



AI-BASED GEO INTELLIGENT SYSTEM FOR ATTACK PREDICTION AND VIRTUAL SIMULATION



PRESENTED BY

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Agenda



Introduction



Objectives



Proposed solution



GIS Technology



DEM Image Analysis



AI with GIS



The role of Artificial
Intelligence and Metaverse



Simulations of proposed
Framework

Introduction



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Objectives

Design and identify the loopholes of spotting the enemy hiding locations and the predict the possible threat locations thereafter simulating the entire model in metaverse for training soldiers in warlike scenarios.

**Terrain
Identification using
GIS**

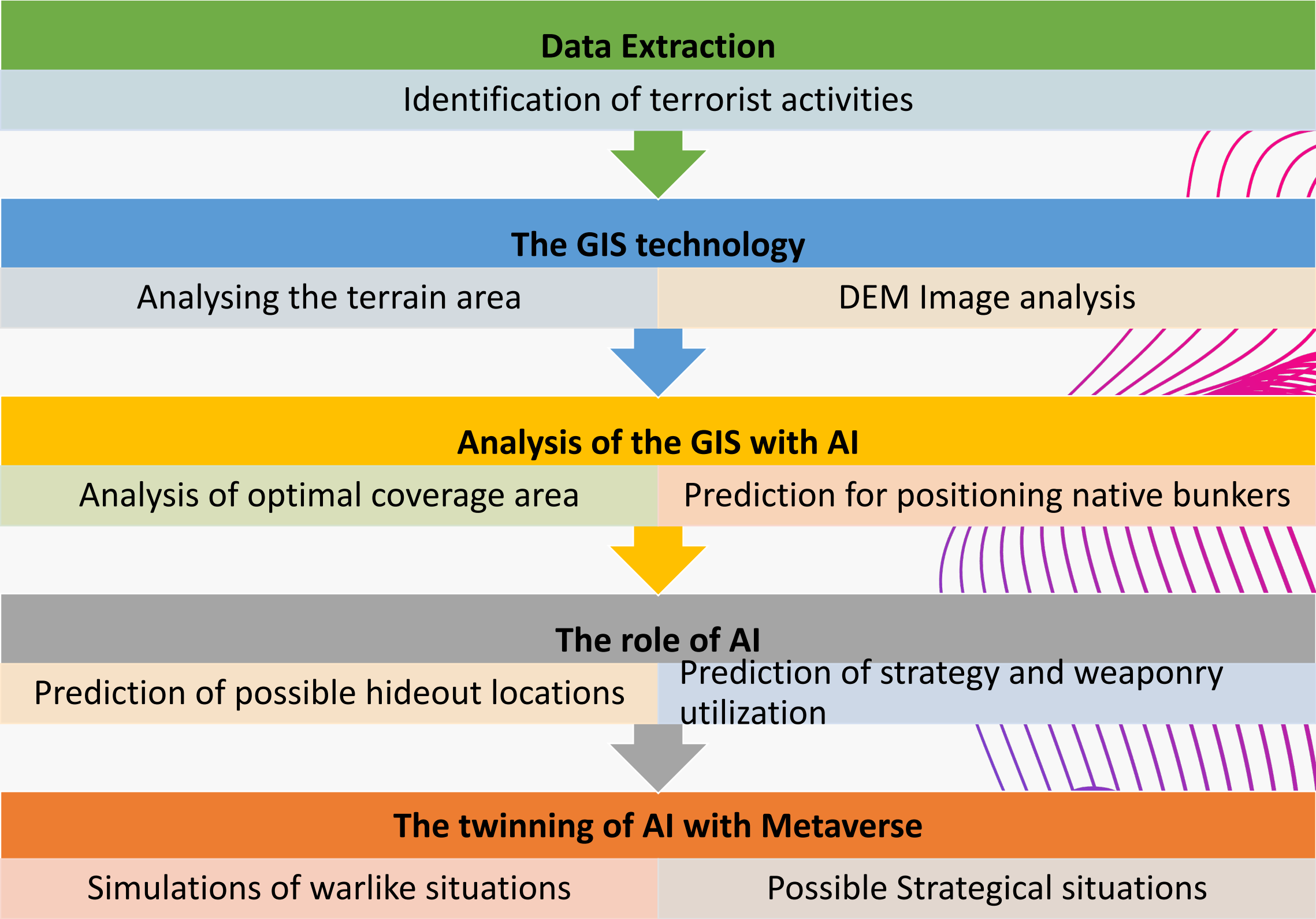
**Computer vision and
AI Predictive models**

