range, fryer, exhaust canopy, coffee maker, hot food table, serving counter, kitchen smallware, china, glasses, cutlery, etc.)	8 500	
		$27 000
Other Equipment		
Washer and dryer	$1 000	
Office furniture	700	
Safe	300	
Vehicle	4 000	
		$6 000
Total Capital Costs		$353 000

Step 5: Direct Departmental Expenses

• *Question II*

"How much will it cost me to run the room operation and the restaurant?"

• *Answer Guide*

Follow these steps to find an answer.

(1) Estimate the costs of running the room operation. This will include housekeeping wages, laundry costs, miscellaneous supplies, and the replacement of linen.

(2) Estimate the costs of the restaurant. This will include the wages of restaurant staff, miscellaneous supplies, and the cost of food. Food costs will likely amount to 35% to 40% of food sales.

(3) Total 1 and 2 above to find the "Cost of Sales" in Year 1. Calculate this as a percentage of sales and use this percentage to estimate the Cost of Sales in subsequent years.

(4) Make an entry to the worksheet on page D-6.

• *Example: The Lakeside Hotel and Convention Center*

(1) Room Expenses:

Housekeeping wages (2 full-time persons)	$10 000
Laundry	2 200
Miscellaneous supplies and replacement	3 500
	$15 700

(2) Restaurant Expenses

Food costs (35% of food sales for 35% × $42 600	$14 900
Wages (1 cook, 2 waitresses)	18 000
Miscellaneous supplies and replacement	2 500
	$35 400

(3) Cost of Sales:

Cost of Sales (Year 1) = $15 700 + $35 400
= $51 100

$$\text{PERCENTAGE OF SALES FACTOR} = \frac{\text{Cost of Sales}}{\text{Total Gross Revenue (Section A — Question VI)}} \times 100$$

$$= \frac{\$51\,100}{\$160\,700} \times 100$$

= 31.8%

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Total Gross Revenue	$160 700	$176 200	$184 200	$193 800	$203 200
Times: Percentage of Sales Factor	31.8%	31.8%	31.8%	31.8%	31.8%
Cost of Sales	$51 100	$56 000	$58 600	$61 600	$64 600

(4) Worksheet Entry

Now turn to the worksheet example for The Lakeside Hotel and Convention Center (page D-6) and see that "line 2 — Cost of Sales" has been completed. If you are presently working on your own analysis, enter "line 2 — Cost of Sales" on the worksheet on page D-7.

Step 6: Calculation of Cash Operating Expenses

• *Question III*

"What cash expenses will I have to meet other than those already worked out?"

These will include salary and wage costs other than those already determined for rooms and the restaurant, occupancy costs, and other general operating expenses. Interest costs and depreciation expense are left until later.

• *Answer Guide*

Follow these steps to find an answer.

(1) List every cash operating expense that is likely to occur. Classify these expenses into three categories and summarize them on an annual basis:

- salary and wages
- occupancy
- general operating

(2) Make an entry to the worksheet on page D-6.

• *Example: The Lakeside Hotel and Convention Center*

(1) Expenses by Classification:

Salary and Wages		
Salary (owner)	$12 000	
Wages (front desk and bookkeeper)	5 000	
		$17 000
Occupancy		
Utilities (power, telephone, water)	$9 000	
Gas	2 000	
Business tax	2 000	
Repairs and maintenance	2 000	
		$15 000
General Operating		
Advertising	$1 500	
Insurance	5 000	
Legal and audit	2 000	
Office supplies	500	
Automobile operating	1 500	
Business travel	1 000	
Other	1 500	
		$13 000
Total Cash Operating Expenses		$45 000

NOTE: (1) Wages for the front desk are included here, whereas they might have been included earlier with room expenses as a Cost of Sales. In this example, the bookkeeper and front desk clerk are the same person.

(2) While each amount used for the above cash operating expenses are estimates, each should be based on an actual analysis of the particular expense (i.e. insurance premiums for insurance).

