

## Overview and Procedures Manual

Years of experience in Costa Rica indicate have resulted in this PROCEDURES MANUAL, which provides a framework for your work there.

This document is divided into three major sections:

Section one contains general information on hotel and transportation services, working with your liaison, and things to keep in mind throughout the project.

Section Two reviews the schedule of due dates for the individual sections of the final report and lists a schedule of meetings. This section also incorporates detailed procedures for all regularly scheduled meetings with advisors and liaisons.

Section Three contains specifications for the Summary Progress Chart and Proposed Work Plans that students fill out weekly. This section also contains the guidelines for the final report, specifying the format and content requirements for the final document.

In addition, Appendix A of this document contains a sample of the Summary Progress Chart and Weekly Proposed Work Plan and other forms that will be used.

**All procedures outlined in the Section regarding Weekly Project Schedule and Project Procedures are mandatory, unless the student, faculty, and organization liaison agree to an alternative mode of operation, which then may supersede those outlined in this memorandum**

The format guidelines for the FINAL REPORT have been developed with the student in mind. The guidelines are meant to allow the production of a report that meets all appropriate publication standards while eliminating wasteful use of time (a precious commodity in a seven-week term).

Arrive WPI housing:	Sunday, October 23, 2009
Depart WPI housing:	Thursday, December 17, 2009

**Advisor Cell Phone Number: 011-506-8812-5232**

## Site Specific Information

### I. City Lay-out

San José is nestled in the central valley of Costa Rica. Since it is elevated somewhat from both the Pacific and Atlantic coasts, it is ideally located to provide a comfortable and pleasant climate. The city boasts a very efficient inexpensive public transportation system and a plethora of relatively inexpensive taxis. Getting around is easy.

### II. Mail and Contact Telephone Number

The apartment building in which you will live is located in one of the nicest residential areas in metropolitan San Jose; it is a very short walk to the Avenida Central, the main road where you will find buses and taxis to help you get around.

If you have mail sent the address is as follows:

Your name  
c/o Hacienda Bogata  
Aptdo. 8-5910-1000  
San José, Costa Rica

It takes at least seven days for mail  
to arrive in San José. Sometimes,  
it takes as long as three weeks.

Mail will also reach you if sent to you at Aparthotel Tairona  
75 Metros Oeste de Taco Bell  
Barrio Dent  
San Pedro, Costa Rica

Telephone number at the switchboard (from the US) is 011-506-234-0146

This second address is very reliable.

Consistent with WPI's Residence Hall policy there are no pets allowed in project center housing. Violation of this policy can result in your termination from a residential project center.

### Calling Home

Calling home from a foreign country can be a difficult and frustrating experience. Phones may not be familiar and the costs of calling overseas with local currency may be very high. For these reasons, it is highly recommended that you carry some sort of calling card.

## **NO MAIL WILL BE FORWARDED TO YOU AFTER YOU LEAVE SAN JOSÉ**

### **What To Do When You Arrive**

The hotel can pick you up. We will send them the arrival times, and if you wish the pickup service, you must let us know. If you do not select the pickup service, when you arrive at the airport, tell the taxi driver to take you to the following address:

Aparthotel Tairona  
75 Metros Oeste de Taco Bell en Barrio Dent (San Pedro)

It will cost you about \$15, even if there are several of you. The charge is to the location, and you pay at a booth just as you exit the airport. You can pay in American dollars. The airport taxis are regulated.

The building is a white building that has many small windows in the front. The name "Tairona" is visible on the building. Addresses in Costa Rica are given in relationship to a well-known location. For our building, Taco Bell in Barrio Dent, San Pedro is the landmark.

In Costa Rica, outgoing mail is taken to the post office. There are very few post boxes on the streets and pick-up may not be reliable. Do not have anything of value sent to you unless it is done through a courier service. It won't arrive.

### **III. Once at Your Housing**

**When you arrive, check the inventory list for what your room contains. No one can vacate the room at the end without going over the list with the housing agent and advisors, so you want to make sure that you know what the inventory is.**

**Everyone in the room will be held accountable for all items including knives, forks, spoons, etc., and what is missing will be billed to you on your next tuition bill. Make a list of all damaged equipment and furniture in your room and give it to your advisor.** This is important so that we can insure that you will not be assessed damages for those that already exist. The rooms will be examined for damages once you have vacated them. If something breaks while you are there, tell the housing agent immediately. You will not be charged for ordinary wear.

Several years ago, some students "borrowed" blankets and towels to take to the beach. The hotel lends such things to the students for field trips **BUT** you have to sign them out. Students are charged for those losses under the current system.

The apartments are well maintained and comfortable. You will have a two-burner hot plate, a microwave and a medium-size refrigerator. The apartments are arranged around a central interior, covered courtyard. In addition, there is a guard at the front door who ensures that only residents come in the building and who will take telephone messages for you. The fax number is 253-6429. Remember from the U.S., you must dial 011-506 first.

