The purpose of the paper submitted to International Project Competition 2014 is to provide a description of the problem you have studied, how this problem relates to sustainability in the context of one or more of vital triad components (energy, environment, water resources), your original idea to solve the problem, analysis on the feasibility and effectiveness of your solution, and final conclusions from your study. Your project paper should have five sections excluding the abstract: 1. Introduction, 2. Background, 3. Proposal, 4. Feasibility and Impact Analysis, 5. Conclusion.

1. **INTRODUCTION**
   This section will outline your motivation in doing this project, the problem area you have studied, and how this problem relates to sustainability in the context of one or more of vital triad components (energy, environment, water resources). You may also briefly specify how others tried to solve this problem in the past, and the extent to which their solution has been effective in solving the problem.

2. **BACKGROUND**
   A background should be provided in this section on the problem, and a short summary of past approaches to solve it (with proper references).

3. **PROPOSAL**
   You will present your original idea in this section to solve the problem introduced in the previous sections. You may use drawings or pictures to describe your project as shown in Figure 1. Sometimes “one picture speaks one thousand words.”

![Figure 1](attachment:process_flowchart.png)

**Figure 1.** Process flowchart for emission reduction in waste transportation (sample).

4. **FEASIBILITY & IMPACT ANALYSIS**
   This section will provide feasibility analysis and impact quantification for the idea or solution you

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provided in the third section. You will preferably quantify how your idea is better than state of the art alternatives, if there are any. Providing substance to your arguments through calculations, models, experiments or prototypes will make your assertions stronger. If you have used ideas, tools, methods, approaches, or papers developed by others, provide references for the sources of your information, and add a reference list to the end of your project paper. Use schematics, flow charts, plots, and/or tables to clarify details. For example, you may plot any quantitative results as depicted in Figure 2.

![Figure 2. Measurement data comparing Reference and Proposed algorithms (sample).](image)

5. CONCLUSION

In this section, you will conclude your paper by emphasizing findings you have presented in the previous sections on why this is an original and superior approach to solve a relevant sustainability problem, summarizing results from your work and/or providing final remarks. It is useful to compare your results with others when applicable, discuss discrepancies and agreements, and comment on the broader impact. Table 1 can be used as a sample format to share some of your data. You may also describe possible future steps to extend your concept project to a more mature or to a more effective state.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Unit Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>megabytes per second</td>
<td>MB/s</td>
</tr>
<tr>
<td>kilohertz</td>
<td>kHz</td>
</tr>
<tr>
<td>nanosecond</td>
<td>ns</td>
</tr>
</tbody>
</table>

Table 1. Units and corresponding symbols.

General Format: A4-sized paper (210 mm x 297 mm) should be used in the paper. The text should not exceed 2000 words (indicate the word count at the bottom of the text as shown). Fonts should be Times New Roman 11pt with the exception of the title which should be Times New Roman 14pt Bold. The title, authors (contact author information as footnote), high school, city, and country should be written as shown in the first page.

Figures and Tables: Up to six figures and two tables can be included in your submitted project paper with proper captions as shown in the previous sections of this document. Captions should be inserted before the tables and after the figures. Make sure that all figures and photos are clearly visible. If the jury cannot clearly see and understand the role of the visual material, the project paper may be reviewed negatively. All drawings, photographs, and plots should be clearly labeled identifying the relevant components contained in the figure.

Abbreviations and Acronyms: Define abbreviations and acronyms the first time they are used in the text. Do not use abbreviations in the title unless they are unavoidable.
Equations: Number any equations consecutively with equation numbers in parentheses, as in (1). Use parentheses to avoid ambiguities in denominators. Punctuate equations with commas or periods when they are part of a sentence, as in

\[ a + b = c. \]  \hspace{1cm} (1)

References: References (in short or long format) should be used whenever material is borrowed from another source. Borrowing or copying information from sources without referencing them will result in the elimination of the submission without review. Number citations consecutively in square brackets [1]. Some examples are provided below.

All project papers are to be submitted in Portable Document Format (PDF) online via the International Project Competition 2014 website. Papers will not be accepted via e-mail, fax, or post. Once your paper has been successfully uploaded, a confirmation notification will be sent to the contact address provided in the first page. The deadline to submit your concept project paper is May 1st, 2014.

Word count: 842 (this number should not exceed 2000)

References