



DETERMINATION OF NOISE POLLUTION RISK POINTS USING GIS TECHNIQUES

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Introduction



<http://assets.nydailynews.com>



<http://kgab.com>

Objectives

1. To visualize noise pollution level
2. To analyze noise pollution risk points using GIS techniques

Tools and data

1. Software

1.1 PostGIS, SQLyog Community

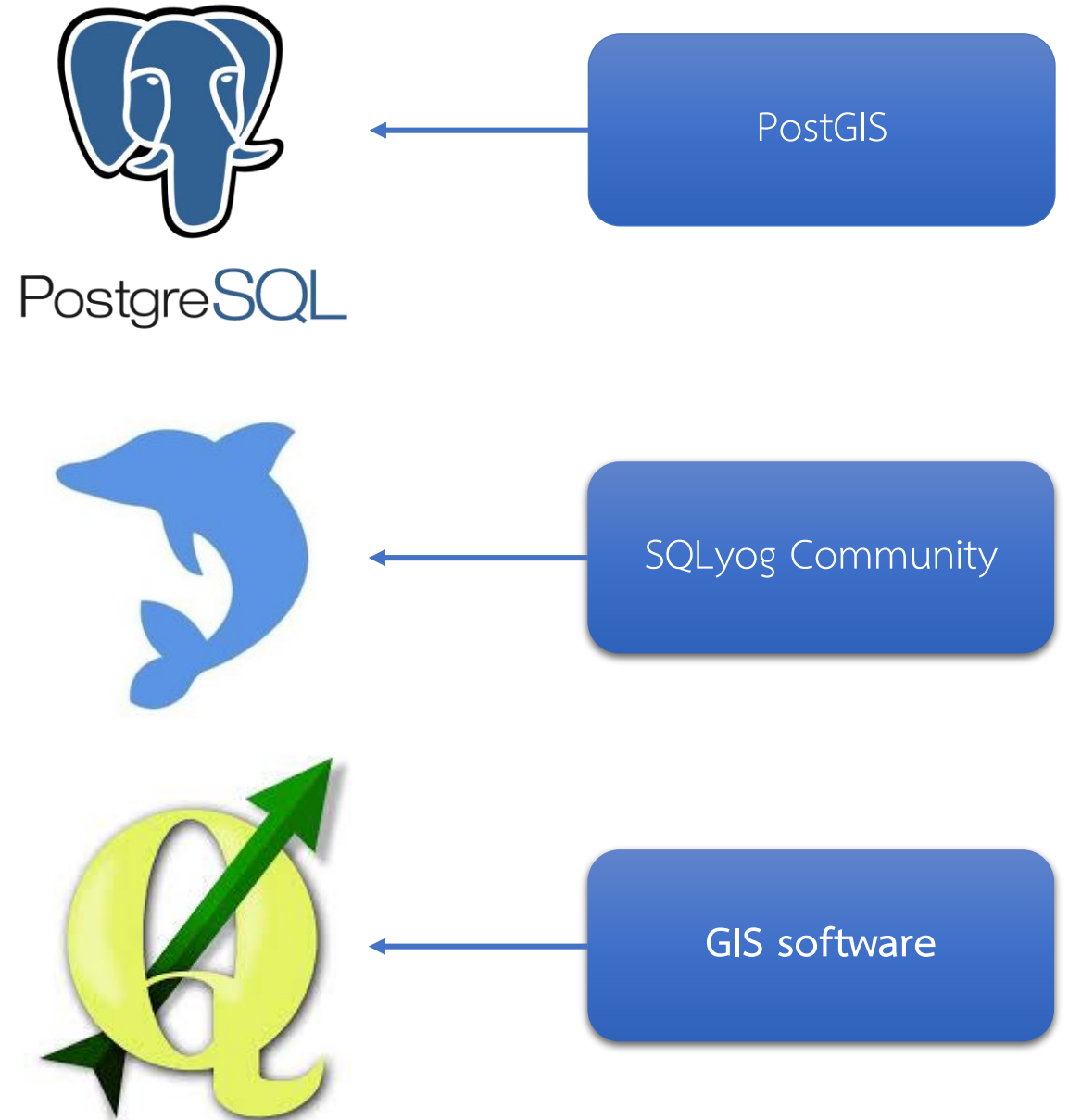
1.2 GIS software : QGIS

2. Data

2.1 date and time (timestamp)