**You will have to buy a few small things** for your apartment, because the equipment is very basic.

Because you are in the tropics, cockroaches and other bugs can be a problem. Therefore, **YOU MUST WASH YOUR DISHES AND TAKE OUT THE GARBAGE AFTER COOKING EACH MEAL. THIS IS MANDATORY AND NOT NEGOTIABLE. ALSO, THE FLOORS IN YOUR BEDROOMS AND THE BATHROOM COUNTERS MUST BE COMPLETELY CLEAR EVERY MORNING BEFORE YOU LEAVE IN ORDER THAT THE HOUSEKEEPER CAN DO WHAT SHE NEEDS TO DO.**

**Bring at least one substantial suitcase lock to Costa Rica. Your computer is pretty safe in your rooms. However, when you leave it in your room unattended, lock it into a suitcase. Do not leave money around or in drawers or on shelves. Please keep it locked into a suitcase, also. While theft is not a problem in the hotel, there is no point in risking your belongings.**

The housekeeper will sweep as necessary and will clean the bathroom sink and floor each day and leave each of you a clean towel each day except Sunday. All of the towels look alike, so make sure you keep yours apart from the others. You may leave the dirty ones in ONE pile in the bathroom each morning before you leave so that they can be replaced. Sheets are provided and are routinely changed. **MAKE YOUR OWN BED.**

No guests are allowed overnight in our housing. Any breaches of this rule will result in all occupants of the apartment being held equally responsible and liable for disciplinary action. If you are

romantically involved with any other student at the center, please be considerate of your roommates. Please, don't embarrass yourself or others.

#### **IV. Faculty Accommodations**

The faculty will be living at the same place as you. Since noise carries from your apartments very easily to the central courtyard and then to everyone else's apartment, you should keep the noise under control. Others not associated with WPI will also be staying in the building.

#### **V. Telephones**

The telephone in your apartment is set up so that you can make calls. You will need an international calling card for any long distance calls you make from other phones. Check with your long distance carrier. We are told that ATT has an excellent one. Calls from Costa Rica are very expensive. You might want to investigate the call-back services, too. ICE has a good \$10 calling card that once, upon a time, you can buy at the ICE building on Av2 near the Teatro Nacional. That card is not sold on the street, and you may have to ask at an ICE office where the current location for that purchase is. SKYPE also is a possibility.

We have wireless access to the internet everywhere in the hotel.

#### **VI. Equipment and Laundry**

Each bedroom is equipped with sheets, pillows, and blankets. Also, towels are supplied, so all you will need to bring is your clothing and beach towels. If you use a hair dryer, you will need to bring that too. Costa Rica runs on the same electric current as we do, so no converters or different plugs are necessary.

Please note that there are laundry facilities. You can use them after 5:00 in the afternoon when the housekeeping staff leaves for the day.

#### **VII. Transportation**

As mentioned above, San José has many buses and taxis. Transportation all over the country is very inexpensive, so you can go from one end of the country to the other for only a few dollars. Travel around San Jose by bus will cost you only few cents.

#### **VIII. Medical Services**

<p><i>Hospital: Clinica Biblica</i> <i>San José, Costa Rica</i> <i>Calle Central y Calle Primera, Avenida 14</i> <i>San José, Costa Rica</i> <i>Dr. Juan Bautista Perez Valverde, Director</i> <i>Dr. Jorge R. Cortes, Assistant Director</i> <i>Direct Phone No. (506)221-3922</i> <i>Central Phone No. (506)257-5252</i> <i>Emergency Phone No. (506)257-0466</i> <i>Fax No. (506)221-0645</i></p>
--

Check with your stateside medical insurance company to see if it will cover you in Costa Rica and to find out how you would make a claim. Be sure to tell your carrier the dates of your stay in Costa Rica. In addition, you will have access to the emergency coverage through your international ID card, but make sure you understand the terms of that coverage and how it would work in regards to your primary medical insurance.

There is excellent medical care available at several private hospitals. We have used Clínica Bíblica many times in the past, which is where most of our Costa Rican friends go, too. **You must pay on the spot for service, but you can use a credit card.** Care is cheaper there than here. In many cases, the doctors have been to medical school or have completed residencies in the states or in Spain or other European countries. Our Costa Rican friends can refer us to their own private doctors, if necessary. **Usually, you can claim payments after the fact from your insurance company, so make sure you BRING A CREDIT CARD FOR EMERGENCIES.** We have seen a broken foot; an advisor got an eye infection, one person had to see a dentist for a gum infection, and several students had flu and secondary infections afterwards that required antibiotics. ***You can't assume you won't get sick. Do not assume that advisors can front the money for you.***

If you want to be reimbursed, **make sure that the papers you take away from the hospital or from the doctor have a diagnosis written on them.**

**Consider getting a flu shot when you arrive.** It will be winter there and many of us have gotten the flu in past years. However, those of us who got the shot did not. *Advisors will be able to provide you with the information necessary to get the shot.* It is done by a doctor in a local pharmacy and costs less than \$20.

