

Countermeasure Modelling Exercise - Seoul Scenario

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Geographical Location



Test Sites

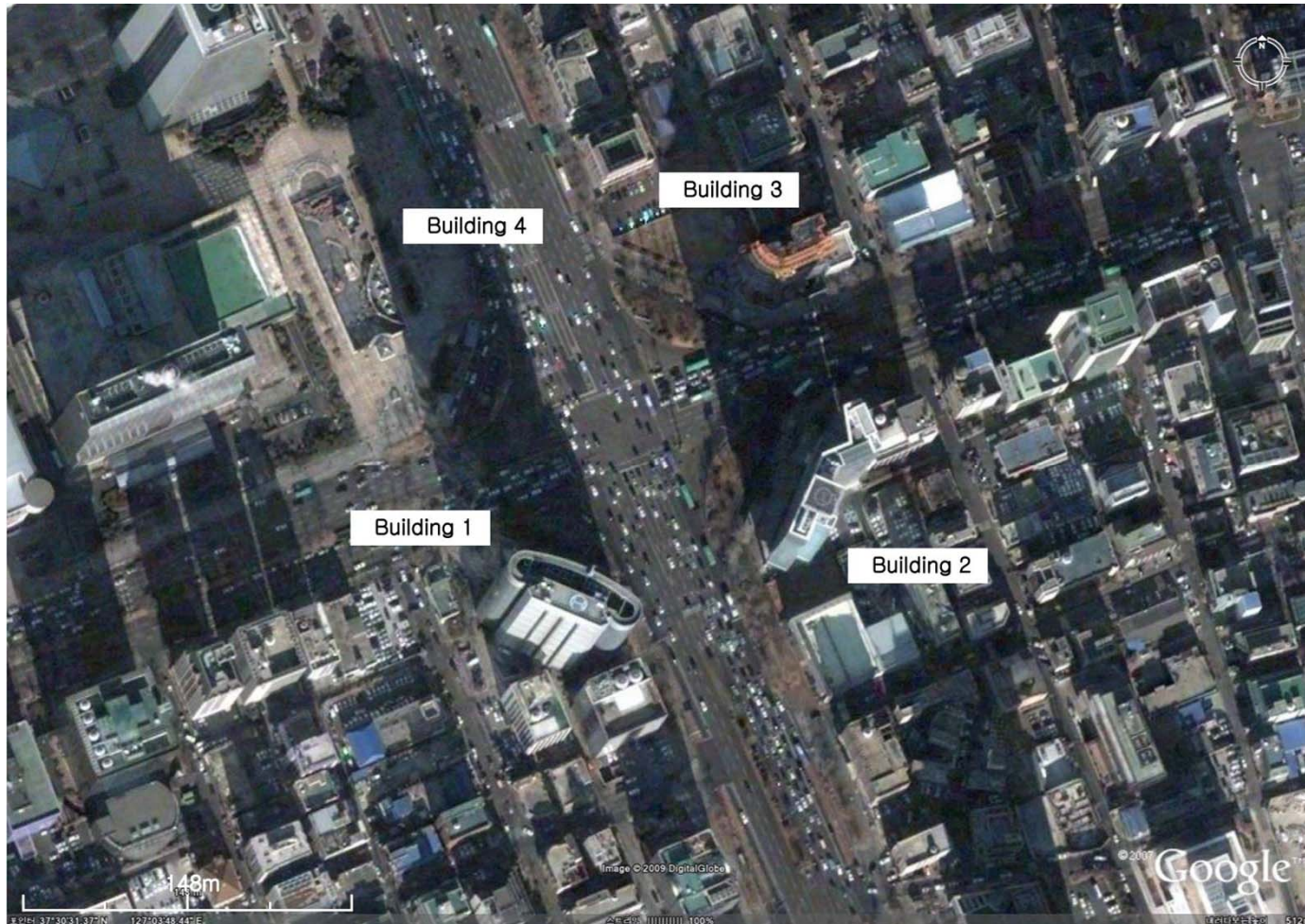


Region 1
Business area

Region 2
Park area



Test Site – Region 1



Building 1

- #1 : ground floor
- #2 : 10th floor
- #3 : 24th floor
(top floor)
- #4 : outside
(block sidewalk)



Test Site – Region 2



Park Area

E1 : dirt pathway

E2 : parking lot
(concrete)



Environmental Information

□ General Information

- ❖ Described in a document
 - Climatological characteristics
 - Human geographical characteristics
 - General description of test sites

□ Detailed Information

- ❖ MS Excel Sheet
 - Building coordinate, building attribute
- ❖ GIS SW (3DViewer)
 - Environmental attribute (building, road, park)



Inputs(1)

- Radionuclides**
 - ❖ **Co-60/Pu-239**
- Deposition Modes**
 - ❖ **Dry deposition**
 - ❖ **Wet deposition with light & heavy rain**
- Deposition (Event) Dates**
 - ❖ **1st June (summer)/1st January(winter)**
- Initial Air Concentration : 1 MBq d/m³**
- Evaluating locations**
 - ❖ **Region 1 – 3 indoors in BD 1 & outdoor**
 - ❖ **Region 2 – park pathway & parking lot**



Inputs(2)

❑ Countermeasures

- ❖ 9 countermeasures including no remediation with different application time after an event

❑ Data for individual dose

- ❖ Different breathing rates with activities
- ❖ Different activity time with individual purposes
- ❖ Particle size



Endpoints

- ❑ **For all combined cases including countermeasures,**
 - ❖ **Contamination density**
 - ❖ **External dose rate**
 - ❖ **Contribution of external dose from each surface**
 - ❖ **Annual external and internal doses**
 - ❖ **Cumulative external and internal doses**
 - ❖ **Countermeasure effectiveness in terms of dose reduction**



Thank you