Sensitivity Analysis for Transportation on Repair Factors

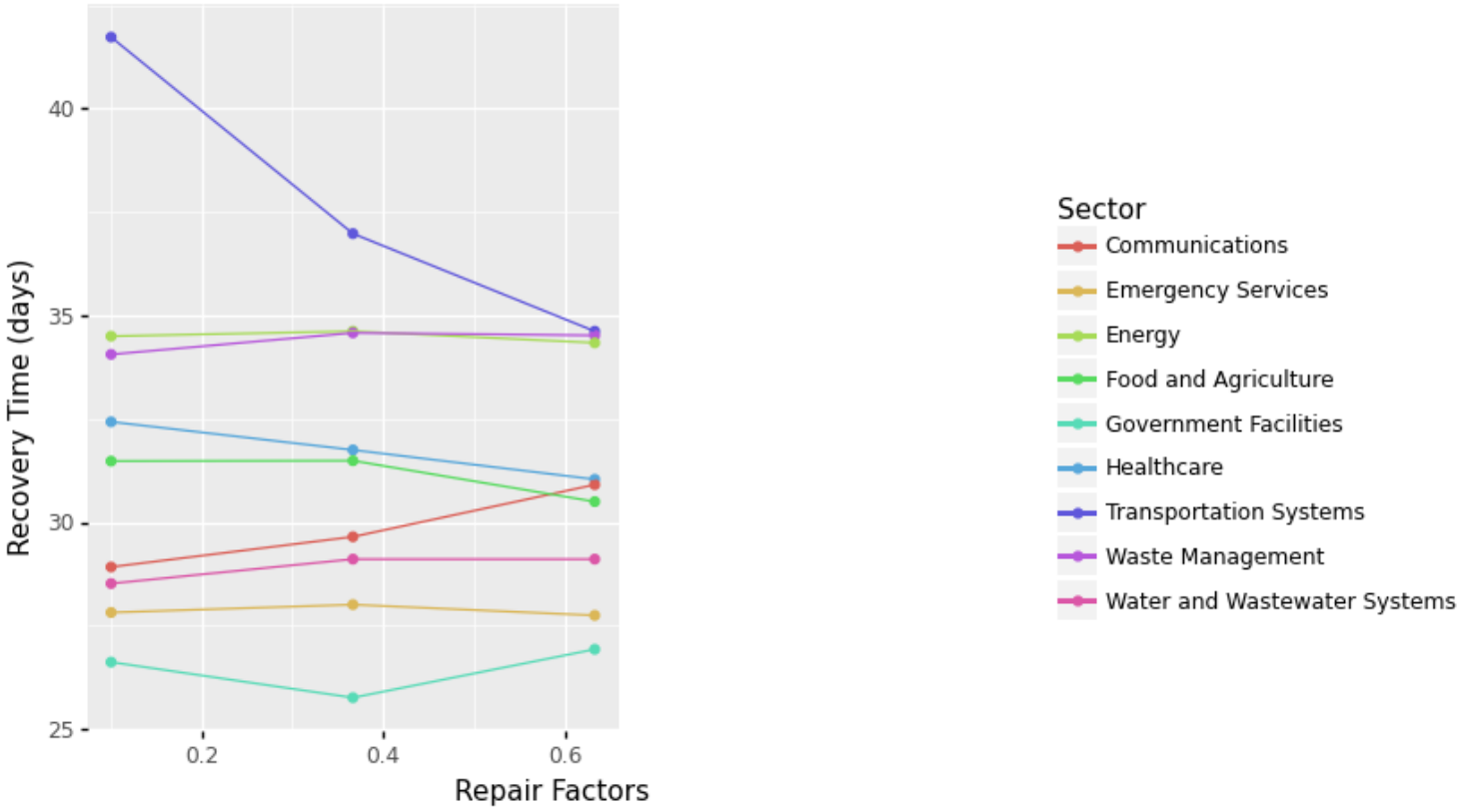
Introduction

A sensitivity analysis was conducted on a selected value from the Stochastic Infrastructure Remediation Model (SIRM). The SIRM allows for a series of interconnected infrastructure sectors to be modeled and considers the realistic variability of the impact of a CBRN (chemical, biological, radiological, and nuclear) event.

Sensitivity Analysis will determine how Repair Factors is affected by recovery time. The closer the slope to zero the less of an impact it will have in the model.

Sensitivity Graph

Transportation Repair Factors vs Sector Recovery Times



Reduction (days) in recovery time for an increase in 0.1 repair factor

Below is the sector and Reduction (days) in recovery time for an increase in 0.1 repair factor for the parameter breakdown for the sensitivity analysis.

Infrastructure Sector	Reduction (days) in recovery time for an increase in 0.1 repair factor
Healthcare	**0.26**
Water and Wastewater Systems	**0.11**
Emergency Services	**0.01**
Food and Agriculture	**0.18**
Transportation Systems	**1.33**
Government Facilities	**0.06**
Communications	**0.37**
Energy	**0.03**
Waste Management	**0.09**