(2) Worksheet Entry

Now turn to the worksheet example for The Lakeside Hotel and Convention Center (page D-6) and see that "line 4 — Cash Operating Expenses" has been completed. As determined above, Cash Operating Expenses in Year 1 are $45 000. Notice that in the worksheet example the amount is increased in subsequent years so that it remains a constant percentage of sales. This is a reasonable assumption. If you are presently working on your own analysis, enter "line 4 — Cash Operating Expenses" on the worksheet on page D-7.

Step 7: Budgeting for Other Expenses

• *Question IV*

"What other expenses do I have to allow for?" "Will I have to borrow money?"

In addition to expenses for rooms and the restaurant, and operating expenses for wages and salary, occupancy and so on, allowance must be made for Interest and Depreciation Expense.

Interest Expense represents the cost of borrowing and although it is a cash expense similar to the others already considered, it has been left until now for special treatment. Depreciation Expense represents the annual cost of using fixed assets such as the building, equipment and furnishings.

• *Answer Guide*

Follow these steps to find an answer.

Interest Expense Calculation

(1) You have already determined the cost of land, building construction, equipment and furnishings (Step 4). You will need these figures now.

(2) Estimate the value of the initial investment in inventory.

(3) Estimate the Value of Sales for which credit will be given (i.e. accounts receivable).

(4) Total 1, 2 and 3 to arrive at Total Capital Requirements.

(5) Estimate the amount of personal money you plan to invest in the venture. Include grants that you expect to receive.

(6) Estimate the residual amount of borrowing needed and state the sources from which it will be raised.

(7) Work out the Interest Cost on the amount of borrowing. Interest Cost is generally the amount you are required to pay the bank or lending agency. To arrive at the Annual Repayment, refer to the Table of Level Factors, look up the relevant factor, and divide the total sum of the loan by the factor.

Level Factor Tables

Interest Rate

NO. YEARS	6%	8%	10%	12%	14%	16%	18%
5	4.212	3.993	3.791	3.605	3.433	3.274	3.127
6	4.917	4.623	4.355	4.111	3.889	3.685	3.498
7	5.582	5.206	4.868	4.564	4.288	4.039	3.812
8	6.210	5.747	5.335	4.968	4.639	4.334	4.078
9	6.802	6.247	5.759	5.328	4.946	4.607	4.303
10	7.360	6.710	6.145	5.650	5.216	4.833	4.494
15	9.712	8.559	7.606	6.811	6.142	5.575	5.092
20	11.470	9.818	8.514	7.469	6.623	5.929	5.353
25	12.783	10.675	9.077	7.843	6.873	6.097	5.407
30	13.765	11.258	9.427	8.035	7.003	6.177	5.517

e.g. : Assume a 5-year $60 000 loan at 12% per annum

Level Factor = 3.605

$$\text{Annual Payment} = \frac{\$60\,000}{3.605} = \underline{\underline{\$16\,644}}$$

(8) Make an entry on the worksheet on page D-6.

• *Example: The Lakeside Hotel and Convention Center*

(1) Cost of Fixed Assets: (Step 4)

Land and building	$320 000
Equipment and furnishings	33 000
Total	$353 000

(2) Initial Inventory Investment:

Start-up supplies (menus, napkins, room soap, matches, stationery, housekeeping supplies, bed sheets and pillow cases, bed pads, towels and face cloths, blankets)	$6 000
Food inventory (10 months' supply of non-perishable items and 1 month's supply of perishable and frozen items — approximately equal to 6 months' supply) 6/12 × $14 900* =	7 500
Total	$13 500

*food cost (Step 5, Question II)

Example, cont'd.

(3) Accounts Receivable

Only credit cards and cash will be accepted. However, it will be impossible to avoid granting credit altogether. It is estimated that 10% of sales will be made on a credit basis and that terms will be 30 days, i.e. all customers pay in 30 days. This means that approximately one month's credit sales must be financed.