#### **IX. Banking**

The most straightforward way to handle your money is by purchasing travelers checks before you arrive in Costa Rica. If you or your parents are AAA members, you can get the travelers checks without charge. Remember to account for weekend travel, laundry, entertainment, and miscellaneous. Most students find that the amount they budgeted is not enough--account for miscalculation because you cannot cash a US check. Some ATM machines are available in Costa Rica, but they don't always work for us. Your parents can wire money to you through a bank for emergencies. You can change your checks at almost any bank. Our nearby mall has two places that will cash travelers checks, even on Sunday, and there are several ATM machines (though they are fickle). Banks are used for a variety of services in Costa Rica. Make sure that you carry a photocopy of the front pages of your passport with you at all times. It's the law in Costa Rica that you must carry identification at all times. When you cash a traveler's check or change US dollars to colones, you will need your passport.

#### **X. Communication**

Communication between faculty and students at the Costa Rica Project Center is very easy since you will be living just feet away from each other. **Bring "post its" for leaving messages on each other's doors.**

#### **XI. Dress Code**

It is always warm in Costa Rica. The temperature ranges from the mid-70's to the low-80's in San Jose. Bring summer clothes only and a light sweater or two for the evenings, which can get quite cool. Obviously you will need bathing suits for the beach. **Bring #15 sun block** for both beach and city; the tropical sun is dangerous. This is no joke. You will have a great tan after a few short days even if you wear sun block every day. **No one wears shorts in the city. If you do, you will be marked as an American tourist.** Please observe cultural rules and wear shorts only while traveling to and from the weekend excursions and while away from cities.

You will need hiking boots or sturdy sneakers for rain forests. The latter should have heavy-duty soles with big tread for helping you to keep from slipping if you walk through the inevitable mud. You should also bring jeans and at least one heavy sweater and a windbreaker for visiting volcanoes, the tops of which can be at a very high altitude. You'll need to layer clothes. There, it can be cold. A backpack and water bottle will be very useful for weekend travel. If you plan to do serious hiking, read guide books to know what other equipment you may need.

Professional dress is required at all times at the agencies, but the definition varies from agency to agency. At some of the places, men will wear jackets and ties, although the custom will vary from organization to organization. Follow the custom of your agency. Check with your liaison. If you do not need a jacket at work, you won't need one for other purposes. But men should bring dress shirts and ties, and plan to dress up for the final presentation.

**The expectation for women is that they will wear dress pants and dressy blouses to work if they are not wearing skirts.** Women in Costa Rica dress more formally than women do here for work, so **khakis, work shirts, and tank tops, are not appropriate.** When you are representing your organization at interviews or at other organizations, you are expected to dress professionally. It is inappropriate for cleavage and midriffs to be exposed in the workplace.

As said on the previous page, no one, neither males nor females will wear shorts in town, either for work or for leisure. That's considered tacky and will clearly mark you as a tourist. The only time shorts are appropriate is when you are on the bus headed for the beach or in our housing, or on-site collecting data if you have cleared wearing shorts with your sponsor.

## **XII. Meetings**

Please note that all Center meetings and weekly faculty meetings at agencies are considered mandatory. If another meeting comes up that conflicts with these, make sure that you have prior approval of your faculty.

Please keep in mind that the time of your organization liaisons is valuable. However, you are entitled to some regular contact with your liaisons. Therefore, if you find that arranging meetings with your liaison is difficult, your faculty should intervene quickly in order to discuss the need for the meetings. If you don't tell the faculty there is a need, they won't know.

Occasionally, a group will feel some pressure from the agency to go beyond the bounds of what reasonably can be accomplished in seven weeks. If such is the case with your team, enlist the help of your advisor early to negotiate with the agency a way to contain the project.

## **XIII. Required Books and Other Materials**

Bring your D-Term ID2050 books and writing cribs. Also bring a statistics manual if you are analyzing statistical data.

1. Dictionaries for both English and Spanish
2. Writing guide from ID2050.

#### **XIV. Sightseeing**

Costa Rica is rich in Hispanic heritage. There are numerous guidebooks commercially available to help you plan leisure time. Plan to get out of San José on most weekends, but don't forget that San José has some excellent museums like the Museo Nacional, Museo de los Niños (Children and Science Museum), the Museum de Oro (Gold Museum), the bug museum at the University of Costa Rica, or the various art museums. It even has a zoo. You can fill a weekend easily.

#### **XV. Curfew**

Sunday through Thursday every student is expected to be in the housing by 1:00am. Weekend nights, the expectation is that you will return to the housing by 3:00am. If you are delayed and will not meet that time, then you **MUST** call the front desk to tell them when you are to be expected and to provide them with a number where you can be reached in an emergency. Failure to comply with these requirements may result in judicial action on site or back at WPI.

