

PROJECT PLAN

***I*PRO 325**

"Sanitation - empowering people."

The A Team
Nikolai Arendovich
Paul Baulier
Elizabeth Corson
Milos Leposavic
Luke Miller

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I. TEAM CHARTER

1. Team Information

A. Team member roster (name, contact information)

Nikolai Arendovich- Narendov@iit.edu

Elizabeth Corson - ecorson@iit.edu

Luke Miller - lmille4@iit.edu

Paul Baulier - pbaulier@iit.edu

Milos Lepasovic - mleposav@iit.edu

B. Team member strengths, needs and expectations

Individual strengths to contribute

Nikolai is an energetic, strong willed person with a humanitarian side. He is decent in Photoshop, proficient in Microsoft Office, and has a history of public speaking educating the average person in basic sciences.

Elizabeth is a strong public speaker with a passion for efficient, well-run meetings. She is proficient in Spanish, Microsoft suite programs, and google documents. She is very connected through e-mail and uses it as a tool for good team communication such as reminders or after-meeting follow up discussion. She is a good editor and is aware of the importance of small details associated with presentations. She will contribute all of these strengths to the progression of the project and for the good of the group.

Luke has studied civil and structural engineering topics, which will be useful for this

particular project. He has the ability to see which smaller problems and details might need to be addressed in connection with the project.

Paul is very opened minded and an attentive listener. He is very organized and manages his time well. He has experience in creating professional presentation-type documents as well as three dimensional models.

Milos is energetic, always positive, and very friendly. He has already participated in an IPRO so he is well aware of the expectations.

New knowledge/skills to develop

Nikolai needs to learn to be more organized in the things he does. He hopes to do this by observing his teammates time-management skills and techniques, and adapting them to fit his personality.

Elizabeth would like to learn more about the geography of Peru and the perils associated with the region. She is interested in discovering current efforts to improve the lives of the poor, and what can be improved about these solutions. She would like to develop more skills in team work with a focus on the ability to inspire others to work to their full potential.

Luke needs to learn to be more proactive and to contribute more time to the project. He also needs to learn how to use technology to accomplish the work of the project.

Paul would like to learn more about the issues of poverty in the world and what can be done to help. He hopes to leave this IPRO with better team work skill and more confidence in public speaking.

Milos would like to improve his communication skills. This includes sending timely e-mails, maintaining accurate contact information for team members, and public speaking in the form of presentations to the class and to the IPRO judges.

Overall expectations about the project

Nikolai wishes to understand in a more objective sense to the troubles people are facing in said situations, and potentially, make a difference to better one's life.

Elizabeth expects to gain a new prospective on the lives of people who are just like herself, yet vastly different. She hopes to find a way to improve at least one person's life, and to spread the message of sanitation and education. She also hopes to inspire others to participate in projects that benefit people in need.

Luke hopes that this project will enlighten him about the challenges faced by the people of Peru. In addition, he would like to learn more about team work and working together toward a common goal.

Paul hopes that this project will not only help inform people here but also find solutions for the people in need living in Peru. He would like to see something being delivered to help the situation in Peru.

Milos would like to see this project succeed so that in the future other students might find this useful and use it in their research.

C. Team identity

Name (acronym or other designation)

THE A TEAM

Logo (diagram, picture, words colors)



Motto

"Sanitation - empowering people."

2. Team purpose and Objectives

A. Team purpose

Our purpose is to identify a current problem in rural Peru. Once identified we will select it and develop a feasible solution that will be economical and culturally sensitive. Our vision as a team is to implement this solution in a selected rural area in Peru. We hope to test our solution, gather as much information as possible and hope that future students or participants will be able to build on to our solution and conduct improvements.

B. List the objectives the team has set

Our objectives are:

- Conduct research on rural Peru
- Identify problems in rural Peru
- Establish contacts in Peru
- Analyze the problems we encounter
- Address one or many of these problems
- Implement an economical solution
- Test the solution and examine the results

3. Background

A. Include information about the customer/sponsor involved.

There is currently no sponsor for this project.

B. Provide information about the user problem(s) the project is facing.

The problem involves the sanitary state of people in the rural areas of Peru. In particular, this involves ground water contamination from human fecal matter causing widespread disease, especially among children. This can interrupt a child's education hindering his future, and with that, the future of the country.

C. Present information about the technology or science involved or potentially involved in addressing the problem(s).

A simple solution to sanitary care is the development of latrines to prevent groundwater

contamination from human waste, and coliform bacteria. The technology involved is the creation of an economic way to dig holes, line them, construct a top, build a shell, and instruct on where such a structure should be built.

D. Offer information on the historical success or failure of previous attempts in addressing the problem(s)

Historically, many organizations have had great success in developing practical and economical solutions to waste management in third world countries. Where the projects fail, however, is in implementation of the latrines. Societies that have survived without latrines for several centuries are not easily encouraged to adopt this strange new idea. This IPRO recognizes this issue, and will create a comprehensive plan for the acceptance and maintenance of the latrines.