- Value of 1 month's sales:

$$\frac{\text{Total Gross Revenue}}{12} = \frac{\$160\,700}{12} = \$13\,400$$

- Value of 1 month's credit sales:

$10\% \times \$13\,400 = \underline{\$1\,340}$ (say \$1 300)

(4) Summary of Capital Requirements

1. Cost of Fixed Assets	\$353 000
2. Initial Inventory Investment	13 500
3. Allowance for Accounts Receivable	1 300
	\$367 800

(5) Personal Investment and Grants

The plan is to invest \$70 000 from personal resources and \$147 800 from the resources of five individuals.

(6) Estimated Borrowing:

Total Capital Requirements	\$367 800
Less: Personal Investment	70 000
Less: Investment of Others	147 800
Equals: Amount to be Borrowed	\$150 000

The plan is to borrow: (a) \$125 000 for 5 years @ 12% from a trust company, and

(b) \$25 000 (or an amount as required after review) on a demand loan from a bank @ 12%

NOTE: (1) The above loan is divided between term (\$125 000) and working capital (\$25 000) lending.

(7) Interest Cost on Borrowing

The Annual Repayment on the \$125 000 loan for 5 years @ 12% is:

$$\frac{\text{Amount of Loan}}{\text{Level Factor}} = \frac{\$125\,000}{3.605} = \underline{\$34\,674^*}$$

*see table in answer guide

Example, cont'd.

REPAYMENT SCHEDULE

YEAR	Column 1 PAYMENT	Column 2 INTEREST PORTION	Column 3 REPAYMENT PORTION	Column 4 BALANCE
				$125 000
1	$34 674	$15 000	$19 674	$105 326
2	34 674	12 639	22 035	83 291
3	34 674	9 995	24 679	58 612
4	34 674	7 033	27 641	30 971
5	34 674	3 717	30 957	0

This column to "line 5 — Interest — Term Loan" on worksheet example (round to nearest $100).

This column to "line 14 — Repayment on Principal" on worksheet example. (round to nearest $100).

- Column 1 is the Annual Payment.
- Column 2 is the Interest Portion of the payment calculated as follows:

OUTSTANDING BALANCE	×	INTEREST RATE	=	INTEREST PAYMENT

Example 1: $125 000 × 12% = $15 000
Example 2: $105 326 × 12% = $12 639

- Column 3 is the Loan Repayment Portion. It reduces the amount of the loan balance.

e.g.

Outstanding Balance	$125 000
Less: Principal Repayment	19 674
New Balance (Column 4)	$105 326

(8) Worksheet Entry

Several lines can now be entered on the worksheet. "Line 5 — Interest — Term Loan" and "line 14 — Repayment of Principal" are entered directly from the Repayment Schedule as indicated above. "Line 15 — (Demand Loan) Bank Balance" can also be entered as follows:

(a) "Line 15 — (Demand Loan) Bank Balance" entered at $25 000 as determined in (6) above. Enter this amount for the first year only.

(b) "Line 6 — (Interest — Demand Loan)" is calculated using the following formula:

DEMAND LOAN	×	ANNUAL INTEREST RATE	=	DEMAND LOAN INTEREST
$25 000	×	12%	=	$3 000

Enter this amount for the first year only. In future years calculate "Interest — Demand Loan" (line 6) at 12% of "(Demand Loan) Bank Balance (line 15)."

Making Allowance for Depreciation

An allowance must be made for the cost of using fixed assets such as the building, equipment and furnishings. An allowance is made at a different rate for various classifications of fixed assets (e.g. 20%, 25%, etc.) which is applied to the undepreciated value of the item.

Use the following procedure to calculate Depreciation Expense.

(1) Set out the cost of all classifications of fixed assets.

(2) Contact the taxation authority to determine the rate (percentage) that is allowed for depreciation on each classification.

(3) Prepare a Depreciation Schedule as below:

DEPRECIATION SCHEDULE		
YEAR	DEPRECIATION EXPENSE	BALANCE TO BE DEPRECIATED
1		
2		
3		
4		
5		

(4) Make an entry to the worksheet on page D-6.

