



OBTC 2016 at Walsh University
June 8th – 11th, 2016

Submission Template

SUBMISSION GUIDANCE

** Remove all identifying properties from this document **

** All files must be saved in PDF format **

Please include ALL supplementary text at the end of this document* *Only one document should be submitted

**Submission Template for the
2016 OBTC Teaching Conference for Management Educators**

1) Title, Abstract & Keywords

Madagascar Energy – A leadership change game.

A short demonstration of an online game created through a computer science class. The game involves selecting energy generating sites in Madagascar. Participants get one map to examine. Success depends upon an individual's memory plus integrating the information from all participants to make good choices. The twist is that the group's selected manager will be transferred to a new group after the first quarter. The reactions to their new managers are recorded. For the OBTC session, we will work through a quarter of the game and compare results. Bring laptops.

Keywords: Online game. Leadership Change. Group Decision Making.

2) Format

Activity

2a) For activities and exercises only, is yours best suited for

A traditional classroom

2b) For activities and exercises only, is yours best suited for

Undergraduate students

Graduate students

Either

3) Time Requested:

30 Minutes

60 Minutes (*Roundtables must select 60 minutes*)

90 Minutes

4) Planning Details:

Each room contains a white board with markers, computer (PC) with DVD capability and computer projector. Does your session require any other equipment?

We will need internet access and a laptop for each group of 8. Since most people bring laptops, I am assuming for every 8 people, at least one would have a laptop.

5) Teaching Implications:

What is the contribution of your session to management pedagogy/andragogy? Specifically, please include your learning objectives, and describe what management and/or teaching topics are relevant to your session, and why. Also, include theoretical, disciplinary, or theoretical foundations that will help reviewers understand how your ideas fit within the broader field of management.

The goals for the experiential exercise are:

- Recognize and integrate individual expertise
- Develop team decision making skills
- Experience changes in leadership and examine reactions

The exercise gives individuals the experience of integrating knowledge from different individuals to reach a decision. If an individual's information is faulty (poor memory of their map) or if the team fails to seek information from all participants, their venture will fail. Also, by reassigning chosen managers to new groups, individuals and groups will experience their own reactions to change. As with all experiential exercises, participants will not only experience their reactions to the elements of the exercise, they can also practice the concepts they have been introduced to in their OB courses.

6) Session Description and Plan:

What will you actually do in this session? If appropriate, please include a timeline estimating the activities will you facilitate: how long will they take, and how will participants be involved? Please remember that reviewers will be evaluating how well the time request matches the activities you'd like to do, and the extent you can reasonably accomplish the session's goals. Reviewers will also be looking for how you are engaging the participants in the session.

- Introduction – How the project was developed and divide into teams [5 minutes]
- Log into online program and receive instructions [5 minutes]
- Begin map study and 1st quarter [8 minutes]
- Review 1st quarter results across teams [2minutes]
- Discussion

7) Application to Conference theme:

How does your session fit with the overall OBTC theme of *United in Service*?

The biggest “service” component of this exercise was the partnership between the author and the university's Computer Science (CS) capstone class. Part of the CS course requirements was to perform service to an outside client, meeting with their client to develop the project to the client's specifications. Another fit is in the sense that much of the benefit of service is applying course concepts to their experience. This exercise provides an experience.

8) Unique Contribution to OBTC:

Have you presented the work in this proposal before? If so, how will it be different? Is this proposal under current review somewhere else? If so, please explain. How will your proposal be different for the OBTC conference?

This work has not been presented elsewhere.

The Madagascar Energy Facilitator's Guide Follows.

Goals:

- Recognize and integrate individual expertise
- Develop team decision making skills
- Experience changes in leadership and examine reactions

Setup:

- Log into computers in each room.
- ELC laptop logged into administrative site
- Madagascar Energy (ME) PowerPoint installed on debrief computer
- Madagascar Energy Background information in message boxes – one per person
- Headphones outside each room
- Projectors on and room computers routed to screen
- Conference Tables
- DVR recording
- Chrome is the Recommended Browser

Each room to be logged into Madagascar website:

XXX

select Madagascar

- Blank out the Administrator's login and password. Users will log in from this page
- Hit key F11 to set image to full screen

Facilitator will use the ELC laptop signed into **XXX**

- Login: XXX
- Password: XXX

Materials:

- ELC laptop to record performance and control the simulation
- Online grid map of Madagascar with cost and elevation information assigned to each square through elcexercises.marshall.usc.edu
- Set of maps for every group
- PowerPoint of initial instructions
- Name Badges for the Managers, including the 1st quarter results for their first team
- Madagascar Energy Situation sheet – one per person

Activity:

Before starting the exercise, use the laptop to log into the Administration site for Madagascar from **XXX**.