E. Include any ethical issues that may be involved in investigating the problem(s).

There may be cultural differences associated with human waste. Many cultures have negative views of waste that may prevent them accepting these new methods. Convincing them to adopt good sanitation practices may contradict certain aspects of their culture, which may be ethically significant.

F. Provide information about the business or societal costs of the problem(s).

Societies without proper facilities for human waste face the cost of disease that can spread quickly, prevent children from attending school to receive an education, and potentially kill people.

G. Offer details on the proposed implementation outline for any practical solutions developed by the project team.

Implementing the plan would require first traveling to the area. Upon arrival, one of two methods could be used. Latrines could be constructed at the local school, and children would be taught to use them properly. This method has a high chance of success because children are not as set in their ideas as adults, and thus willing to make changes to their habits. The second method would involve calling a town meeting to educate the people on

the importance of sanitation, and then developing a plan, led by town members, to implement the creation of latrines and other sanitary devices in the village.

H. Include research about similar solutions or literature search results.

<http://www.plan-uk.org/pdfs/disperu.pdf>

<http://ceae.colorado.edu/mc-edc/pdf/Peru%20Project%20Description.pdf>

<http://washinternational.wordpress.com/2008/07/07/latrines-trounce-toilets-barriers-to-sanitation-coverage/>

<http://pubs.acs.org/doi/abs/10.1021/es7025856>

<http://www.brownumnimagazine.com/content/view/1757/40/>

<http://tilz.tearfund.org/Publications/Footsteps+21-30/Footsteps+30/Simple+low-cost+improvements+for+latrines.htm>

<http://www.unicef.org/>

4. Team Values Statement

A. List desired behaviors, e.g. time and obligation conflicts, addressing conflicts and complaints with team members directly, sharing all information with

Desired behaviors include:

- Listening to others
- Behaving politely
- Being open-minded
- Not attacking people with ideas that you do not agree with
- Voicing concerns as they happen

B. List how problems will be addressed, and/or IPRO instructors, approaches not recorded online, establish a process within team meetings that provides an agreed upon forum for discussing problems that may be important but challenging for individual team members to express.

The first step to handle conflicts will be have a group meeting where every member discusses the issue and attempts to find a solution to the problem. If any single member feels that the conflict was not resolved by this meeting, they should request peer mediation.

For peer mediation to be successful, the mediator must be able to remain impartial. The mediator can be a member of the group or some third party, depending on the severity of the conflict or the comfort of the participants.

These steps to conflict resolution will allow for candid discussions of team dynamics. They will also strengthen bonds between team members, and bring about a greater understanding of how team members work and think.

II. PROJECT METHODOLOGY

1. Work Breakdown Structure

A. Describe how your team will go about solving the problem(s)

Prepare a process appropriate to the problem you are addressing.

The process we will use will center around assigning tasks to different team members based on their strengths. Each team member will research a particular issue between meetings. When we meet, we will share what we learned and discuss the new information and how it relates to our project. We will then incorporate any new details from this discussion into our evolving solution. Any ideas that are contributed will be analyzed and discussed. These ideas will be further researched and examined if we decide that they have some merit. Every idea or comment will be treated with respect. At the end of the meeting, we will assign at least one task to each team member, based on the ideas and questions we came up with during the meeting. If we follow this process, more or less, we should have no trouble in progressing significantly every week.

Identify major tasks.

- 1) Identify the problem. What are the problems associated with sanitation in Peru?
- 2) Research issues related to our topic, so that we can better understand all the different aspects of the problem.
- 3) Talk about possible solutions. What options do we have to address this problem? What are the pros and cons of each solution?
- 4) Select a solution to focus on. Determine which of the possible solutions is the most

- practical, economical, and will provide the greatest benefit.
- 5) Identify the obstacles and challenges that will need to be addressed. For our particular project, these might include cost, feasibility, engineering challenges, cultural issues, etc.
 - 6) Research to find information about how to overcome the challenges mentioned above.
 - 7) Start working on the design.
 - 8) Evaluate the design at each step to determine what will work and what needs to be changed or improved.
 - 9) Build a model and test it, or find some other way to analyze how well our solution will work.
 - 10) Make modifications to the design.
 - 11) Finalize the design and document its construction, so it can be reproduced.
 - 12) Determine how best to implement this solution in Peru.
 - 13) Prepare and give the final presentation.

Explain how the potential solutions will be tested, analyzed and documented.

We will build a small-scale model of the solution. We will test it in a way that will determine whether the design will work under the normal use or not. Every step of the process will be thoroughly documented. Analysis will be done in a methodical way. We will look for any possible problems with all our potential solutions. We will determine how best to address each problem. Additionally, we will identify which problems are the most important to address, and which problems are of little concern.

State whether it is reasonable for your team to be able to accomplish all t tasks within the timeframe and resources available.

Our team may be able to accomplish the tasks, depending on the scale of our solution. If the solution is on a larger scale requiring more resources, then we may have to pass our project to next semester's IPRO 325 team.