• *Example: The Lakeside Hotel and Convention Center*

(1) Cost of Fixed Assets **(2) Depreciatiation Rate**

ITEM	COST		RATE*		TOTAL
Building** (Less Land)	$317 000	x	5%	=	$15 850
Equipment and Furnishings (Less Vehicle)	29 000	x	20%	=	5 800
Véhicule	4 000	x	30%	=	1 200
	$350 000				$22 850

*These depreciation rates are given as examples only.
**Step 4, Question I.

$$\text{Average Depreciation Rate} = \frac{\$22\,850}{\$350\,000} \times 100 = 6.5\%$$

(3) Depreciation Schedule:

Col. 1 YEAR	Col. 2 DEPRECIATION EXPENSE	Col.3 BALANCE TO BE DEPRECIATED
		$350 000
1	$22 750	327 250
2	21 271	305 979
3	19 889	286 090
4	18 596	267 494
5	17 387	250 107

This column to "line 7" and "line 12 — Depreciation" on worksheet example. (round to nearest $100)

- Column 2 is the Depreciation Expense — calculated by multiplying the depreciation rate by the balance:

  e.g. 6.5% x $350 000 = $22 750

- Column 3 is the New Balance:

  e.g. $350 000 less $22 750 = $327 250

(4) Worksheet Entry

As indicated above, two more lines are entered to the worksheet example, "line 7 — Depreciation" and "line 12 — Depreciation". If you are presently working on your own analysis, enter these lines on the blank worksheet on page D-7.

Section B. Summary

• *Summary*

You have now completed Section B of the study and, once again, your answers should be summarized in an overall presentation. The presentation example for The Lakeside Hotel and Convention Center continues on the following pages. Remember, blank format sheets are provided in the Appendix to help you to prepare your own summary.

• *Sample Presentation: The Lakeside Hotel and Convention Center*

Section B
OPERATING FEASIBILITY

Set out below are the following schedules:

(a) Building, Equipment, and Furnishings Schedule
(b) Cost of Goods Sold Schedule
(c) Cash Operating Expense Schedule
(d) Capital Costs of Fixed Assets Schedule
(e) Initial Working Capital Requirements Schedule
(f) Principal and Interest Schedule
(g) Depreciation Schedule

(a) BUILDING, EQUIPMENT AND FURNISHING SCHEDULE: (Page B-2)

We have determined that the following is required:

LAND AND BUILDING
Land
Building (720 square meters) including set up

EQUIPMENT AND FURNISHINGS
Furnishings for 16 motel units
Furnishings for restaurant
Kitchen equipment
Other equipment (washer and dryer, office furniture, vehicle, etc.)

(b) COST OF GOODS SOLD SCHEDULE: (Page B-4)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Total Gross Revenue	$160 700	$176 200	$184 200	$193 800	$203 200
Cost of Sales @	31.8%	31.8%	31.8%	31.8%	31.8%
Cost of Sales	$ 51 100	$ 56 000	$ 58 600	$ 61 600	$ 64 600

(c) CASH OPERATING EXPENSE SCHEDULE: (Page B-6)

EXPENSE		AMOUNT
Salary and Wages		
Salary (owner)	$12 000	
Wages (office)	5 000	
Total Salary and Wage Expenses		$17 000
Occupancy		
Utilities (power, telephone, water)	$ 9 000	
Gas	2 000	
Business tax	2 000	
Repairs and maintenance	2 000	
Total Occupancy Expenses		$15 000
General Operating		
Advertising	$1 500	
Insurance	5 000	
Legal and audit	2 000	
Office supplies	500	
Automobile operating	1 500	
Business travel	1 000	
Other	1 500	
Total General Operating Expenses		$13 000
Total Cash Operating Expenses		$45 000

(d) CAPITAL COSTS OF FIXED ASSETS SCHEDULE: (Page B-8)