#### **XVI. Getting to Your Agency**

**Remember that** you are responsible for getting directions to your agencies. **Your faculty are NOT responsible for that.** To avoid a problem, get those directions before you leave for Costa Rica.

### Sample Weekly Project Schedule-Check with Advisors

#### Week 1. October 26-November 1

Monday	<p>Orientation meeting with the faculty advisors at 7:00 PM. The purpose of the meeting is for the advisors and you to exchange information that will make the first week a smooth one. The advisors will also go over the schedule for the week. The faculty will suggest a schedule for weekly meetings at agencies.</p> <p>Half days will be spent in your Spanish immersion course at the Instituto Universal, Av. 2, Calle 9. Your advisor will tell you what your arrival time is.</p>
Tues-Fri	<p>Each student project group will meet with its liaison at the agency promptly at the time indicated by the liaison in earlier conversations. The projects officially start then. <b>It is your responsibility to get instructions from the liaison regarding how to travel to work on that first day.</b> At the first meeting with the liaison, ask for organizational information, your work telephone number and your liaison's and email addresses for the liaisons. Identify available information sources, including how to gain access to information you will need for your literature review. The faculty will start visits this week so confirm the time with faculty and liaison.</p> <p>Evening meeting with students and faculty at 7:00. Give the contact information to the faculty. Often, there are minor problems to discuss or questions to ask. Sometimes there are feelings that need airing. Also arrange weekly meetings for faculty, liaisons and students.</p>
Tuesday	

#### Week 2. November 2-November 8

Mon-Fri	Second week of Spanish immersion, half days.
Monday	<b>First draft of Appendix A due at 6:00 p.m.</b>
Tuesday	<p>On-site meeting with advisors and liaisons. <b>Schedule the final presentations at your agency.</b> Generally, this meeting is designed to make sure everyone agrees on the direction and content of the project. You should prepare carefully for the meeting, however, and perhaps prepare materials for your advisors and for your liaison and others from the agency who are involved with your work and who have been invited to attend. (See Appendix A of the Procedures Manual for suggested format of meeting.)</p> <p>Summary Progress Chart for Week 1 and proposed work plan due for Week 2 (see Appendix A for forms, which you should copy, and for directions on how to use them). Use these forms each week for meetings with sponsors and faculty.</p>
and Wednesday	
Wednesday-Friday	At faculty discretion: Weekly presentations with faculty and other teams at the



faculty's apartments. Check with faculty for time.

Each team member will speak for five minutes. Prepare your visual aids professionally and carefully and make sure they can be seen by the person farthest away.

Critique your colleagues carefully. You have a fifteen-minute period in which to do so. Mannerisms, grammar, voice projection, style, content, the logic of the presentation, the kind and quality of the visual aids are fair game for comments. You should also comment on where and how teammates who are not presenting place themselves while their colleague is speaking. Please remember that the two people who are not speaking to the audience should not be whispering to each other nor should the teams who are in the audience be whispering or giving last minute attention to their own presentations. Each team's presentation requires everyone else's full attention. Past experience dictates that the presentations, while anxiety producing at first, become extremely important to everyone because they provide a forum in which to give and receive honest, thorough, tough, but fair feedback.

By now you should have actively begun your research and your plan should be complete. You should know whom and how many people you will be interviewing, and you should have begun making appointments. If you are administering a questionnaire, it should already have been developed and pre-tested.

**Week 3. November 9-16**

Monday	<b>First draft of Chapter I. Introduction and Chapter II. Background due by 6:00 p.m. with accurate References page.</b>
Tuesday & Wednesday	Weekly on-site meetings at agencies  This week you should have arranged for your room for your final presentations. You must anticipate properly the correct size of the room you will need.
Thursday	<b>First Draft of Chapter III. Methodology due by 9:00 a.m.</b>
Tuesday –Friday	Weekly presentations at faculty discretion.

**Week 4. November 10-15**

Tuesday & Wednesday	Weekly On-site meeting at agencies with advisor at discretion of advisors.
Tuesday-Friday	At faculty discretion, presentations to advisors—focus on preliminary data
Friday	<b>Second drafts of Introduction and Background with updated References page (attach first drafts) and second drafts of Methodologies due (attach first drafts and first draft of Executive Summary) Table of Contents, Tables, Figures, second draft of Appendix A (attach old draft) due by 9:00 a.m.</b>

**Week 5. November 16-November 22**

Monday	Weekly on-site meetings at agencies with advisors.  Presentations to faculty. Focus on outline of final presentation and your data, conclusions and recommendations.  <b><i>First draft of data and analysis either in one chapter or split into two (Discuss with faculty about which model to use) and chapter on conclusions and recommendations. Due by 9 AM</i></b>
Tuesday & Wednesday	
Friday	
Friday	

**Week 6. November 23-29**

Tuesday & Wednesday	Weekly meetings at agencies at discretion of faculty.  Presentations to faculty. Focus on Conclusions and Recommendations.
Sunday	<b><i>Second draft of Data Presentation and Analysis (attach first drafts) and First Drafts of Conclusions and Recommendations by 6 PM</i></b>

**Week 7. November 30-December 7**

Wednesday	<b>Weekly meetings at agencies at faculty discretion.</b>
Saturday	<b>Draft proposals due to faculty by noon</b>

**Week 8. December 8-17**

Monday and Tuesday	Final presentation rehearsals
Wednesday Thursday Friday	FINAL PRESENTATIONS. <b>Final report due at presentation.</b>
Saturday	Leave San José

## Project Procedures

Due to the heavy workloads that will be experienced during the term, certain procedures have been adopted to facilitate efforts. You will need to determine what word processing software you will have at your agency.

