# 5 Professionalism

This discussion is with respect to the paper titled “Contextualizing Professionalism in Capstone Projects Using the IDEALS Professional Responsibility Assessment”, *International Journal of Engineering Education* Vol. 28, No. 2, pp. 416–424, 2012

## Areas of Responsibility

Pick one of  IEEE, ACM, or SE code of ethics. Add a column to Table 1 from the paper corresponding to the society-specific code of ethics selected above. State how it addresses each of the areas of seven professional responsibilities in the table. Briefly describe each entry added to the table in your own words. How does the IEEE, ACM, or SE code of ethics differ from the NSPE version for each area?

**Analysis based on ACM code of ethics.**

| **Area of Responsibility** | **Definition** | **NSPE Canon** | **ACM Code of Ethics** | **Difference from NSPE** |
| --- | --- | --- | --- | --- |
| Work Competence | Perform work of high quality, integrity, timeliness,  and professional competence. | Perform services only in areas of their competence;  Avoid deceptive acts. | Achieve high quality work and keep the bar set high to ensure efficient competence. Acknowledge the existing rules pertaining to professional work. Only perform work in areas of competence. | ACM focuses on keeping the general standards set high to allow hig quality work. It also places an emphasis on knowing preexisting rules and regulations in the areas of industry to ensure that no rules are broken during execution. |
| Financial Responsibility | Deliver products and services of realizable value and  at reasonable costs. | Act for each employer or client as faithful agents or  trustees. | Manage personnel and other project resources to ensure high quality of life for all project stakeholders. | ACM focuses on improving the quality of life for all stakeholders through the management of personnel and resources, while NSPE focuses on only the employers and clients and excludes information about resource management. |
| Communication Honesty | Report work truthfully, without deception, and  understandable to stakeholders. | Issue public statements only in an objective and  truthful manner; Avoid deceptive acts. | Accept any feedback generated from professional review and access required computing and communication resources ONLY when authorized | ACM focuses more on using peer reviews and critiques to improve work performance. It is similar to the NSPE by avoiding deceptive acts and only accessing resources as required. |
| Health, Safety, and Well-Being | Minimize risks to safety, health, and well-being of  stakeholders. | Hold paramount the safety, health, and welfare of the  public. | Contribute to society and human well-being. | The ACM focuses on analyzing each stakeholder to a specific project and ensuring that the project does not harm any of these stakeholders. This differs from NSPE because it takes time to encourage analysis of the stakeholders rather than group them into the general public. |
| Property Ownership | Respect property, ideas, and information of clients  and others. | Act for each employer or client as faithful agents or  trustees. | Honor the property rights of stakeholders or team members including tangible and intangible property. | ACM focuses on giving the proper credit for intangible resources and intelligence appropriately, while NSPE focuses more heavily on acting respectful and trustworthy. |
| Sustainability | Protect environment and natural resources locally  and globally. | N/A | Contribute to society and human well-being. It is vital to understand each stakeholder to a project. | NSPE did not have any section that highlighted sustainability. |
| Social Responsibility | Produce products and services that benefit society  and communities. | Conduct themselves honorably, responsibly,  ethically, and lawfully so as to enhance the honor,  reputation, and usefulness of the profession. | Articulate to all members and stakeholders of an organization the social responsibilities of a certain project and ensure all members accept those responsibilities. | ACM focuses more on ensuring all other members of the organization’s team understand their social responsibilities, while the NSPE focuses on just one individual’s social responsibility. |

## Project Specific Professional Responsibility Areas

For each of the professional responsibility area in Table 1, discuss whether it applies in your project’s professional context. Why yes or why not? How well is your team performing (High, Medium, Low, N/A) in each of the seven areas of professional responsibility, again in the context of your project. Justify.

| Area of Responsibility | Does it apply to the project? | How well is the team performing? |
| --- | --- | --- |
| Work Competence | Yes - For the emissions dashboard, getting information readily available for the customer is important as they would like updates in a timely manner. The work that we produce must also be high quality since this is their product that we are developing | Medium |
| Financial Responsibility | Yes - The cost of the project is relatively minimal, but making sure that the customers time is not wasted in meetings is important | High |
| Communication Honesty | Yes - Making sure that the work we are doing is communicated effectively without deception in meetings and also in deliverables | High |
| Health, Safety, and Well-Being | No - No one is at risk in our project, since all the data is publicly sourced and it is a website hosted project, no stakeholders safety is at risk in this project. |  |
| Property Ownership | Yes - Respecting the information that MISO holds with respect for the power industry and the information that they are providing is a must in this project. | High |
| Sustainability | Yes - This project consists of looking at the emissions data throughout their floor plan, which directly correlates with sustainability of power in those areas of interest | High |
| Social Responsibility | Yes - This product will be publicly available for MISO’s stakeholders to view and to be able to update their own floor plan based on emissions data they would like to see | High |

## Most Applicable Professional Responsibility Area

Sustainability is the driving force behind our project. Due to the need to meet global warming targets under 2 degrees,, a mass mobilization of data and expertise is needed in the electricity generation sector. By collecting a large amount of data on the emissions profile of the MISO network, utilities, MISO, regulators/politicians, and concerned citizens will be able to see where and when new clean electricity sources are needed. Our project will allow these stakeholders to find the existing gaps in the generation network where new clean generation installations are needed most. Our team has demonstrated the need for sustainability in our industry by evaluating a variety of data sources, other competing and similar data visualizations. We have analyzed these implementations and data sources to ascertain which inputs and target outputs will best deliver clarity on the areas where clean electricity generation is most needed.