2.2 latitude and longitude (lat, lng)

2.3 noise level (mcp_value)



Methodology

Extract and convert data (lat, lng, pcm_value, ...) to CSV

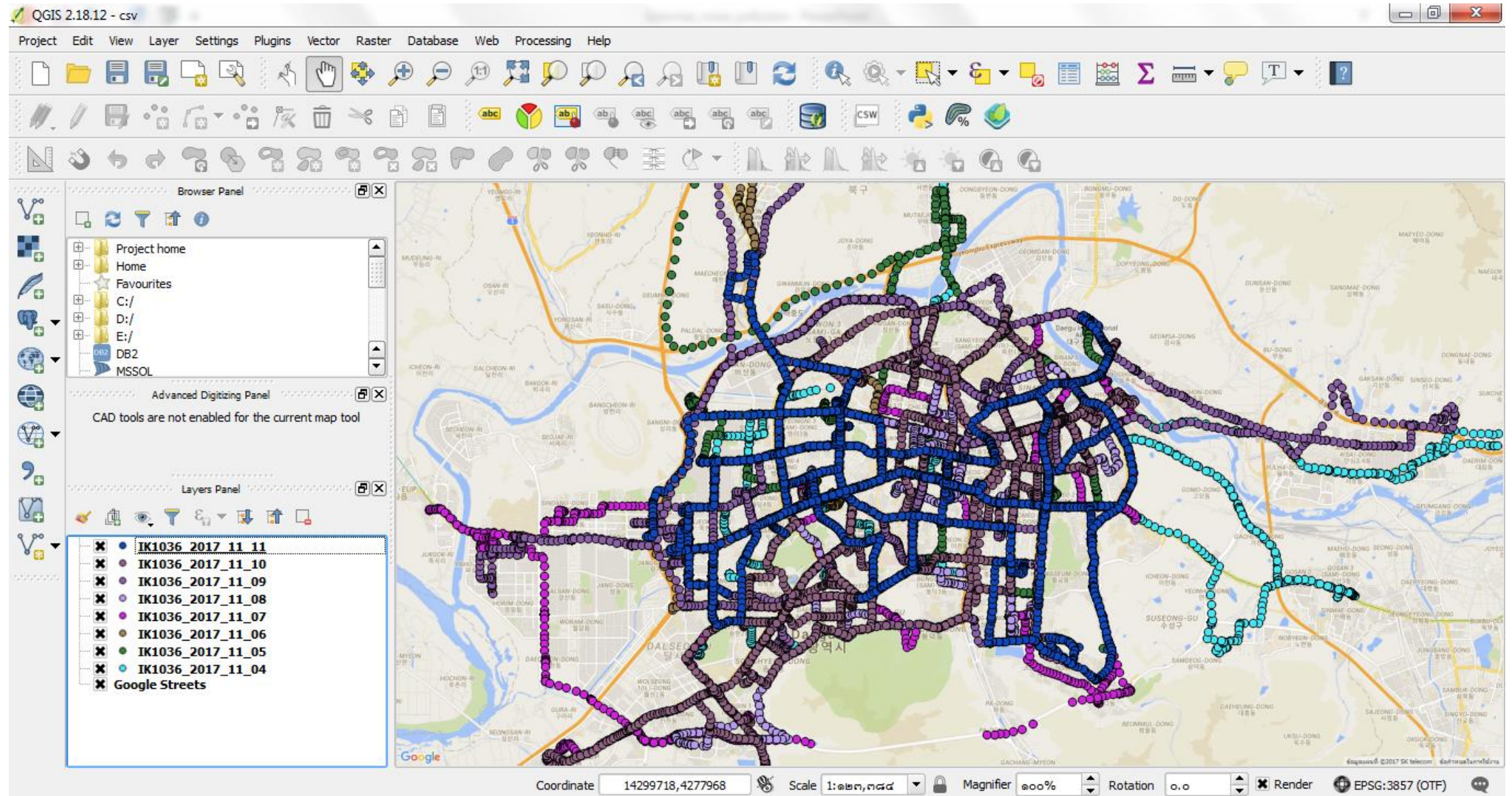
34 cars

6,569 data points

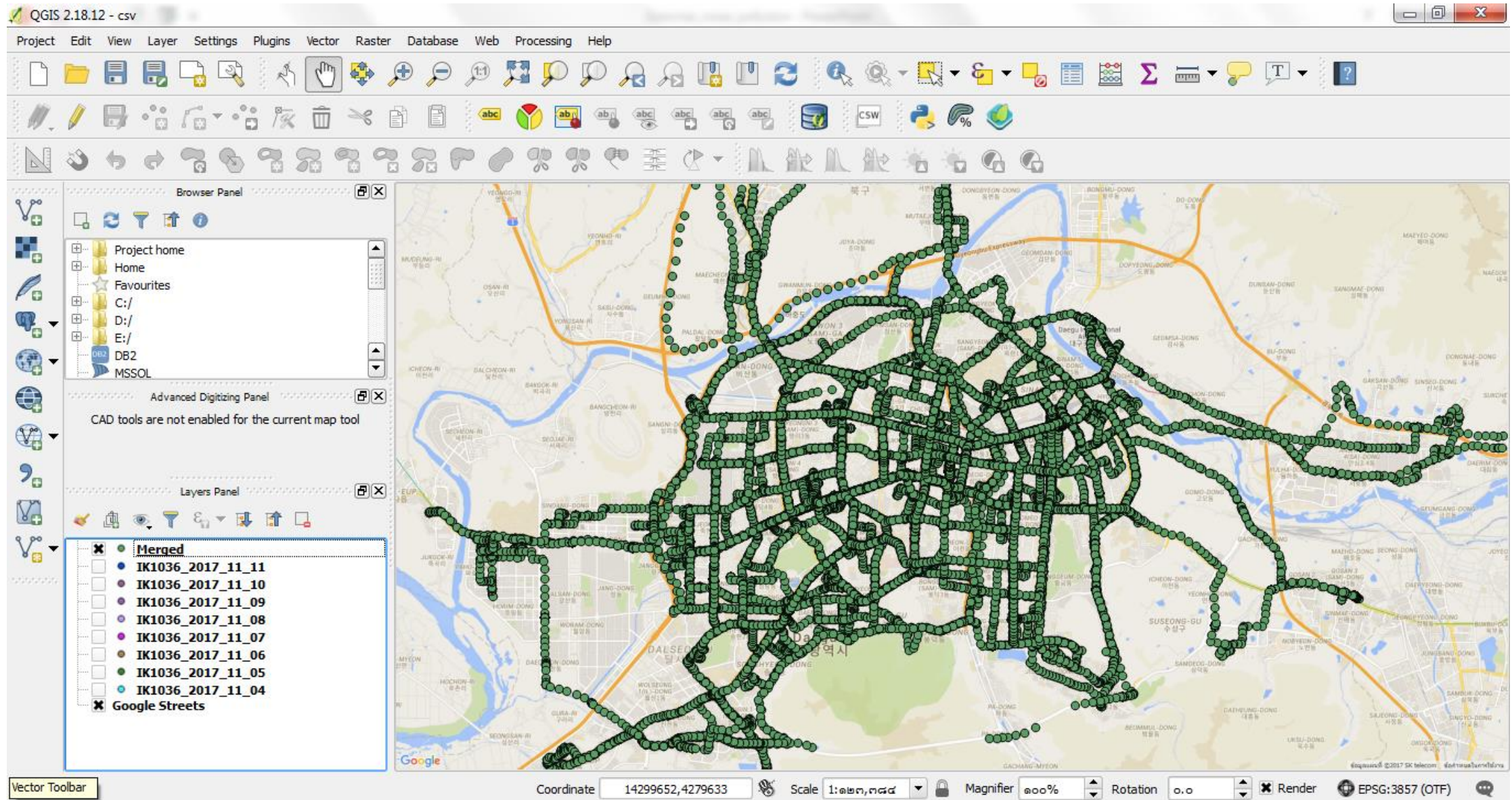
4,253,003
Million data
points

id	gateway_id	node_id	timestamp	total_index	total	total_percent	so2_index	so2_cai	so2_per
813013	PLNGateway	IK2004	2017-06-08 22:12:10	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
813012	PLNGateway	IK2004	2017-06-08 22:12:10	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
813011	PLNGateway	IK2001	2017-06-08 22:12:09	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
813010	PLNGateway	IK2001	2017-06-08 22:12:09	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
813009	SERVER	IK1001	2017-06-08 22:12:07	2	116	77	0	13	
813008	SERVER	IK1013	2017-06-08 22:12:08	1	77	85	0	20	
813007	PLNGateway	IK2002	2017-06-08 22:12:05	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
813006	PLNGateway	IK2002	2017-06-08 22:12:05	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
813005	SERVER	IK1007	2017-06-08 22:12:04	2	200	60	0	15	
813004	SERVER	IK1009	2017-06-08 22:12:04	2	130	74	0	20	
813003	PLNGateway	IK2003	2017-06-08 22:12:03	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
813002	PLNGateway	IK2003	2017-06-08 22:12:03	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
813001	SERVER	IK1003	2017-06-08 22:12:02	1	90	82	0	13	
813000	SERVER	IK1006	2017-06-08 22:12:01	1	74	86	0	15	
812999	PLNGateway	IK2004	2017-06-08 22:12:00	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
812997	PLNGateway	IK2001	2017-06-08 22:11:59	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
812998	PLNGateway	IK2004	2017-06-08 22:12:00	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
812996	PLNGateway	IK2001	2017-06-08 22:11:59	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
812995	SERVER	IK1001	2017-06-08 22:11:57	2	116	77	0	23	
812993	PLNGateway	IK2002	2017-06-08 22:11:55	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)

Methodology



Methodology



Methodology (cont'd)