1 At the weekly organization meeting with the faculty advisor, each team will submit a:

Summary Progress Chart and Proposed Work Plan that includes what was accomplished during the week and specifying who did what. In addition, the summary must include the specific objectives for the following week.

2. When the project is completed and your faculty agree, submit your project electronically. Then, once it is approved by your faculty electronically, print the CDR and get it signed by your advisors. Submit paper and CDs as instructed by faculty. In addition to the copies they request and you want for yourselves and your agencies, you will need paper copies and CDs for Sra. Music and Professor VG.

(i)

## FORMAL GUIDELINES FOR FINAL REPORT

### CONTENTS:

Letter of Transmittal to Sponsor

Title Sheet

Abstract

Executive Summary

Authorship Page\*

Acknowledgments

Table of Contents

Tables

Figures

Executive Summary

- I. Introduction
- II. Background and Literature Review
- III. Methodology (or Procedure)
- IV. Results
- V. Analysis of Results (consult faculty if considering combining IV and V.)
- VI. Conclusions and Recommendations
- VII. Appendices
- VIII. References

Note for student authors:

### APPENDICES

- A. Mission and Organization of the Agency
- B.
- C.

\* This page is required by WPI for all group projects. It identifies which student holds primary responsibility for each section of the report.

## FORMAT FOR LETTER OF TRANSMITTAL

(Business letter format, written to agency liaison)

The Letter of Transmittal is a letter formally submitting the project report to the agency involved. A sample letter of transmittal is given below. The letter must contain the title of the report and include the following sentences:

“Copies of this report are being submitted simultaneously to (faculty advisors) for evaluation”.

“Upon faculty review, the original will be catalogued in the Gordon Library of Worcester Polytechnic Institute”.

The letter should close with a statement which thanks the liaison for his or her help.

(Sample Letter)

May 8, 2006

Mr. Louis C. Santone, Director  
Office of Business and Legislative Issues  
U. S. Department of Commerce  
San Juan, Puerto Rico 009011

Dear Mr. Santone:

Enclosed is our report entitled The Impact of the Petro-chemical Industry of Unleaded Gasoline Production. It was written at the U. S. Department of Commerce during the period January 9 through May 8, 1999. Preliminary work was completed in Worcester, Massachusetts, prior to our arrival in Puerto Rico. Copies of this report are simultaneously being submitted to Professors Rissmiller and Addison for evaluation. Upon faculty review, the original copy of this report will be catalogued in the Gordon Library at Worcester Polytechnic Institute. We appreciate the time that you and Mr. David Glancy have devoted to us.

Sincerely,

Your Names

## TITLE PAGE

Report Submitted to:

Name of WPI Faculty Advisor (s)

Puerto Rico, Project Center

By

(typed names)

(signatures)

---

---

---

---

---

---

In Cooperation With

(names and titles of agency liaison)

---

(name of agency and division)

---

REPORT TITLE IN CAPITAL LETTERS

(Date)

This project report is submitted in partial fulfillment of the degree requirements of Worcester Polytechnic Institute. The views and opinions expressed herein are those of the authors and do not necessarily reflect the positions or opinions of (Agency Name) or Worcester Polytechnic Institute.

This report is the product of an education program, and is intended to serve as partial documentation for the evaluation of academic achievement. The report should not be construed as a working document by the reader.

## ABSTRACT

The Abstract is of prime importance, since it is used by readers for guidance as to subject, treatment, and results. Often the quality of the Abstract will determine how much attention a decision-maker will devote to the rest of the report. Therefore, the Abstract must summarize the contents briefly and accurately, and be understandable independent of the text. It must not exceed 120 words in length and should contain no equations, figures or illustrations. The Abstract must contain the name of the organization with which you worked. It might begin, for example: "This report, prepared for the U. S. Department of Commerce". The Abstract must be single-spaced.

(this abstract, unless revised by the faculty advisors, will appear on your transcript.)

## EXECUTIVE SUMMARY

You should be working on this section from the beginning. Like the Abstract, it should be understandable independent of the rest of the report. It should be able to stand by itself, and should be tightly written, concise and right to the point because this may be all that a top manager has time to read. In three pages, you should be able to condense the critical aspects of your report: objectives, methodologies used, findings, analysis, conclusions and recommendations.

