

THE APPLIANCE CORPORATION OF AMERICA



The Appliance Corporation Of America (APCOA) is a manufacturer of home appliances. It has about 15,000 employees worldwide with annual sales of \$10 billion. Its customer service system works as follows.

Say you are the owner of an Appliance drying machine. You are concerned about a strange rattling noise your dryer makes. So you call their customer service number, 313-543-7902, and are greeted by a recorded message that asks you to hold on until the next customer service representative becomes available. After a few minutes you get a chance to speak with one. He obtains from you your name, address, phone number, and the details of your purchase, and then asks you what the problem is. After you explain the problem, he looks up the name and telephone number of a technician who is an expert with dryers. You are then connected to the technician. You explain the problem to the technician. If it is a minor problem, the technician provides you with instructions on how to solve it. Otherwise, if the dryer requires on-site repair, the technician connects you back to a customer service representative, who will schedule an APCOA repair technician for an appointment. The repair technician visits you, asks you some questions, examines the dryer, diagnoses what is wrong, and goes back to the office to get the parts, unless they happen to be already loaded in his truck. When the parts are not in stock, they need to be ordered, which could take weeks.



The Appliance Corporation of America: The Assignment

Imagine you have been assigned the role of a consultant to APCOA for improving the business processes and systems explained in the case. Your assignment is this: Write a report for the *Information Systems Steering Committee* explaining how you will use MIS/IT-based solutions to address the issues in the case. Assume that your target audience has recently taken the MIS and is already familiar with all the concepts, terminology, and theories covered in this course. The paper (including diagrams; excluding bibliography) should be at least 8-10 pages, single-spaced. Too long? Don't worry; the paper has a way of growing bit by bit! Feel free to exceed 10 pages if you have enough to say.

You can apply a great deal of what you learn in this course to this case. It is strongly advised that you take separate notes, recording your ideas for this case *as they occur to you* during the course of the semester. You will be graded on

- **Scope** (the number of issues you identify/analyze/resolve)
- **Content** (the quality of your solutions)
- **Organization** (the logical flow of your ideas)
- **Communication** (the clarity of your writing)
- **Writing mechanics** (lack of typographical and grammatical mistakes)
- **Diagramming** (proper use of the appropriate diagramming tools)
- **Research** (the number of relevant sources cited; how effectively they are utilized)

The report should consist of the following sections.

A. **Summary.** Describe a summary of your report in one paragraph.

B. **The Pieces.** Break down the process described in the case into a series of discrete steps, each corresponding to an issue that needs to be resolved, and can be done so through an appropriate information systems/technology solution:

1. **Issue:** Explain what you consider the issue to be. Issues are not objective facts that can be pointed to. They are outcomes of a process of analysis, one that takes a situation and explains why it is unsatisfactory. (*Example: why should customers have to pay for the cost of the telephone call, especially when it may be a long-distance toll call and may take a relatively long time?*)
2. **Goal:** Convert the above negative into a positive by formulating an objective associated with that step. Ideally how should this step work? (*Example: the phone call should not cost customers anything at all*)
3. **Solution:** Propose an IS/IT-based solution to the above issue.

C. **The Whole.** Having come up with bits and pieces of the solution in the above fashion, synthesize them into a whole by proposing an integrated redesign of the process.

D. **Bibliography.** You are to find **10 or more** academic or trade references (other than those made available to you in the course) that are relevant to this case. Of these 10 (or more) references, **at least 3 have to be in academic references.** To find academic references, go to

<http://iii.lib.csufresno.edu/search/m?SEARCH=Information%20Systems> and explore the contents available. Make sure you:

- Become familiar with advanced searches and use the capabilities offered by it.

- Understand the difference between using search terms with and without quotes.
- Perform a large number of searches to find golden nuggets of information. When you do not find good material first, search again. That is why they call it re-search!!!

Each source should be cited and explicitly used in the body of your report. Both print and web-based sources are acceptable. Feel free to use lecture notes and the textbook as a basis for proposing ideas, but do **not** count them as part of the references. While you are encouraged to visit relevant websites (such as GE, Whirlpool, Maytag, Electrolux, etc.) and learn from them, they are **not** to be counted as part of the 10 references either.

Do not confine yourself to reactive solutions. Also consider long-term, proactive ideas that may prevent problems from arising in the first place.

One way to check the completeness of the scope of your report is to take each of the application domains discussed in class (Transaction Processing Systems, Management Reporting Systems, Decision Support Systems, Knowledge-based Systems, Expert Systems, etc.) and ask yourself if your analysis has benefited from a meaningful application of that domain.

Application Domain	Issue 1	Issue 2	Issue 3	Issue 3	Issue 4
Management Reporting System			√				
Knowledge Based System	√						
Transaction Processing System		√					
Decision Support System					√		
Automation				√			
.....							

The above table is only for your own personal use as a checklist. Its purpose is to identify those application domains that have not been utilized anywhere as a solution to any problem in the given scenario, i.e., missed opportunities.

Do not address any issues pertaining to systems development and implementation, such as whether your proposed system should be outsourced or developed in-house. Consider your output as a high-level systems analysis and design report that will be considered for implementation if its contents are viewed favorably by its audience.

Please keep in mind that the target audience of your report is familiar with the basic concepts of this course, but they do not specialize in MIS/IT. Hence you should explain in plain English any bit of jargon (or acronym) that has not been discussed in the MIS course. Please try to explain it in your own words rather than copy it verbatim from an assigned reading or website.

In analyzing this case, you may at times feel that the information you need to proceed meaningfully has not been given. This is typical of analyzing written cases (vs. doing real-world projects), no matter how long or short the case. If and when you come to such points, please proceed by making an assumption. But state your assumption explicitly and factually. Please highlight each assumption made in the following format:

Assumption: _____

Examples:

Assumption: APCOA dryer parts are not proprietary and can be purchased and used in repair by APCOA's competitors.

Assumption: The customer service reps have little or no technical training.

Please assure that your report has an appropriate cover page, table of contents, and page numbers.

Tips on Bibliographic Search

Adjectives

smart
embedded
high-tech
internet-ready
connected
networked

Nouns

appliance
home
dryer
systems

NOTE!

Google has a search option for those who want to search specifically for more academic or "scholarly" information on the web:

<http://scholar.google.com>

Conduct searches with pairs of words consisting of one word from the **Adjectives** list followed by a word from the **Nouns** list. Examples:

- Smart appliance
- Connected home
- High-tech dryer

Other relevant search terms would be:

- Call center
- Customer service
- Appliance repair
- Automated diagnostics
- Customer Relationship Management

The following journals contain good material:

- www.appliancemagazine.com
- www.cio.com (under Research Centers, click on CRM)
- <http://itmanagement.earthweb.com/>
- www.howstuffworks.com
- <http://www.fastcompany.com>
- www.computerworld.com
- <http://knowledge.wharton.upenn.edu/>
- <http://www.incoming.com/>

The following companies are similar to APCOA and their web sites contain relevant material. Explore these websites as though you were the customer calling APCOA.

- GE
- Whirlpool
- Maytag
- Electrolux
- Sears