**Metaverse for
simulation and
training**

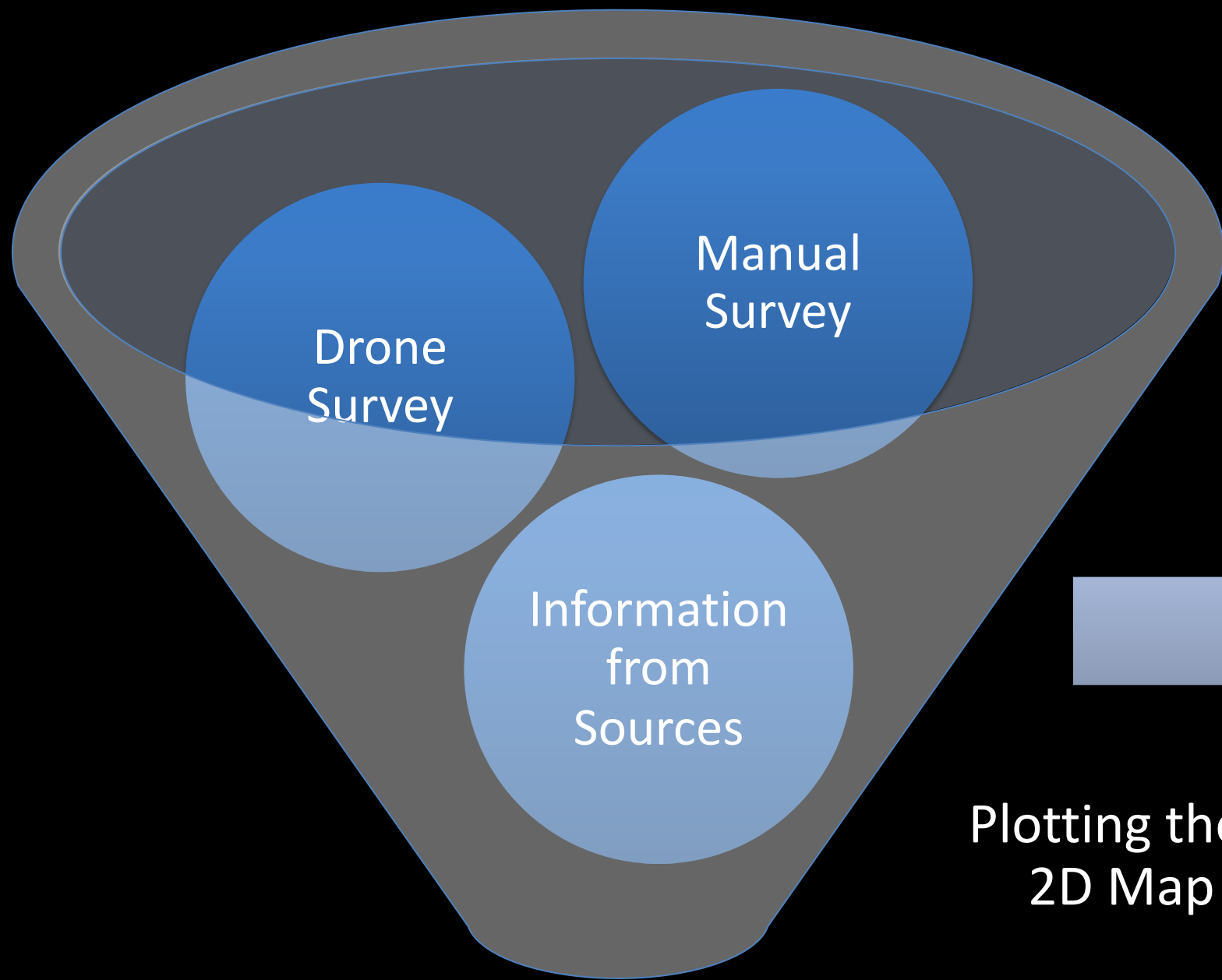