While the format for this section may vary from report to report, the following outline (all in very brief statements) may prove helpful:

### Introduction

- Overall Goal and Specific Objectives
- Background
- Present Situation
- Projections
- Constraints
- Alternatives
- Comparison of Alternative
- Results (or Recommendations or Conclusions)

The Executive Summary should not be more 3 pages, unless there are special circumstances.

## AUTHORSHIP PAGE

When a single, comprehensive written report is submitted for a project, each individual's contribution to the group effort must be clearly identified. The authorship page is either a simple list of individual chapters and their respective authors or is a statement in which each contributing group member is named as having carried out one or more specific tasks within the overall project effort.

## ACKNOWLEDGEMENTS

Students often insert an acknowledgments page if they wish to specifically acknowledge the assistance or involvement of particular people in that project. It is standard to acknowledge your advisors and your liaison.



## CONTENTS

This should be the last part of the report you do, because you cannot fill in the page numbers until you are finished with the report. However, you should have developed the Table of Contents early in the formulation of the report. It can serve as the basic outline of the paper.

## TABLES

This functions as a table of contents for tables. Each table should be numbered and labeled and the proper page number indicated.

## FIGURES

This functions as a table of contents for figures. Each figure should be appropriately numbered and labeled.

### I. INTRODUCTION

The Introduction should contain a section on the significance of the subject matter. It usually runs about 4 to 5 pages in length and describes in general terms what the reader will read in the body of the report. The subject, goals, purposes, importance, method, audience, and anticipated form of the results for the project should all be touched upon. The Introduction must contain the following statement single-spaced:

This report was prepared by members of Worcester Polytechnic Institute Costa Rica Project Center. The relationship of the Center to the (name of organization) and the relevance of the topic to the (name of organization) are presented in Appendix A.

### II. BACKGROUND AND LITERATURE REVIEW

Usually, a project topic will deal with several areas of knowledge. The literature review is a discussion of the theoretical background your topic and current and past research performed in the topic area. It provides the reader with the information necessary to understand your topic. It also leads the reader to understand how and why you formulated the problem in the way you did. Your project is intended to fill a gap in knowledge or add to the store of knowledge in the subject area. In some cases, when a project results in a product such as a video tape, for example, the literature review created the rationale for creating the product, which, in turn, will be used as a tool for actions that in the end will develop knowledge. If your literature review does not clearly provide a rationale for your project, you have not covered your field or you have not conceptualized the problem rationally. Your literature review from D-term should provide you with a good start. But you are expected to expand your own knowledge through new literature sources and to provide the reader with many more sources. Remember, people who have no knowledge in your project area may look at your report in Gordon Library. Your literature review should enable them to understand the basics in your topic area, the rationale of your methodology, the data you discuss, and your conclusions and recommendations. Remember to focus on points not on particular authors or sources, unless they are seminal works in the field that are so commonly recognized that the name of the author or work is immediately recognized.

Lunsford gives you examples of formats for citing sources and reporting references.

Citations should be embedded in the text by number and should be in last name of author and year of publication.

### **III. METHODOLOGY (or PROCEDURE)**

This chapter, one of the most important in the report, must present your methods of analysis in a way that will allow the reader to replicate your efforts with a different sample. The Procedure is the general, conceptual flowchart of the problem-solving approach. You must provide a rationale for all procedures you elect. If, for example, you plan to conduct interviews, you must tell why you chose to conduct unstructured versus structured interviews. If you conducted focus groups, you must justify the choice and describe in detail how you did them. If you sent out questionnaires, why did you do so? Justify the type and size of your interview sample or your questionnaire sample.

Many projects will NOT require statistical analysis. However, if your project does require statistical analysis, why did you choose one statistical procedure over another? What were the difficulties in choosing your sample? How did you pretest your interview questions or your questionnaire? What were the time, money, geographic and human resource constraints? If you did not choose a random sample, why not? If you stratified your sample, why did you stratify it that way? Bailey, K. Methods of Social Research (2<sup>nd</sup> ed.), or Kidder, L. (1981) Selltiz, Wrightsman and Cook's Research Methods in Social Relations (4<sup>th</sup> ed.), New York: Holt, Rinehart & Winston are excellent resources and supplement each other.

Whenever possible and **if appropriate** for your topic, make sure that your methodology includes procedures that will allow you to qualify at least some of your results. For example, if you interviewed nine people using an open-ended interview schedule, you may still be able to tabulate your results in some way so that trends at least can be noted, reported in your finding in your findings and analysis chapter(s), and used for the basis of recommendations in your conclusion and recommendations chapter. Be complete and be specific.

In conducting your work, you may have had to modify the procedures you first intended to use. Explain what modifications you made and why. Hunches, even based on interviews, cannot be reported unless they are backed by data that has been analyzed systematically, even if not statistically. Systematic analysis requires organizing data according to criteria set up in advance. Usually systematic analysis means numbers are involved.

Some projects do not lend themselves to quantification. Talk to your advisors.