< 20 dB



20 – 40 dB



40 – 60 dB



60 – 80 dB



> 85 dB

Risk Point ที่ต้องการ



5

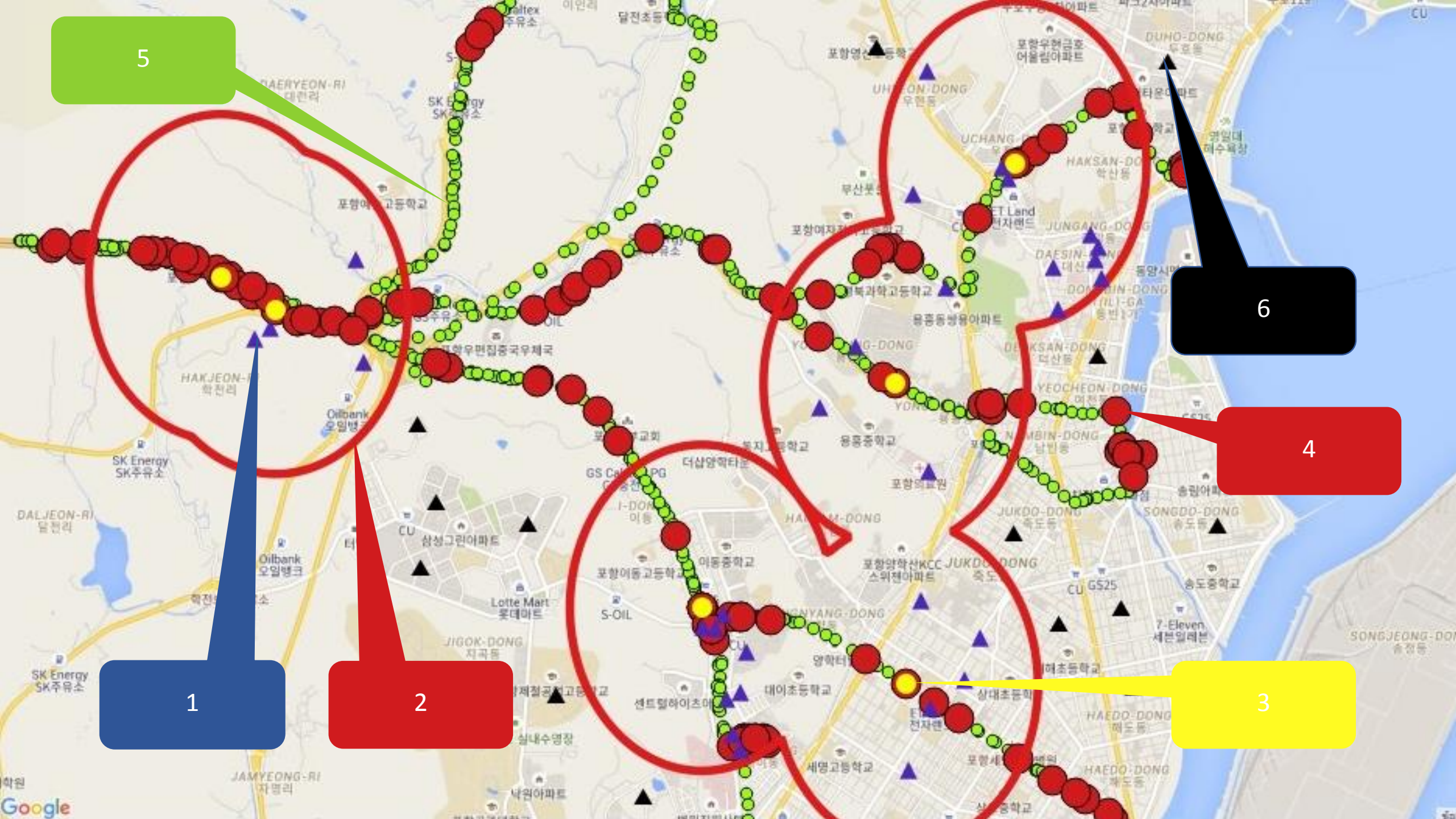
6

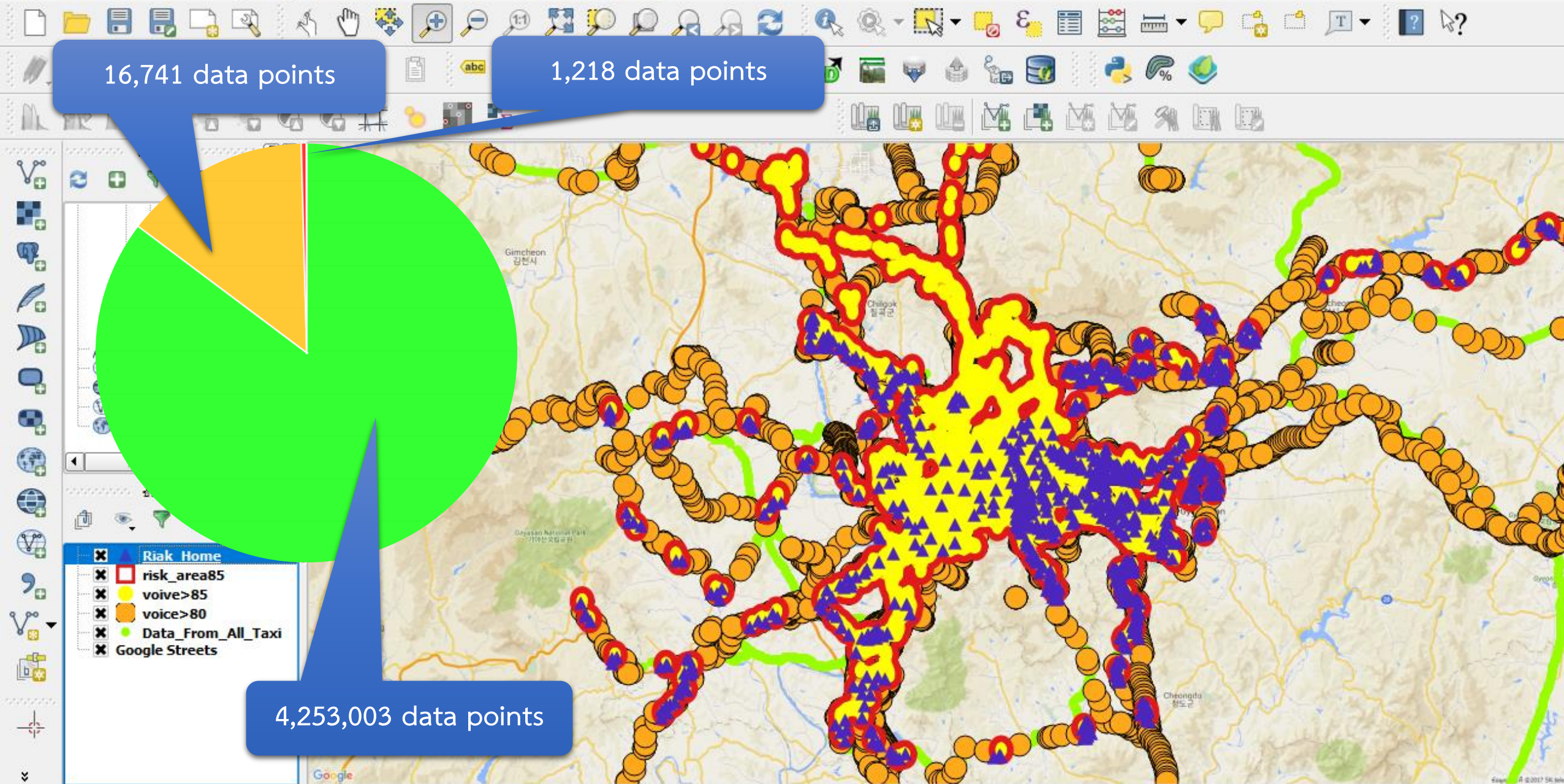