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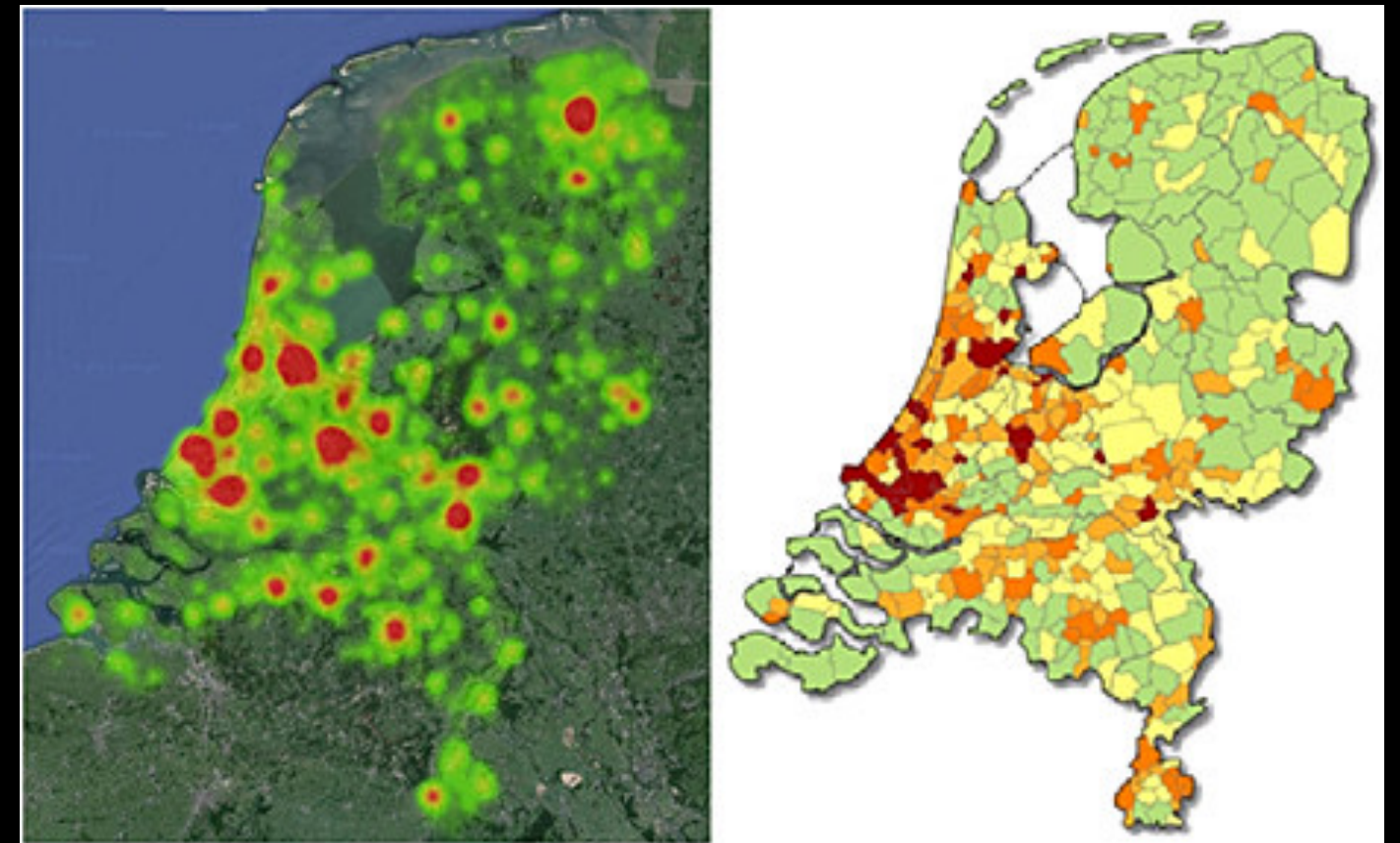
Proposed Solution