FIXED ASSETS	AMOUNT
Land and building	$320 000
Equipment and Furnishings	33 000
	$353 000

(e) INITIAL WORKING CAPITAL REQUIREMENTS SCHEDULE: (Page B-8)

CATEGORY	AMOUNT
Inventory	$13 500
Accounts receivable	1 300
	$14 800

(f) PRINCIPAL AND INTEREST SCHEDULE: (Page B-10)

YEAR	PAYMENT	INTEREST PORTION	PRINCIPAL REPAYMENT	BALANCE OF PRINCIPAL
				$125 000
1	$34 674	$15 000	$19 674	105 326
2	34 674	12 639	22 035	83 291
3	34 674	9 995	24 679	58 612
4	34 674	7 033	27 641	30 971
5	34 674	3 717	30 957	0

(g) DEPRECIATION SCHEDULE*: (Page B-11)

YEAR	DEPRECIATION EXPENSE	BALANCE TO BE DEPRECIATED
		$350 000
1	$22 750	327 250
2	21 271	305 979
3	19 889	286 090
4	18 596	267 494
5	17 387	250 107

*6.5% depreciation rate assumed.

Based on the above schedules, we have prepared a pro forma profit and loss together with a cash flow schedule for the years 1989 to 1993 inclusive.

SECTION C
FINANCIAL FEASIBILITY

Step 8: Sales Less Expenses

• *Question I*

"After paying all expenses, how much do I make?"

In seeking an answer to this question, you are really trying to determine whether or not the venture is profitable. The amount that indicates profitability is "Net Profit after Taxes". If this amount is positive, the venture is profitable.

• *Answer Guide*

Follow these steps to find an answer.

(1) Review your worksheet to ensure that all the figures are enterted on the correct lines.

(2) Calculate the following for the first year on the worksheet:

(a) Gross Profit (Total Gross Revenue less Cost of Sales)

(b) Net Profit before Taxes (Gross Profit less Total Expenses)

(c) Income Tax (Net Profit before Taxes times Tax Rate): Call the Taxation Office and find out what tax rate applies at this level of profits.

(d) Net Profit after Taxes (Net Profit before Taxes less Income Tax)

(e) Cash Flow from Operations (Net Profit after Taxes plus Depreciation)

(f) Actual Cash Flow (Cash Flow from Operations less Repayment of Principal and Demand Loan).

(3) If the Actual Cash Flow is negative (e.g. deficit), this figure is the amount of the demand loan you will need at the start of the next year (e.g. follow the arrow on the worksheet). Calculate Interest Expense on the demand loan for the next year and enter the amount on "line 6 — Interest — Demand Loan" for that year.

(4) Repeat (2) and (3) above for the subsequent years.

• *Example: The Lakeside Hotel and Convention Center*

The worksheet example is now complete. "Net Profit after Taxes" is positive in all years. Therefore, the venture is profitable.

• *Sample Presentation: The Lakeside Hotel and Convention Center*

Section C
FINANCIAL FEASIBILITY

PRO FORMAT PROFIT AND LOSS, AND CASH FLOW SCHEDULE 1989 TO 1993

	1989	1990	1991	1992	1993
1. Total Gross Revenue*	$160 700	$176 200	$184 200	$193 800	$203 200
2. Cost of Sales*	51 100	56 000	58 600	61 600	64 600
3. Gross Profit	600	120 200	125 600	132 200	138 600
4. Cash Operating Expenses	45 000	49 300	51 600	54 300	56 900
5. Interest—Term Loan	15 000	12 600	10 000	7 000	3 700
6. Interest—Demand Loan	3 000	500	0	0	0
7. Depreciation	22 900	21 300	19 900	18 600	17 400
8. Total Expenses	85 800	83 700	81 500	79 900	78 000
9. Net Profit Before Taxes	23 800	36 500	44 100	52 300	60 600
10. Income Taxes (@ 25%)**	5 950	9 125	11 025	13 075	15 150
11. Net Profit after Taxes	17 850	27 375	33 075	39 225	45 450
12. Depreciation	22 800	21 300	19 900	18 600	17 400
13. Cash Flow from Operations	40 650	48 675	52 975	57 825	62 850
14. Repayment of Principal	(19 650)	(22 000)	(24 700)	(27 600)	(31 000)
15. (Demand Loan)/Bank Balance	(25 000)	(4 050)	22 625	50 900	81 125
16. Actual Cash Flow	(4 050)	22 625	50 900	81 125	112 975