The login is ELCfighton and the password is fighton. You will select "Create game" and copy down the 6 digit number generated which you will share with participants. **DO NOT start the game until ALL teams log in using the code that was generated.**

If running with a large Graduate group, you will want to meet with them in their classroom to set the stage for the exercise. Otherwise, meet with them in ABC (or DEF) and go over the situation using the Madagascar
XXX

Experiential Learning Center

Inspired by LEADOUT by Fred Fosmire and Charles Hosford

Energy (ME) PowerPoint. [If 7 or less groups, assign them to rooms other than the debrief rooms so that walls can remain down until the debrief.]

Notify your Tech on what you will want for clips/scans. You may want to get a scan before the manager switch, when they notify their group of the switch, and after they move to their new group.

Place ME Background sheets in the message boxes – one per person.

Have the online simulation for each room projected to the room screens. Log into the Administration page on the ELC laptop.

Introduction:

“Welcome to the ELC. My name is _____, and I will be facilitating today’s exercise – Madagascar Energy. Before covering the specifics of the exercise, let me mention a few things about the ELC. We will be recording your interactions, so please do not sit at the head of the table by the door – we just record the back of your head then. Also, as in any experiential exercise, you get out of it as much as you put into it. To encourage everyone to “be in the moment”, all cell phones, laptops, etc. need to be turned off and stowed away. This is especially necessary in this exercise since there could be a temptation to cheat with cell phones.”

I am now going to set the stage for today’s exercise. In a few minutes, I will be dividing you into development teams for Madagascar Energy, or ME, a Non-Governmental Organization (NGO) operating in Madagascar. Additional situational information will be provided once you are in your team rooms. Your development team’s mission is to identify appropriate sites for various type of energy projects for ME.

Go through the PP slides.

- Slide 1 – Title
- Slide 2 – Penguins of Madagascar
- Slide 3 – Your Mission - Select new sites for various types of renewable energy – Solar, Wind, Tidal Turbine, or Geothermal.
- Slide 5
 - Successful Site Selection
 - Adequate sunshine for Solar
 - Geothermal hot spot for Geothermal
 - Sustained wind pattern for Wind
 - Ocean current pattern for Tidal Turbine
 - Population patterns
 - Not currently serviced by energy grid
 - Unrestricted access (not a nature reserve)
 - Elevation considerations for Geothermal [determined by online topographic info]
- Slide 6

- Online Simulation
 - Each team will find displayed in their rooms a map of Madagascar divided into the same grids that will appear on the maps individuals will receive to study.
 - Choices will be made during each quarter by clicking on one of the grids and selecting the type of energy project to build there.
 - The program will calculate your costs, any penalties and count the population impacted.
- Slide 7
 - Evaluation Criteria

Best Population Impact Ratio/Cost (per \$1,000)

Example:

Project cost = 2,000,000

Population Impacted = 10,000

Ratio = 5
- Slide 8
 - Maps
 - Each non-manager in each of the Development Offices will receive one of the 7 maps. No one person will have complete knowledge and each person will obtain critical information to the project.
 - You can use the whiteboards for your strategy session but they must be cleaned before you start the first quarter.
- Slide 9
 - What's the Catch?
 - Only 2 minutes to study your map.
 - You cannot write anything down.
 - You cannot discuss your map with anyone else during that 2 minutes.
 - You have to use your memory only!
 - Side note: Real world issue isn't memory, but quality of knowledge/info.
 - You cannot use cell phones for pictures
 - You cannot use any objects to assist
- Slide 10
 - Agenda
 - Separate into teams (Development Offices)
 - Each Development Office will select a Regional Manager.
 - Planning Period
 - Map Study Time
 - Site Selection (4 quarters – 6 minutes each)
 - Scoring & Debrief

“Let me emphasize that there is no sharing of the maps during the study time. After the initial strategy meeting, all whiteboards must be erased and nothing can be used to record map positions (e.g., change in your pockets). Your memory of the maps is a proxy for knowledge you bring to business decisions.”

“Any questions before I divide you into Development Offices?”

Divide the participants into groups, the preferable number is 8 to a group with the manager not getting a map. (So in a group of 72, you have them count off to 9 since there will be 9 groups of 8; a group of 40 would count off by 5s.) [With small classes, you may have to include the managers in the map distribution – insuring all managers get the same map.]

- Once groups have assembled in their breakout rooms, announce: “Before you start working on your team’s strategy, I want to get you logged into the game. But before we do that, I am going to give you a couple of minutes to decide on a team name.”
- After a couple of minutes announce: “Will a member of your team please go to the computer in your room and someone else go to the whiteboard and grab a marker. Please jot down this number - ##### [this is the code you got when you created the game]. The person at the computer will now enter that code and your Team name to enter the game. You will not be able to enter anything into the grid until I announce the start of the first quarter. This just lets you know what the grid you will be working with looks like.