Data Extraction



Plotting the information on 2D Map using GIS tool



Data Extraction along with coordinates

GIS Technology



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	A	B	C	D
1	Station_Name	Longitude	Latitude	
2	Station 1	103.630	1.286	
3	Station 2	103.681	1.309	
4	Station 3	103.720	1.368	
5	Station 4	103.800	1.420	
6	Station 5	103.833	1.315	
7	Station 6	103.910	1.355	
8	Station 7	104.005	1.346	
9	Station 8	103.759	1.333	
10				

Coordinates of stations

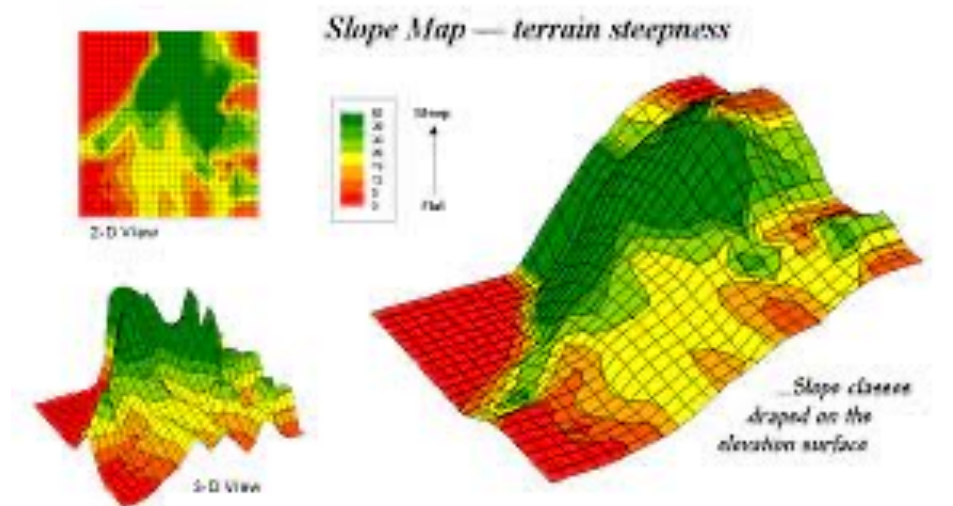