*Rooms and restaurant.
**Tax rate of 25% assumed.

SECTION D
VENTURE FEASIBILITY

Step 9: Return on Investment

• *Question I*

"Is it worthwhile?"

Now that you have determined sales, costs, and profits, you are in a position to take a hard look at the venture. There are two things in particular that you should look for:

(a) the minimum value of Total Gross Revenue you will require to cover your expenses. This will give you an indication of how much risk is involved in the venture (Break-Even Sales).

(b) the rate of return on your investment (Return on Investment).

• *Answer Guide*

Follow these steps to find an answer.

(1) Calculate the Gross Profit percentage (subtract Cost of Sales percentage from 100%).

(2) Find Total Expenses (Cash Operating Expenses, Interest and Depreciation).

(3) Use the following formula:

$$\text{BREAK-EVEN SALES} = \frac{\text{total expenses}}{\text{gross profit percentage}}$$

(4) Express "Net Profit after Taxes" as a percentage of the investment (the money invested inthe business) to arrive at an approximate Return on Investment.

$$\text{RETURN ON INVESTMENT} = \frac{\text{Net Profit After Taxes}}{\text{Personal or Other Investment*}}$$

*e.g., assets, shareholders' bans, and government contributions.

• *Example: The Lakeside Hotel and Convention Center*

(1) Gross Profit Percentage = 100% — 31.8% = 68.2%

(2) Total Expenses = $85 800

(3) Break-Even Sales = $\frac{\$85\,800}{.682}$ = $125 800

(4) Return on Investment = $\frac{\$17\,850}{\$217\,800} \times 100$ = 8.2%

SCHEDULE FOR RETURN ON INVESTMENT

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Net Profit After Taxes	$ 17 850	$ 27 375	$ 33 075	$ 39 225	$ 45 450
Investment*	217 800	235 650	263 025	296 100	335 325
Return on Investment	8.2%	11.6%	12.6%	13.2%	13.6%

*Net Profit after Taxes added to actual investment to arrive at investment for the next year:

e.g. $17 850 + $217 800 = $235 650
$27 375 + $235 650 = $263 025
etc.

Step 10: Final Decision

• *Question II*

"Should I go ahead with the venture?"

The decision on whether to go ahead with the venture is the final and most important decision you will have to make.

• *Answer Guide*

Follow these steps to make a decision.

(1) Review the information on (a) Break-Even Sales and (b) Return on Investment.

(2) Compare Break-Even Sales with the Total Gross Revenue Target.

(3) Compare the Return on Investment figure with the return you would receive from a fixed deposit.

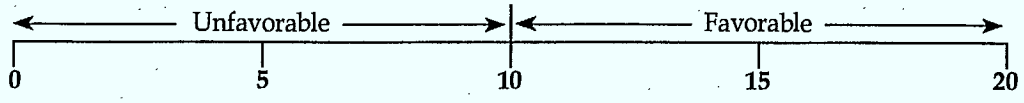
(4) Make the decisions as follows:

From the statements below, select the one that applies:

		SCORE
☐	Total Sales Target is greater than Break-Even Sales by at least 5%.	10
☐	Total Sales Target is greater than Break-Even Sales by less than 5%.	5
☐	Total Sales Target is less than Break-Even Sales.	0
☐	Return on Investment is at least 10 percentage points more than the rate of interest you would get on a fixed/term deposit.	10
☐	Return on Investment is between 5 and 10 percentage points more than the rate of interest you would get on a fixed/term deposit.	8
☐	Return on Investment is between 1 and 5 percentage points more than the rate of interest you would get on a fixed/term deposit.	5
☐	Return on Investment is less than the rate of interest you would get on a fixed/term deposit.	0

(5) Total the score.