At this time, please select a manager. You have **15 minutes** to make your manager selection, and to develop your strategy for your Development Office. Consider setting goals, developing operating procedures, your decision strategies (i.e., consensus, majority rule, etc.), your tolerance for risk, and how to handle conflict. You may want to assign someone to manage the simulation on the room computer. Once the manager has been selected, please have her or him come to the hallway to check in with me.”

As managers come to the hallway, have them sign in on the Manager Assignment sheet and give them a badge to enter their name on and wear.

Place the sets of maps in message boxes. [If you do need to give the managers a map, make sure they are all assigned the same map. Critical, since you will be moving them to new rooms and you don’t want to disadvantage groups by removing critical information.]

- After **15 minutes**, announce: “The map study time will begin in a moment. Remember, managers will randomly hand out the maps, face down. You will have 2 minutes to study your map. Do not show it to or discuss it with others. Will the managers please go to the message box to retrieve your maps. Open the message boxes by turning the knob clockwise until it stops. ”
- After **2 minutes**, announce: “Managers, please collect all maps and place them in the message box. Your first 6 minute quarter begins now.”

Start the game on the laptop.

Collect all maps from the message boxes and verify that all were turned in.

CLIPS/scans of groups.

- After 6 minutes, announce: “Managers. At this time, please note your first quarter ratio on the bottom section of your badges and report to me in the hallway [or an open room]. Please minimize the online map at this time. The teams remaining in the rooms are on holiday and no work is to be done while the managers are away.”
- After all the managers report in, explain that Madagascar Energy has instituted a management development program. Rotate the managers up the alphabet, with the manager in the highest letter moving to the beginning room. Explain that they have one minute to explain the transfer to their original team and you will announce the switch over the intercom.

CLIPS/scan – If possible, you may want to get a scan of managers telling their teams.

- After 1 minute, announce: “All managers should now report to their new assignment as the second quarter begins now.”

CLIPS/scan – May want to get a scan focusing on the groups' reactions to their new manager.

- After 6 minutes, announce: “The second quarter has ended so take a look at your impact ratio. Once again, everyone else is on holiday, maps should be minimized and no work is to be conducted until the managers return from their offsite meeting. Managers, please report to headquarters, me, at this time.” Once the managers have reported, explain that we are now in the third quarter and Madagascar Energy has set a goal of an impact ratio of XX for each of the Development Offices. Madagascar Energy has also instituted a penalty for each team that fails to meet their impact ratio. If they do not meet or exceed the XX ratio, one person will be transferred out of the office. (Remind managers that they will continue to work with their current group, not their first group.)
- As managers return to their rooms announce: “The third quarter is underway.”
- After 6 minutes, announce: “Managers, please come to the staff meeting to report your group's impact ratio and whether you will be transferring anyone out of your office. Everyone else, you are on a final holiday.”

If anyone is transferred out of the group, explain that they are now observers of the team that their first manager was re-assigned to. Explain that they will be called upon during the debrief to report on their observations and comparisons with their team's interactions.

- Just after the 4th and final quarter starts, announce: “At this time, each group has a decision to make. You have an opportunity to send your manager to headquarters for a 1 minute review of all the maps that were initially distributed at the start of the exercise. They will have just one minute and it will cost the transfer of one of your staff out of the office. You have 1 minute to decide whether you wish to

participate. I will make an announcement when the time is up and managers can report to headquarters if the group decides to send him or her, along with the person being transferred.

- After 1 minute, announce: “All managers participating in the extra map study time please report to headquarters now. Please bring the person being transferred as well.”
- Lay out the maps for managers choosing to study the maps and time it for 1 minute.

If anyone is transferred out of the group, explain that they are now and they will be called upon during the debrief to report on their observations of their team's interactions.

- When the managers return to their groups, begin the 6 minute timing for the last quarter.
- After 6 minutes announce: “The 4th quarter is now over. Please leave the online map as is and join us for the debrief in room _____. Members of each Development Office should try to sit together for the debrief. Managers will need to be ready to report the team's impact ratio and general performance.”

Debrief

- Post results from the administration site.
- Ask Development Managers recap performance and results of the swap
- Teams report their reactions

Leadership

- How did you elect a leader? Based on what?
- What style of leadership did they use? Why? Effective?
- Managers reactions to team change? Strategy? Effective?
- Teams reactions to a new leader?
- Impact of manager's previous performance on new team?
- How would you manage that leadership change in real world?
- Did you undergo any major change in norms?
- If you could hand pick your team, what skills would you look for?
- Did leadership emerge?
- How does this relate to business organizations?

