Specifications of contents in attached excels (Tables S1-S6)

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| Names of attached Excels | Names of sheets in the Excel |
| Table S1 for Phase 1\_News Collection & Cleansing | * Corpus collection * Corpus cleansed * Similarity matrix between news articles |
| Table S2 for Phase 2 Domain Knowledge Components (5 lists of index words) | * Portable water * Saltwater * Road and streets * Buildings (Hong Kong Island & Kowloon) * Buildings (New Territories) * Wastewater & storm water * Electricity * Gas * Telecommunications * Slope protectors * Lifts and escalators * Waste & environment * Hospitals and clinics * Emergency service * Entertainment * Social service * Business stores * Schools * Transit |
| Table S3 for Phase 2\_Domain Knowledge Components (Hong Kong Dictionary of City Infrastructure) | * Potentially affected infrastructures * Synonyms of potentially affected infrastructures * Infrastructure damages * Potentially affected stakeholders * Synonyms of potentially affected infrastructures |
| Table S4 for Phase 3&4\_Recognized Infrastructure/Stakeholder Entities & Verification | * Identified affected infrastructures in 1058 water pipe bursts * Identified affected stakeholders in 1058 water pipe bursts * Summary of verification * Errors (I, II, III, and IV) in each of the 500 selected sample news * 48 OOV words regarding Error II * OOV (Error II) on infrastructure * OOV (Error II) on stakeholder * Summary of Error IV (i.e., Fig. 7) * Distance matrix regarding Error IV |
| Table S5 for Phase 5&6\_Results of IFI rules & Associated Stakeholders | * 11943 potential infrastructure failure association (IFI) rules * 25 Stakeholders’ co-occurrence matrix * Evolution of IFI chains |

Tables S1-S5, Fig. S1 and Fig. S2 are available online in the ASCE Library (www.ascelibrary.org) or GitHub (https://github.com/0AnonymousSite0/Raw-Data-and-Processing-Details)