(6) Check the score on the scale below:



• *Example: The Lakeside Hotel and Convention Center*

Total Gross Revenue Target		$160 700
Break-Even Sales		125 800
Difference		$ 34 900
Percentage Difference =	$\frac{\$34\,900}{\$160\,700} \times 100$	= 21.7%
Score		10 points
Return on Investment		11.8% (average for 5 years)
Rate of Interest on Fixed/Term Deposit		10.0%
Difference		1.8%
Score		5 points
Total Score		15 points

DECISION---------GO AHEAD!

Section D. Summary

• *Summary*

As in Sections A, B and C, answer the questions in the form of a summary presentation. Use the completed example as your guide.

• *Sample Presentation: The Lakeside Hotel and Convention Center*

Section D
VENTURE FEASIBILITY

The planned Total Gross Revenue of $160 000 is 21.7% higher than the Total Gross Revenue of $125 800 needed to cover operating expenses. A reasonable safety margin has therefore been allowed.

An average Return on Investment of 8.4% has been estimated for the project. This has been calculated as a return on personal investment as well as on grants.

After studying this information, it is apparent that the venture is feasible.

USING THE WORKSHEET

When you finish:

Section A MARKET FEASIBILITY	COMPLETE LINE NUMBER
Step 1 — Estimate Total Market Potential	1
Step 2 — Estimate Market Share	
Step 3 — Estimate Gross Revenue	

Section B OPERATING FEASIBILITY	
Step 4 — Estimate Building, Equipment and Furnishings Requirements	2
Step 5 — Estimate Direct Departmental Expenses	
Step 6 — Estimate Cash Operating Expenses	4
Step 7 — Estimate Other Expenses	5 6 7 8 12 14 15

Section C FINANCIAL FEASIBILITY	
Step 8 — Complete Worksheet	3 9 10 11 13 16

WORKSHEET

PROFIT AND LOSS AND CASH FLOW

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
(1) Total Gross Revenue*	$160 700	$176 200	$184 200	$193 800	$203 200
(2) Cost of Sales*	51 100	56 000	58 600	61 600	64 600
(3) Gross Profit	109 600	120 200	125 600	132 200	138 600
(4) Cash Operating Expenses	45 000	49 300	51 600	54 300	56 900
(5) Interest—Term Loan	15 000	12 600	10 000	7 000	3 700
(6) Interest—Demand Loan	3 000	500	0	0	0
(7) Depreciation	22 900	21 300	19 900	18 600	17 400
(8) Total Expenses	85 800	83 700	81 500	79 900	78 000
(9) Net Profit before Taxes	23 800	36 500	44 100	52 300	60 600
(10) Income Taxes (@ 25%)	5 950	9 125	11 025	13 075	15 150
(11) Net Profit after Taxes	17 850	27 375	33 075	39 225	45 450
(12) Depreciation	22 800	21 300	19 900	18 600	17 400
(13) Cash Flow from Operations	40 650	48 675	52 975	57 825	62 850
(14) Repayment of Principal	(19 650)	(22 000)	(24 700)	(27 600)	(31 000)
(15) (Demand Loan)/Bank Balance	(25 000)	(4 050)	22 625	50 900	81 125
(16) Actual Cash Flow	(4 050)	22 625	50 900	81 125	112 975

*Rooms and restaurant

USING THE WORKSHEET

When you finish:

Section A MARKET FEASIBILITY	COMPLETE LINE NUMBER
Step 1 — Estimate Total Market Potential	1
Step 2 — Estimate Market Share	
Step 3 — Estimate Gross Revenue	