### **IV. RESULTS**

Sometimes the writing of the report will be more logical when the authors integrate their reporting of findings with the analysis of the data. Before electing to do so, discuss your rationale with your advisors and get their permission. Many of the projects report findings that do not lend themselves to a statistical reporting style. Check with your advisor.

This chapter contains the presentation of the findings of your investigations. Start with the simplest material, but be specific. Your reporting and any arguments you make will be infinitely stronger if you use, whenever possible, tabulations of the findings. An example is, "Six out of twenty people interviewed wanted the airport to be transferred to private ownership". Proceed to more complicated reporting. "In spite of the fact that so few people were in favor of private

ownership, the majority - 18 out of 20 - felt that private ownership would result in more efficient service for passengers". Not all projects will lend themselves to this sort of reporting.

Tables may be used when doing so supplements but does not simply duplicate the text. In the text, tell the reader what to look for in the table, but discuss only the highlights. Do not use a table to take the place of text. Each table should be numbered and have a name. Use APA style unless directed otherwise by your advisors.

**Readers should be able to understand the table without explanation.** Have others who are not in your team look at your tables and tell you what they mean. If the reader does not understand the table, revise it. Refer to the table by number: "High school students are more informed about the tasks of mechanical engineers than they are about those of electrical engineers (See Table II - 4)", for example; or "Table II - 4 shows the number of manufacturing plants that ...."

## **V. ANALYSIS OF RESULTS**

The second part of your Procedure is the Analysis of your Results. You might be combining chapters, but the principles remain the same. The analysis focuses on the significance of patterns you see in your data. This chapter enables you to make recommendations and conclusions by focusing on the significance of patterns you discern in your chapter on Results. Hence, you will be able to say, "Seven out of the nine people indicated a preference for Classic Coca-Cola, indicating a trend". Or, "Since only four out of nine people believed the regulations should be changed, we cannot justify a recommendation to change the regulations. Nevertheless, our sample was so small that we cannot conclusively state that our findings constitute an adequate picture of the opinions of the total population from which the sample was drawn."

Remember that your samples will not be large enough to allow you to make statements about cause and effect. In order to do so, you would have had to use a classic experimental design in which you controlled for all variables except the ones you wished to test. You would, also, have had to use a large sample. Hence, while always referring back to your sample size for justification, you can talk only about trends and about their strength. Provide the reader with alternate explanations for the outcomes of your data. When the majority of adopters of solar equipment are between the ages of 30 and 50, it is not because older people do not like or believe in solar equipment as an energy saver but because older people have smaller access to media sources from which they can learn about solar equipment. Or they have lower incomes than the younger group, and therefore, cannot afford solar equipment, for example. Do not reject data you feel will not support your hypotheses or that will not please your agency. As researchers you have an obligation to report and analyze all relevant data. Disproving a theory or stating that the evidence is inconclusive is always as important as proving a theory.

## **VI. CONCLUSIONS AND RECOMMENDATIONS**

Be sure that all your conclusions are consistent with and follow from an analysis of your data. Everything in this chapter must grow logically from what you have presented in earlier sections.

The chapter indicates what policy recommendations you are making. Recommendations must follow from conclusions, which follow from your analysis, which follow from your data, which follow from your methodology, which follow from your hypotheses, which follow from your discussion of background material including discussion of theories.

While recommendations grow logically from your investigation, they do not necessarily grow logically from the opinions of agency personnel nor from the political climate of an agency. Upon occasion, recommendations may be contrary to what an agency may wish to hear. This is a delicate situation and will require tact on your part. Discuss controversial findings and recommendations with your liaison and advisors, but be true to your data and your analysis.

## **VII. APPENDICES**

You might have several appendices. Web pages or manuals are appendices, not findings.

### **APPENDIX A. - MISSION AND ORGANIZATION** (of Agency)

This Appendix should include a general background statement on the history and development of the agency or organization, recent budgetary trends, how and by whom its policy is set, and a specific statement of current mission, policies, goals and objectives. The original letter from the agency, identifying the topic, should be included as an exhibit. The final section should describe how your project topic is related to the agency's mission, the position and responsibilities of the people working with you in the agency (show an organization chart), and how the project topic's results would affect components of the organization.

## **VIII. REFERENCES**

Use the APA styles of citations unless directed by your advisors to use another model. You will find various web sites that will help you with examples. Also, use the APA Publications Guide for complete instructions.

Possible Guidelines for Final Report (check with your advisors)

1. Use Roman numerals for Chapter Numbers, capital letters for Appendices. All Chapter and Appendix titles should appear as follows:

Chapter 1. **INTRODUCTION**

Leave two spaces between headings and the first line of text.  
When using subtitles, capitalize the first letter of each word and begin two lines lower.

