



Subsurface Spaghetti

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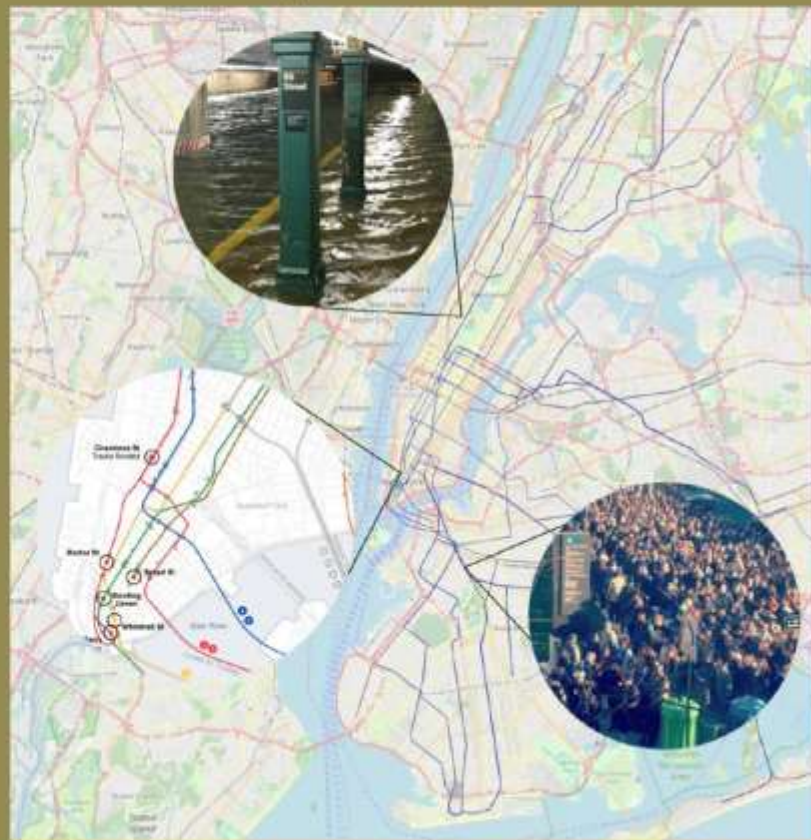
Dept. of Civil & Urban Eng. & Center for Urban Science + Progress

Underground utility vulnerabilities

Proximal



Spatial Extent

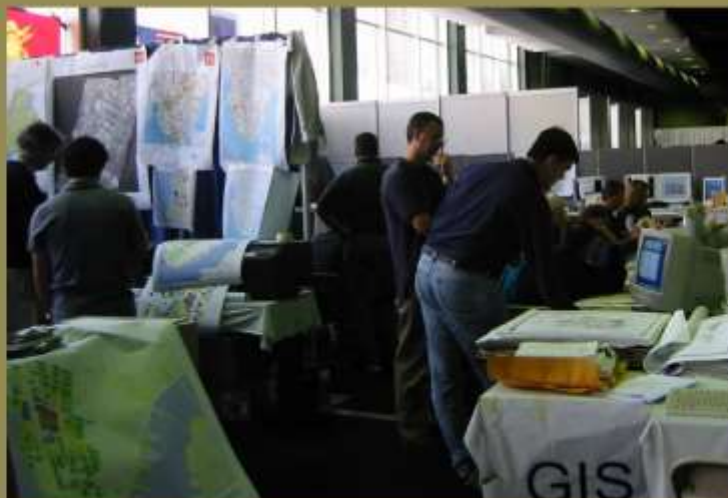


20+ Year struggle

Sep. 11 2001



3 Weeks Later



Real Threats



Today



20 Year struggle

1. Dozens of data owners (private, city, & state)
2. Incomplete data
3. Undigitized data
4. Security concerns
5. Privacy concerns
6. Business concerns
7. Lack of money
8. Lack of integrated leadership



Thank you

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