Section B OPERATING FEASIBILITY	
Step 4 — Estimate Building, Equipment and Furnishings Requirements	2
Step 5 — Estimate Direct Departmental Expenses	
Step 6 — Estimate Cash Operating Expenses	4
Step 7 — Estimate Other Expenses	5 6 7 8 12 14 15

Section C FINANCIAL FEASIBILITY	
Step 8 — Complete Worksheet	3 9 10 11 13 16

WORKSHEET

PROFIT AND LOSS AND CASH FLOW	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
(1) Total Gross Revenue*					
(2) Cost of Sales*					
(3) Gross Profit					
(4) Cash Operating Expenses					
(5) Interest—Term Loan					
(6) Interest—Demand Loan					
(7) Depreciation					
(8) Total Expenses					
(9) Net Profit before Taxes					
(10) Income Taxes (@ __%)					
(11) Net Profit after Taxes					
(12) Depreciation					
(13) Cash Flow from Operations					
(14) Repayment of Principal	( )	( )	( )	( )	( )
(15) (Demand Loan)/Bank Balance	( )	( )			
(16) Actual Cash Flow	( )				

*Rooms and restaurant

APPENDIX I
PRESENTATION FORMAT SHEETS

- *Presentation Format Sheets*

AN ANALYSIS TO DETERMINE
THE FEASIBILITY OF ESTABLISHING
A _____ VENTURE

DATE: _____

Page ____

INTRODUCTION

Section A

MARKET FEASIBILITY

1. TOTAL MARKET POTENTIAL

Page ____

2. MARKET SHARE

3. VALUE OF SALES

Page ____

Section B
OPERATING FEASIBILITY

Set out below are the following schedules:

(a) Building, Equipment, and Furnishings Schedule

(b) Cost of Goods Sold Schedule

(c) Cash Operating Expense Schedule

(d) Capital Costs of Fixed Assets Schedule

(e) Initial Working Capital Requirements Schedule

(f) Principal and Interest Schedule

(g) Depreciation Schedule

(a) BUILDING, EQUIPMENT, AND FURNISHINGS SCHEDULE

Page ____

(b) COST OF FOODS SOLD SCHEDULE

(c) CASH OPERATING EXPENSE SCHEDULE

Page ____

(d) CAPITAL COSTS OF FIXED ASSETS SCHEDULE:

FIXED ASSET	AMOUNT

Page ____

(e) INITIAL WORKING CAPITAL REQUIREMENTS SCHEDULE:

CATEGORY	AMOUNT

Page ____

(f) PRINCIPAL AND INTEREST SCHEDULE:

YEAR	PAYMENT	INTEREST PORTION	PRINCIPAL REPAYMENT	BALANCE OF PRINCIPAL
				$
1	$	$	$	$
2				
3				
4				
5				

(g) DEPRECIATION SCHEDULE*:

YEAR	DEPRECIATION EXPENSE	BALANCE TO BE DEPRECIATED
		$
1	$	$
2		
3		
4		
5		

*____% depreciation rate assumed

Based on the above schedules, we have prepared a pro forma profit and loss together with a cash flow schedule for the years 19__ to 19__ inclusive.

Section C
FINANCIAL FEASIBILITY

PRO FORMAT PROFIT AND LOSS, AND CASH FLOW SCHEDULE 19__ TO 19__					
	19__	19__	19__	19__	19__
1. Total Gross Revenue*	$	$	$	$	$
2. Cost of Sales*					
3. Gross Profit					
4. Cash Operating Expenses					
5. Interest—Term Loan					
6. Interest—Demand Loan					
7. Depreciation					
8. Total Expenses					
9. Net Profit Before Taxes					
10. Income Taxes (@ __%)					
11. Net Profit after Taxes					
12. Depreciation					
13. Cash Flow from Operations					
14. Repayment of Principal	( )	( )	( )	( )	( )
15. (Demand Loan)/Bank Balance	( )	( )			
16. Actual Cash Flow					

Page _____

Section D

VENTURE FEASIBILITY

• *Notes*