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Presentation Title: Does Framing Infrastruction Projects As Long-Term Change Project Design?

Abstract: Infrastructure combines natural and human resources and systems to provide essential services such as shelter, mobility, and clean water. Infrastructure design therefore shapes human impact on the environment as well as quality of life for billions of people and across generations. These infrastructure benefits come with the tradeoff of generated climate emissions. Such emissions are "sunk" into the infrastructure, thus making the long-term design intentions of infrastructure critical to a project's overall sustainability. Previous research suggests that changes to decision framing can lead to more sustainable infrastructure design; and that future-framing can elicit more sustainable personal choices. Merging and extending these findings, we present the preliminary results of an online-experimental survey in which we tested whether future-framing caused experts to produce more sustainable infrastructure designs. Infrastructure professionals (N = 261) were randomly assigned to either a future-framed or present-framed condition and asked to recommend design attributes for a wastewater treatment project. Here we show that participants in the future-framed condition, which consisted of changes to word tenses in the project description, recommended significantly longer intended design life (8 years), useful life to the community (8 years), and acceptable return on financial investment (3 years). However, there were no significant differences in specific design metrics represented by a sustainability rating system. These findings suggest that future-framing can be used as a straightforward way to promote longer-term infrastructure intentions, but do not confirm that these intentions translate to achievement of specific sustainable design metrics.