Possible Questions for Kit Wong's presentation

Climate and Disaster Risk Assessment: Fundamentals, Current Trends and AI Innovations

NLC-RISC Trustees Conference 2026

1. Rapid assessment appears to be useful in planning. Would the results be also useful in designing mitigation?

   Rapid assessments are primarily used for "screening", or to identify the highest-risk assets. In doing so, the owner can prioritize actions such as planning for upgrades or designating assets for demolition. While the tool uses general building information to estimate vulnerability, it is not a detailed engineering study of a specific building. A more in-depth study would be warranted if the owner decides to design upgrades to protect against projected hazards.

2. Can you elaborate on the cost of an AI rapid assessment, for example, what data can one expect at the minimal cost level and what are some additional data/services that would require higher level of effort?

   In the case of the AI tool that I described earlier, using AI to gather hazard data and to rate vulnerability and risk involves very little cost. At this lowest cost-level, you would receive hazard data (e.g., magnitude and probability) for every building, vulnerability ratings against each of the hazards, and an overall risk rating. This assumes that the input building and location data are correct, and that enough information has been provided about the building function to determine the importance. Our clients sometimes ask us to perform follow-up consulting services, such as suggesting courses of action, determining the pros and cons of each, or developing an in-depth resiliency plan that would maximize the investment value. These types of services require a higher level of cost and involvement.

3. Can you elaborate on how the collaboration with your firm would work? What would the process look like and how long it would take?

   Once we have reached an agreement to perform the work, we will conduct a telephone interview with your stakeholders to explain what building data we will need and what data will be returned. We will ask how you plan to use the resulting vulnerability and risk data to ensure that it supports your organization's goals. We expect that it may take several weeks for you to gather input data and check for

validity. We will provide a spreadsheet to collect the data. Once we receive the data, it will only take us several days to return the results. We can provide the results in spreadsheet format or in GIS format. We will then have a follow-up call to answer any questions and provide additional insight.

4. Can you elaborate on how you go about controlling AI and preventing hallucinations and minimizing errors?

   AI has many different facets. Most of us are familiar with the generative aspects of AI, in which we ask it to create something- for example, write a summary, or compose a graphic. In that context, it is very easy for AI to go down the wrong path. In our application, we use a very narrow set of guardrails. We ask AI to perform a very specific action, and do that many, many times. The only decision we ask AI to make is to decipher the color at a specific point on a map. In the near future, as hazard data gets more advanced, this interpretive function might not even be required.

5. The vulnerability methodology appears to focus on loss of functionality. Can your tool be adjusted to prioritize economic loss?

   Yes, the vulnerability methodologies can be adjusted to rate economic loss instead of functional loss. But the two are often related, of course. For example, if a building collapses due to a hazard, it would be a total loss in terms of function and economic. In the case of estimating economic loss, we would evaluate the replacement cost of the building and would not include the cost of the contents. Because contents may change over time, estimating losses to contents would be very difficult. If an economic loss assessment is of interest, it would require some development effort, and we would not be able to offer that feature at the minimal cost level yet at this time.