B. Create a team structure.

Identify team leader(s)

The team leader is Elizabeth. Elizabeth reminds the team of tasks that each member needs to accomplish before the next team meeting and runs the meetings.

Create sub-teams based on the major tasks and identify leaders for each one.

Sub-teams were already assigned by Dr. Schug. Each sub-team has a diverse group of students; the teams were not created based on area of study.

Include a breakdown of each sub-team's major responsibilities and the corresponding sub-team member(s) in charge.

Each sub-team is working on its own project. Subteams meet twice a week in class, and share their accomplishments approximately one a week with the whole group.

List all major project tasks pertaining to the problem solution or project chronological order.

- Research problems in rural Peru.
- Select one problem (sanitation).
- Investigate past projects concerning latrines and brainstorm ways to overcome their failures.
- Make contact with native Peruvians and discover significant cultural implications related to the project.
- Based on this information, create a design for the latrine and for the implementation plan.
- Create a model of the latrine design.
- Create documents for the education section of the plan.
- Generate a presentation on our work.

List milestones.

- Conduct Research
- Plan and Design a model
- Midterm Review
- Implement a small scale model
- Test the model
- Conduct improvements on the model
- Final Presentation

Include an estimate of hours needed and number of team members needed to complete each task.

- Research - 25 hours
- Plan and Designing a model - 10 hours
- Implement a small scale model - 10 hours
- Test the model - 5 hours
- Conduct improvements on the model - 25 hours

2. Expected Results

A. Provide details on expected activities involved in the project.

The A Team plans to begin this project by extensively researching the region and the actual needs of the people. This can be done through the internet, literature, or personal contact with the citizens of Peru. Once a clear understanding is gained of the culture, people, problems, and natural forces, the team will begin research on latrines and sanitation. Beyond research, other activities will include making models, designing educational materials, and visiting sites to gain a hands-on experience.

B. Describe expected data from research or testing involved in the project.

The team expects to determine from research not just the facts about Peru, but also the feelings. Sanitation is so much more than a statistic, it is a way of life that people must fully accept if it is to be implemented correctly. With this in mind, we must be sure to go beyond quantitative data and find qualitative data as well. All sources will be explored. We also hope to find data on previous projects like ours in an effort to predict the problems and pitfalls that might occur, and develop a plan to avoid them. Sanitation is not a new idea, but while it has been done in the past, there are always ways to improve. On the more technical side, we hope to find in our research several ways to construct latrines, and eventually be able to combine the best of the ideas for a design that is appropriate for our project.

C. Define potential products resulting from research and testing.

Potential products include designs for a latrine hole, designs for a latrine cover, designs for a

latrine shelter, and designs for a hand washing station. All of these designs may result in an actual physical product, perhaps in a model scale. Associated with these designs will also be educational packets for construction, maintenance, and importance of the product. These educational packets will be created with minimal costs and with a target audience in mind. Finally, a plan will be developed for the implementation of these products.

D. Define potential outputs to be produced.

Potential outputs include a model, a presentation describing our project, a way to teach our implementation plan to others, and a possible trip to Peru to put our plan into action.

E. Describe the expected results in terms of deliverables that will be produced by the project team, i.e., a working prototype, survey or focus group feedback, grant proposal, etc.

In terms of deliverables, this project will create a Team Contract, a Project Plan, and ethics report, a brochure, a presentation and poster for iPRO, a prototype of our design, an example of our education materials, a plan for implementation, a plan for the seminar to teach people how to help others implement our project, and an analysis of historical advances in this area.

F. Summarize the challenges, risks and assumptions that you can anticipate affecting your results.

One of the biggest challenges with this project is the actual implementation. Whenever you consider improving a person's life, you must first recognize that they may not see the need for improvement. Much of this project will be spent discovering the best way of encouraging the poor in Peru that sanitation is an essential change to their daily lives.

G. Discuss how the expected results will be incorporated in a proposed solution or contribute to a solution process.

Through our research and final designs, we hope to create a proposal to improve sanitation in Peru. This proposal will be very detailed, and will incorporate all aspects mentioned above and take into account all potential problems and complications. It is the eventual hope that a

group will be able to go to Peru and use the proposal to implement our sanitation improvements.

3. Project Budget

A. Create an itemized list of proposed spending. Provide as much detail as possible and identify the tasks associated with the requested funds and the basis for the estimates provided.

\$100 - The project will result in a scale model of the desired latrine. Materials involved will be relatively inexpensive and easily obtainable.

\$15 – Poster for IPRO day

\$25 – Brochures for IPRO day

\$50 – Educational materials

\$190 – TOTAL

4. Designation of Roles

A. Assign roles

Minute Taker: records changes under consideration.

Nikolai Arendovich

Agenda Maker: creates the meeting agendas and moves the meetings along.

Elizabeth Corson

Time Keeper: is responsible for making sure meetings go according to the agenda.

Paul Baulier

iGroups Moderator: ensures that iGroups is updated regularly.

Luke Wilson

Reflector: analyzes group interaction and performs SII assessments.

Milos Lepasovic