4

1

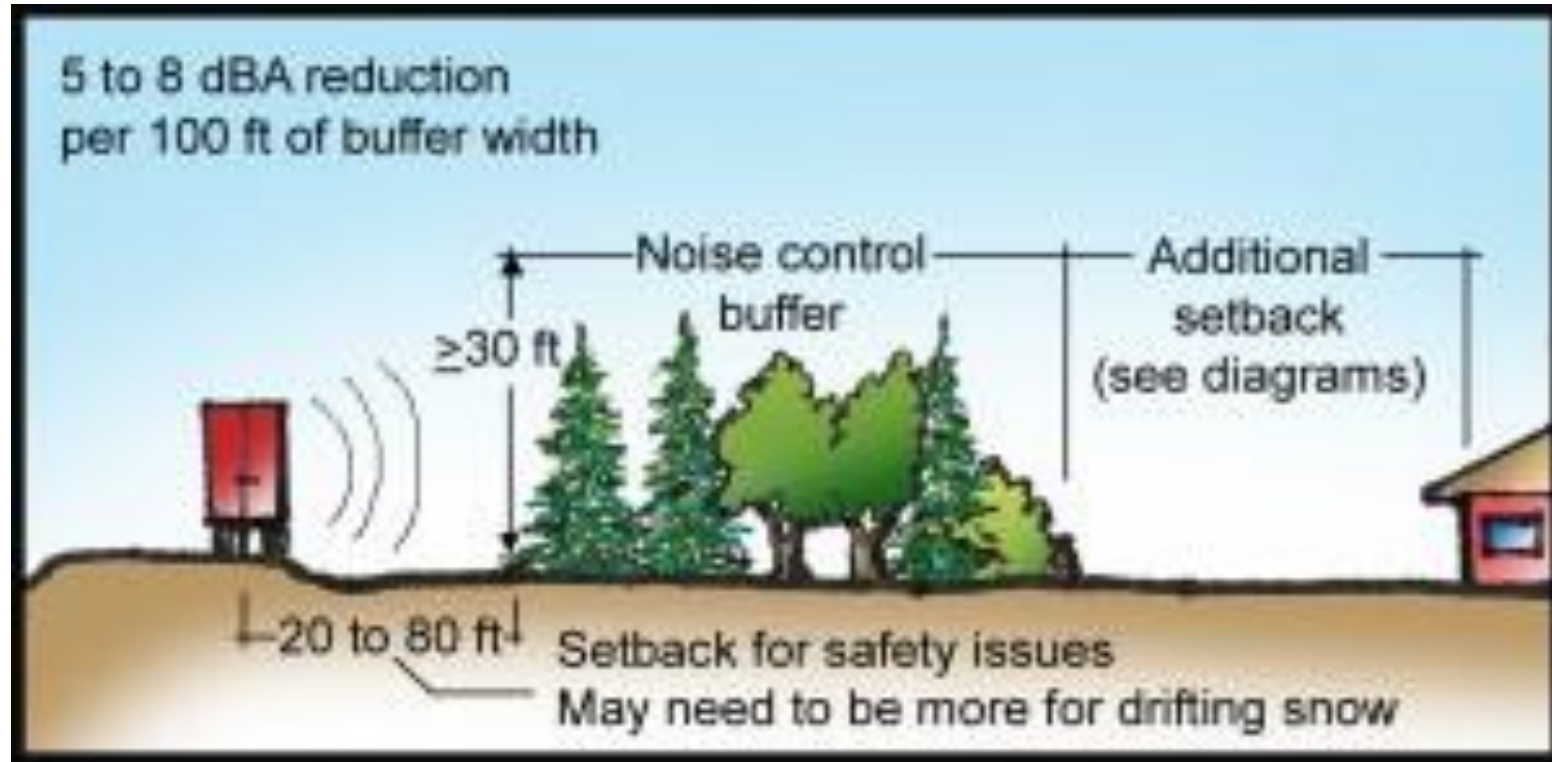
2

3





Discussion



Thank you