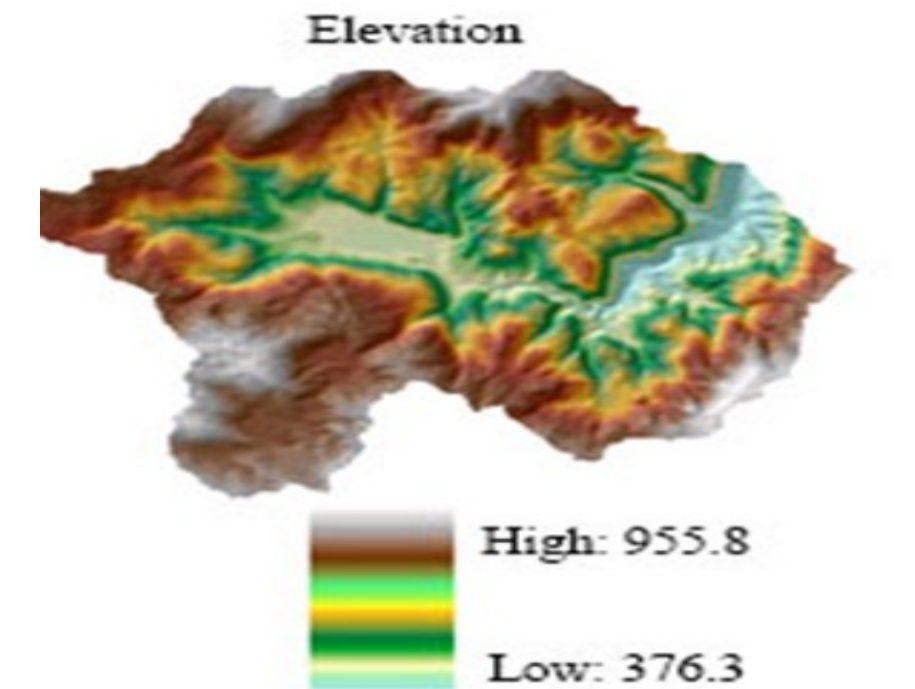
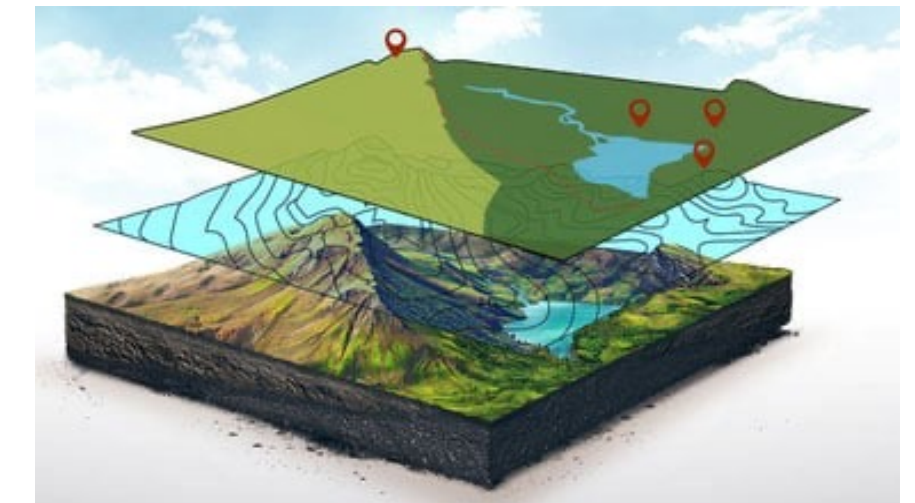
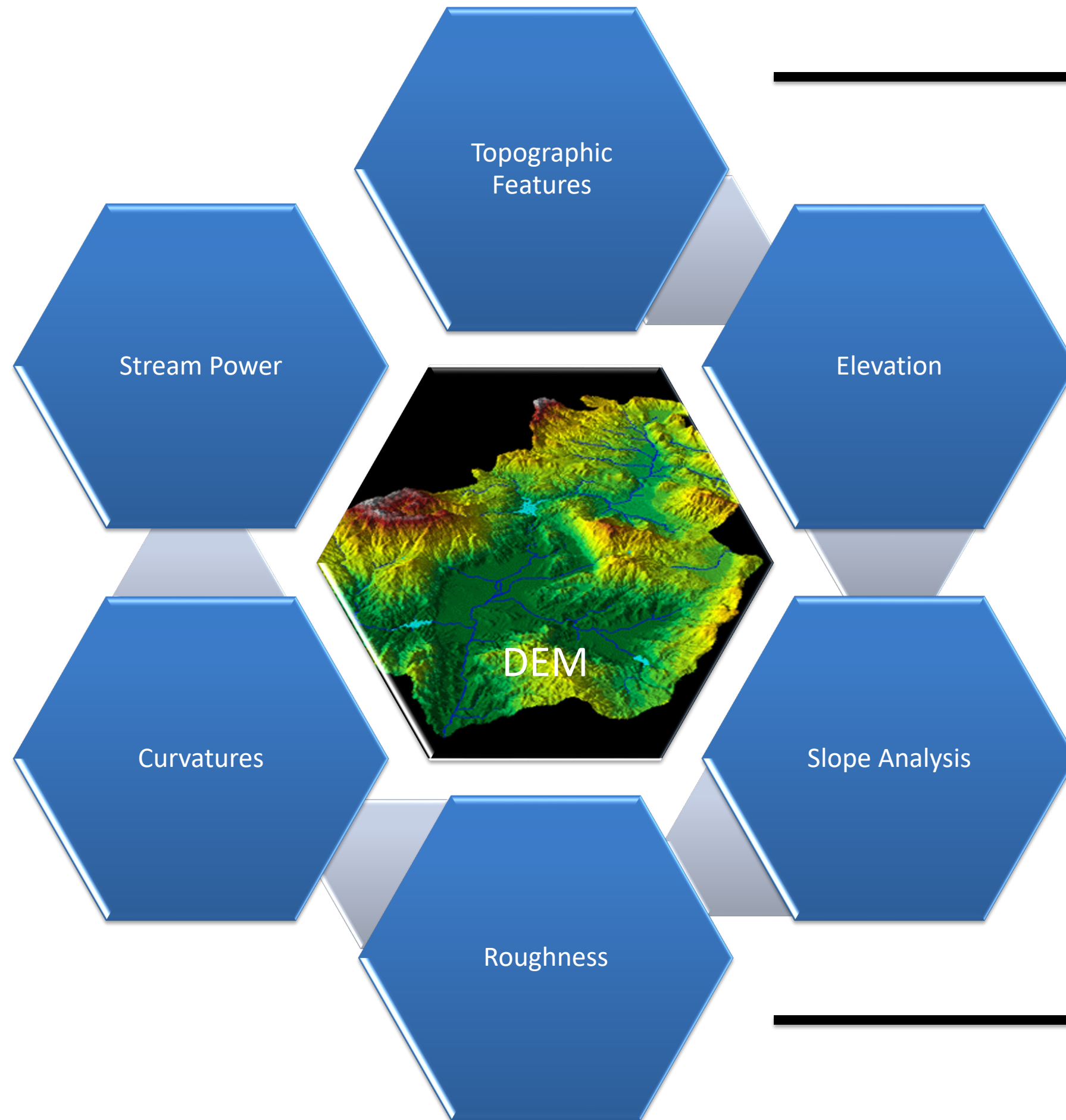
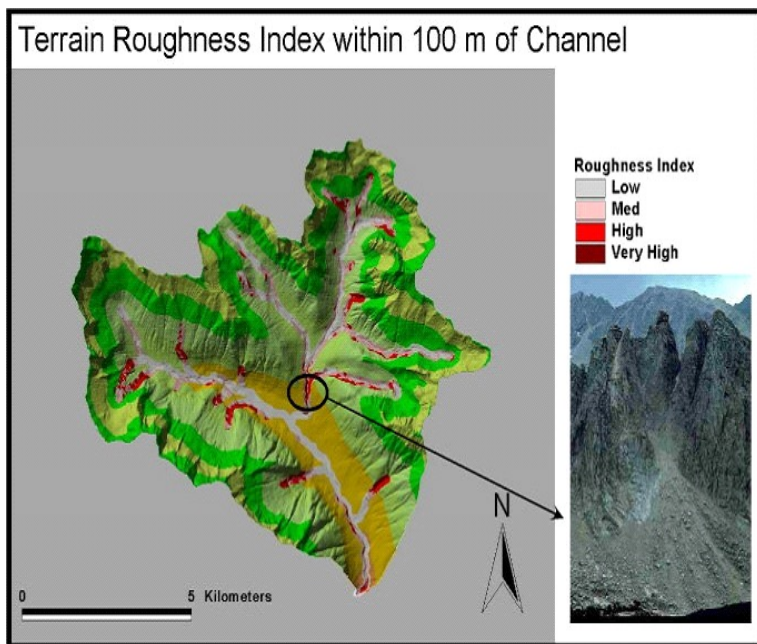
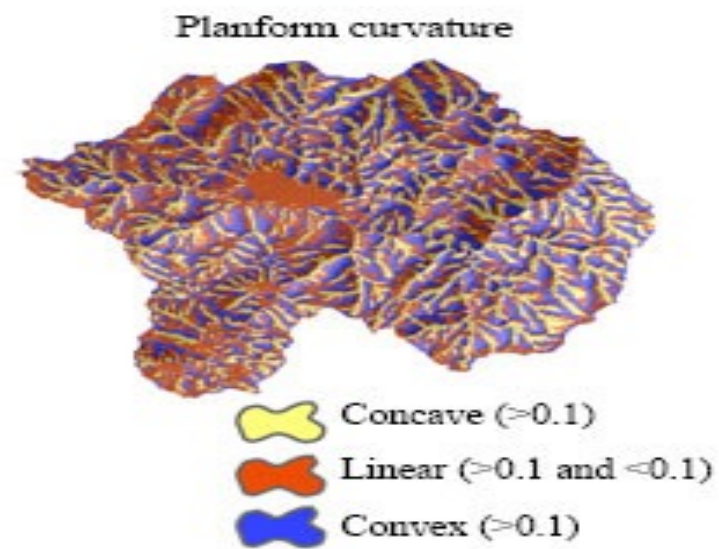
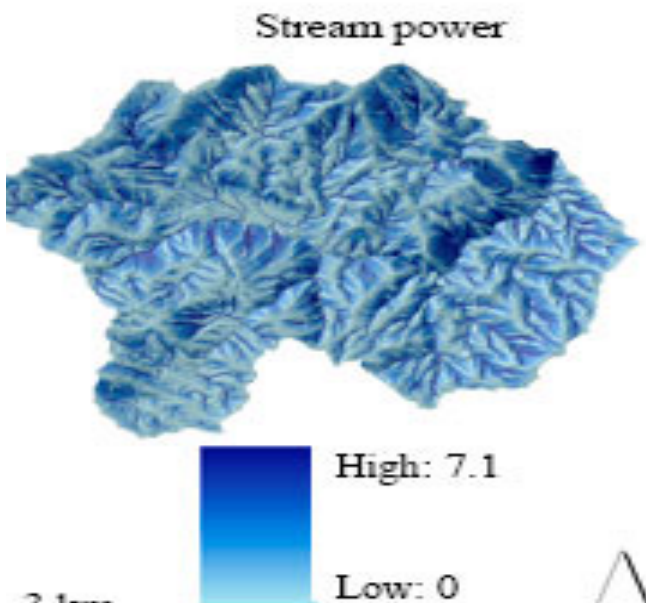