Strategy/Group Process

- What was effective about your planning time? Ineffective?
- How smooth was the implementation of the plan? What would help the implementation process?
- If you were to advise another group in terms of process, what would you suggest?
- How did the issue of time influence group processes?

Power/Influence

- Who did you listen to? Why? Substance? Style? Confidence?
- How did you deal with conflict? (consensus? Majority? Dominant few?)

Manager's Name:

Manager's Q1 Ratio:

Madagascar Energy ©

Given the power of creative animation, many of us now think penguins when we hear Madagascar.¹ Except for possibly in some zoos on the island nation, they do not exist in Madagascar – the lemurs and the weather would run them out.

Beyond the lemurs' dominion, the energy needed to cool things off enough for penguins would be problematic. Roughly 15% of the island's human population of 23.5 million has access to electricity.² One doubts they would use such a scarce resource for penguins.



It is that scarcity of electricity that brings Madagascar Energy (ME) to Madagascar.

The mission of the Development Offices of the Non-Governmental Organization (NGO), Madagascar Energy is to develop renewable energy generation for rural areas of Madagascar. Currently, only 5% of the rural population has access to electricity and 80% of Madagascar people live in rural areas.² The belief is that providing access to energy will be life enriching for the people of Madagascar.

The ME Development Office has the difficult task of site selection for the new energy projects. Given the limited national electricity grid, projects need to be located close to their clients until progress is made in expanding the grid. It is a delicate balance of population density, topographic details, geothermal hot spots, weather patterns, and fit with specific methods of energy generation. An equally important consideration is the predicted cost of implementation for each of energy generation methods. As an example of the balance to contemplate, if a site is found suitable to both geothermal and solar, the depth of the geothermal spot determines the cost and in many cases, solar would be the more economical choice if the number of days with sunshine are high enough.

The budget of ME is rather unique for an NGO. While Madagascar Energy is not for profit, much of its funding comes from a Silicon Valley startup which is the new darling of venture capitalists. The company sees Madagascar as the perfect beta test of their new products and site selection process. While there is much good will and financial backing, there is also extreme scrutiny on the bottom line. As a beta test, the cost effectiveness of the process and the size of the population impacted by the projects will be closely monitored. Ineffective teams will be disbanded.

Teams with expertise in different capacities involved in the projects have created maps highlighting suitable areas for the projects as well as maps providing information on population density, restricted sites and areas already on the power grid. Your team will have to integrate the information in order to make the best site selections for specific energy projects.

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¹ Accessed 7/21/2015: <https://thinkdowrite.wordpress.com/2014/12/01/penguins-of-madagascar-a-review/>

² Accessed 7/14/2015: https://energypedia.info/wiki/Madagascar_Energy_Situation

Separate maps will have grids capturing:

1. Geo Thermal Sites
2. Wind Duration Patterns
3. Sustained Sunshine
4. Ocean Currents
5. Population of at least 10,000
6. Areas Currently On The Power Grid
7. Restricted Areas Of National Parks and Reserves

While projects of this type would have the maps available at all times, one purpose of this exercise is to simulate different expertise and how groups manage and integrate the information only known by one person. To mimic that differential in knowledge, team members will be assigned one map of unique information with just a few minutes to absorb it. The maps will then be removed from the rooms.

Costs are calculated as follows:

- Geo Thermal Plant \$2 million + \$10 thousand per 1000 meters of drilling [Map #1]; Elevation information is available when you hover over each grid on the online map.
- Wind Turbine \$2 million [Map #2]
- Solar Photovoltaic \$2 million [Map #3]
- Tidal Turbine \$2 million [Map #4]
- Penalty for accessing restricted Areas Of National Parks and Preserves \$100,000 [Map #7]

Population penalties are incurred when bad selections are made. The team will incur the cost of the project with 0 impact on the population [A cost without benefit]. Population penalties occur for the following situations:

- When a grid is selected for a particular type of project unsuited for it
- Areas Currently On The Power Grid [Map #6]
- Restricted Areas Of National Parks and Preserves [Map #7]

Population impact is calculated as follows:

- The population map marks grids where at least 10,000 people would benefit from an energy project. In determining the impact ration, 10,000 would be the population number used. [Map #5]
- While there is a chance that a project could benefit a few people in non-marked areas of the map, it does not meet the threshold amount required by Madagascar Energy. Therefore, the population impact number would be zero for that grid.

Development Office's Mission:

Your task is to integrate the information from all 7 maps and select the right energy projects for the right locations. Madagascar Energy estimates that only about 15% of Madagascar would be suitable sites for any of the energy projects. Be deliberative and strategic in your site selections.

