**Project Management**

The recommendation must be viable in a professional, legal, and ethical sense. Care must be taken to assess whether the proposed solution meets legal codes, conforms to standards set by other cities, and is ethically defendable. To accomplish this, the project management department of Team 11-3 has put forth a plan to determine the professional, legal, and ethical viability of the proposed solution.

The recommendation that Team 11-3 has put forth focuses on Reno-Sparks. As such they are mainly concerned with the legal viability of the recommendation within the context of Reno-Sparks traffic law. The proposal must be assessed to determine whether it breaks any codes and whether any codes would need to be implemented in order for the recommendation to be implemented.

To ensure that the recommendation will be viable on a professional level, traffic standards from other cities, states, and countries will be considered. The goal here is to make sure that the recommendation would be able to be implemented in other places without too much modification, and that the team is not breaking standards that would be considered ethical by other cities.

On an ethical level, the recommendation has to bring forward ways to improve the safety of the Reno-Sparks traffic system. Research must be conducted to determine whether the proposed system would bring a real increase in the safety of the Reno-Sparks traffic system. The engineers will show that rerouting traffic so that ambulances may get to their destination faster will bring a significant decrease in the death rate of people in an accident. They will determine whether routing traffic away from an accident will decrease the chance of another accident happening somewhere else. In addition to all this, the engineers of Team 11-3 will make sure that the recommendation adheres to all standards of the National Society of Professional Engineer’s Code of Ethics [NSPE Code of Ethics for Engineers, website].

Punctuality and professionalism are important to Team 11-3. To demonstrate this, they have developed a team charter to ensure that all deadlines are met, and all meetings are attended, so that the project will be completed in due time. Deadlines for all major components of the design review have been scheduled ahead of time. In the case that these non-major deadlines are not met, then the responsible engineer will have to write a formal apology to the rest of the team. In the event that an engineer does not have all their required work for a major deadline, they will be reported to the ENGR 301 T.A.s and suspended from the team if possible. The engineers of Team 11-3 have agreed to weekly meetings on Wednesday. These may either be informal meetings where they simply report on their progress that week, or they may be formal meetings where plans for major components of the project are discussed. In the event that a formal meeting is missed, the engineer responsible must bring coffee for everyone in the next meeting. Table 1 details these policies.

Team 11-3 is proud to have an excellent team culture that encourages active participation and cooperation. When making decisions the team is careful to ensure that all voices are heard, and no decision is made without careful consideration from every engineer. Each engineer in Team 11-3 is capable of completing all their assigned tasks without further management from anyone else in the team. This makes Team 11-3 the most qualified team to complete this task.

Table 1: Team incidents and their corresponding punishments.

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| **Incident** | **Punishment** |
| Miss informal meeting | No punishment, but must check in with discord. |
| Miss formal meeting | Bring coffee to next formal meeting |
| Miss soft deadline | Write apology note |
| Miss hard deadline | Report to T.A.s or suspension |

To determine whether a city-wide unified traffic system that allows for emergency routing is a viable solution to the presented challenge, the engineers of Team 11-3 have come up with a system of deadlines to ensure that all required information is available before the design review. To assert that the recommendation is viable, the engineers must defend the recommendation’s feasibility, assess its impacts, and develop a plan to implement the recommendation. Team 11-3 will begin gathering information to complete these goals on March 4, and finish gathering information by April 15. This gives the team 42 days to gather all the required information. The deadlines detailed here will make sure that this gets done.

Defending the proposal’s feasibility comes down to seeing that it is viable in a legal, professional, ethical, and economic sense. The engineers of Team 11-3 must make sure that the recommendation complies with legal and professional standards. By March 11, Reno-Sparks traffic codes will be researched to ensure that the recommendation does not break any laws and whether new laws will be needed to implement the system will be determined. Professionally, to ensure that the system is not too specific to Reno-Sparks and could theoretically be implemented elsewhere, the traffic systems of New York City and London will be looked at to see that the system could be implemented in other cities with minimal modification. This will be done by March 18. With the aforementioned information considered, a legal strategy to implement this system will be prepared by March 25. To defend the proposal ethically the engineers must complete the following tasks. Ethical issues related to the traffic system will be identified by April 1. By April 8 the recommendation will be adjusted wherever necessary to meet NSPE Code of Ethics. By April 15 an ethical defense considering the aforementioned variables will be prepared. Finally, the team will ensure that the recommendation is economically viable. Here to costs of the proposed system will be determined by March 9, the benefits determined by March 14, and the defense considering this information will be prepared by March 19. Along with this goal, Team 11-3 must still assess the impacts of the recommendation and create a strategy for its implementation.

To assess the impacts of the recommendation, the engineers of Team 11-3 have defined three objectives. First, the economic impacts on Reno-Sparks must be determined. An assessment of whether the recommendation would create or destroy jobs in the city will be available by March 24. Next the environmental impacts of the proposal must be assessed. The emission rates of vehicles depending on how often they are stopped will be researched by March 14. Whether or not emissions would increase, or decrease, will be determined by March 24. Finally, the global and societal impacts will be considered. A prediction of the impact on Reno-Sparks citizens will be prepared by March 25, and a consideration of how this system could be implemented globally will be prepared by April 15. With these two goals completed the team must consider the obstacles in implementing the solution.

To create a plan to implement the system Team 11-3 has determined three objectives. A business strategy must be created. A SWOT analysis will be completed by March 29 and a plan to manage expenses by April 4. A marketing plan will need to be developed. Here the consumer of the system will be defined by April 9, and a plan to make the system appealing to the city government will be prepared by April 15. Finally, environmental requirements will need to be determined. The additional infrastructure needed to implement the system will be identified by April 3, and mitigating measures to keep the environment clean will be defined by April 15.