2. All Figures, Tables and Exhibits in a particular Chapter or Appendix should be identified and numbered by Chapter or Appendix. Use APA style unless directed otherwise by your advisors. Each must have a short descriptive title. For example: Figure 1. Regional growth trends. Table 1. Energy consumption per capita. Page numbering for the final report should be consecutive.
3. **MARGINS** - very important to observe in order to be able to bind all materials in a readable way. (Beware of 8 x 10 1/2 paper)  
From top of page and from right-hand side: 1 inch.  
From bottom of page: 1 1/4 inch.  
From left-hand side: 1 1/2 to 2 inches in order to leave room for binding. Nothing should appear outside these margins except the page number, which should be centered at the bottom of the page or be in the right bottom corner.
4. **Citations** – Unless otherwise directed by your advisors, footnotes should be embedded in the text in parentheses using the APA style. This relatively newly preferred form takes the place of the older standard form for footnoting by numbers and puts the author's last name, year of publication, and when a direct quote is used, page numbers in parentheses. The full citation can be found alphabetically listed in the back of the document in a section called References. For example, (Jones, 1988:63) means that Jones wrote the book or article, published it in 1988 and you are using a direct quote from page 63. When you are not using a direct quote, the citation would be as follows: (Jones, 1988) or (Jones, Smith, Brown et al., 1988) or (Jones in Brown, 1977) unless otherwise directed by your advisors. In all examples, you are using Jones' materials. In the second example, there were more than three authors to the book. In the last instance, Brown wrote the book and cited Jones or Jones had an article in Brown's book. In the References section, use standard citation forms for your full citations. O'Hare gives you a model. Do not call the References section "Endnotes" or "Footnotes" or 'Bibliography'.

You may also have referred to other books and articles from which you got general ideas but from which you have not draw specific enough material that warrants footnotes. In this case, you will want to have an Additional Bibliography section in which you alphabetically list in full citation form those sources.

5. **REFERENCES** - The References come at the end of your project report and

should include all books, journal articles, newspaper articles, etc. that you used in researching your topic. The References section is an alphabetical listing according to author of all your listed References. If in the text you referred to (Walters, 1967), you must give the full citation in the References.

Example:

Walters, A. (1967). *The Growth of American Industry*. New York: Harper & Row.

**NOTE:** Periods follow the author's name and the title of the work. For journals:

Grant, R., Higgins, C., and Irving, R. (Spring 1988). "Computerized Performance Monitors: Are They Costing You Customers?" Sloan Management Review. Vol. 29: 39-36.

(In this case, the article title is enclosed in quotation marks and the name of the magazine is underlined).

### **SUPPLEMENTARY GUIDELINES FOR FINAL REPORT**

SINGLE SPACE all sections of the final copies of the final report, except where you need to provide extra space for the sake of visual effect.

Be consistent in footnote style. The Procedures Manual includes comments on proper citation form and bibliographic form. If in doubt, consult APA Publications Guide.

### **COPIES OF THE REPORT TO BE SUBMITTED:**

1) ONE CD COPY and one bound hard copy for Project Center files (S. Vernon-Gerstenfeld). The CD will be used to duplicate your report for any agencies who wish to have a copy. Make sure, therefore, it is not READ ONLY. That copy should be turned in at the same time that the copy for the Registrar is turned in. Give it directly to the receptionist in the IGSD Office or put it into Prof. VG's inbox in the IGSD Office.

2) ONE electronically submitted COPY: for the Registrar, which will eventually go into Gordon Library

3) ONE COPY: for each faculty advisor (find out if they want CDs).

4) ONE COPY: for organization liaison find out what format they want.

5) ONE CD COPY: For local coordinator, Mrs. Music – **leave it with her at time of presentation**

6) THREE OR FOUR COPIES: one for each member of the project team.

7) Others as requested by people you interview, for example.

## SUPPLEMENTARY GUIDELINES FOR FIGURES

Graphs, charts, and other illustrations are normally referred to as Figures. Tables are referred to as tables.

If a figure takes up 1/2 page or more, give it its own page. Place it as closely as possible to the section of the text to which it refers.

If a figure is more than a page, include it as an appendix to the report.

If a figure is taken from or is a modification from an outside source, credit that source. Use APA style, unless directed otherwise by your advisors.

Source: Statistical Abstract of the U.S., 1966, p. 23

or

Adapted from Statistical Abstract of the U.S., 1966, p. 25.

This sort of reference appears below the figure. Do not use a figure if it is not referred to in your text.

Below is an example of a table:

Table 1. Fruit Grown in Massachusetts. (Given by town in percent of total yield of fruit in state.)

	Leominster	Cambridge	Springfield
Apples	10.0	0.05	6.0
Oranges	3.0	0.01	0.0
Plums	2.0	3.00	17.0

Adapted from the U.S. Department of Agriculture, July 2008

## SUPPLEMENTARY NOTE ON SPELLING

There is no excuse for not using a spellchecker, but a few words commonly misspelled and/or misused are: liaison, effect/affect, methodology/method, which/that - check dictionary for correct usage; it's/its—the first is contraction of it is, second is possessive pronoun of it.