Plotting the points on 2D Map

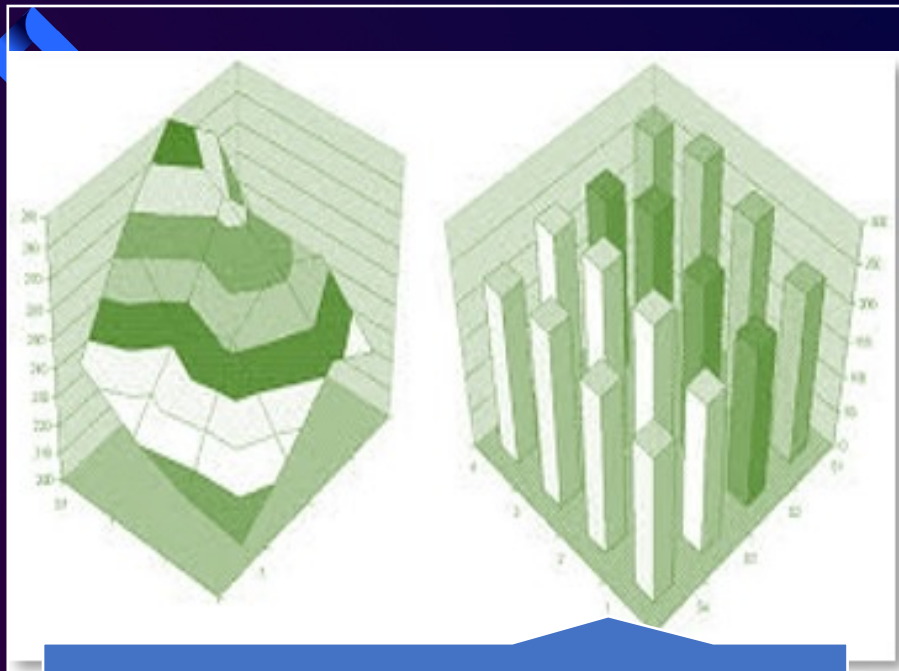


Generating a 3D Map for the coordinates

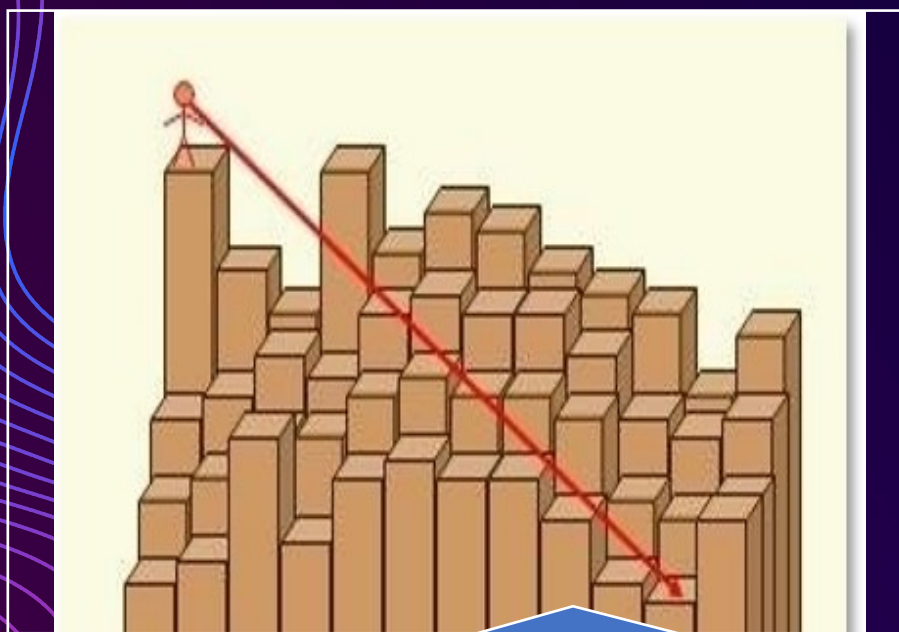
Digital Elevation Models for image analysis



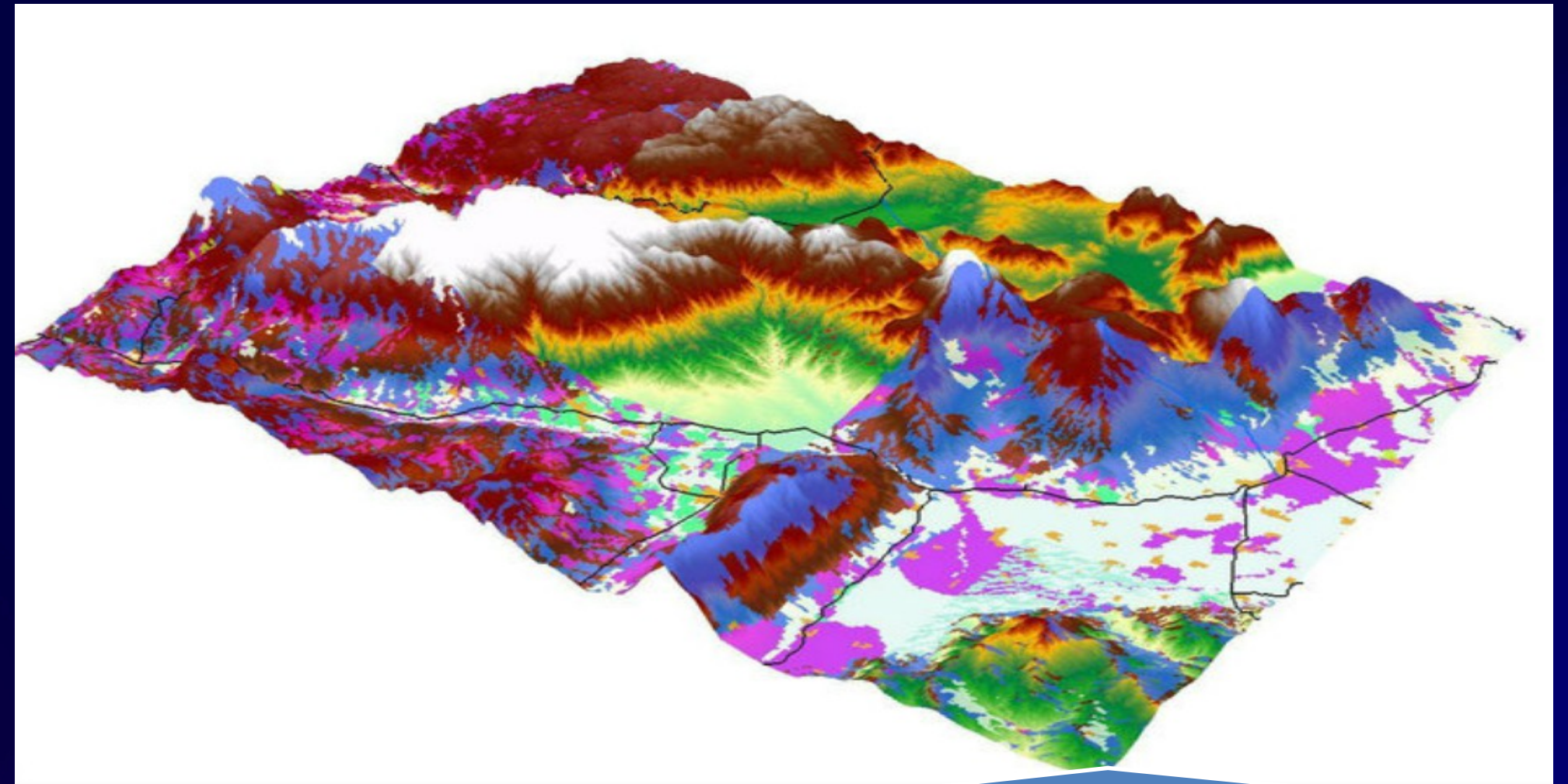
DEM image for placement of optimal bunker location



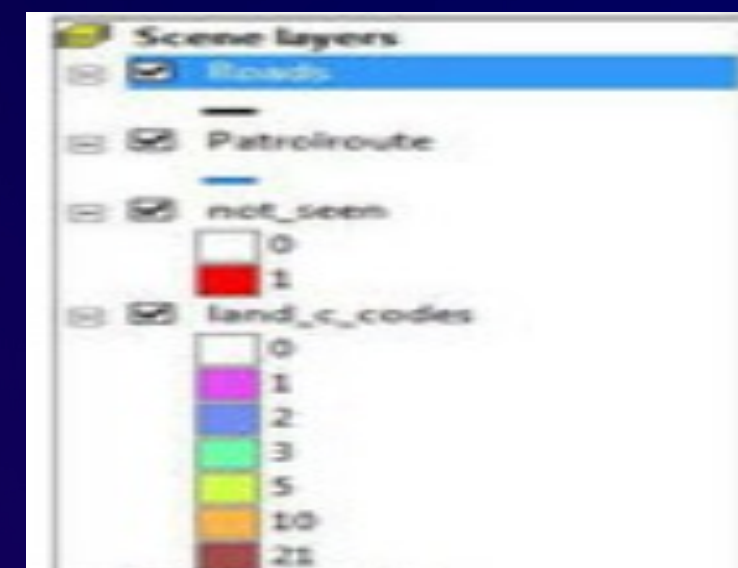
Bar Graph Representation of Surface Area



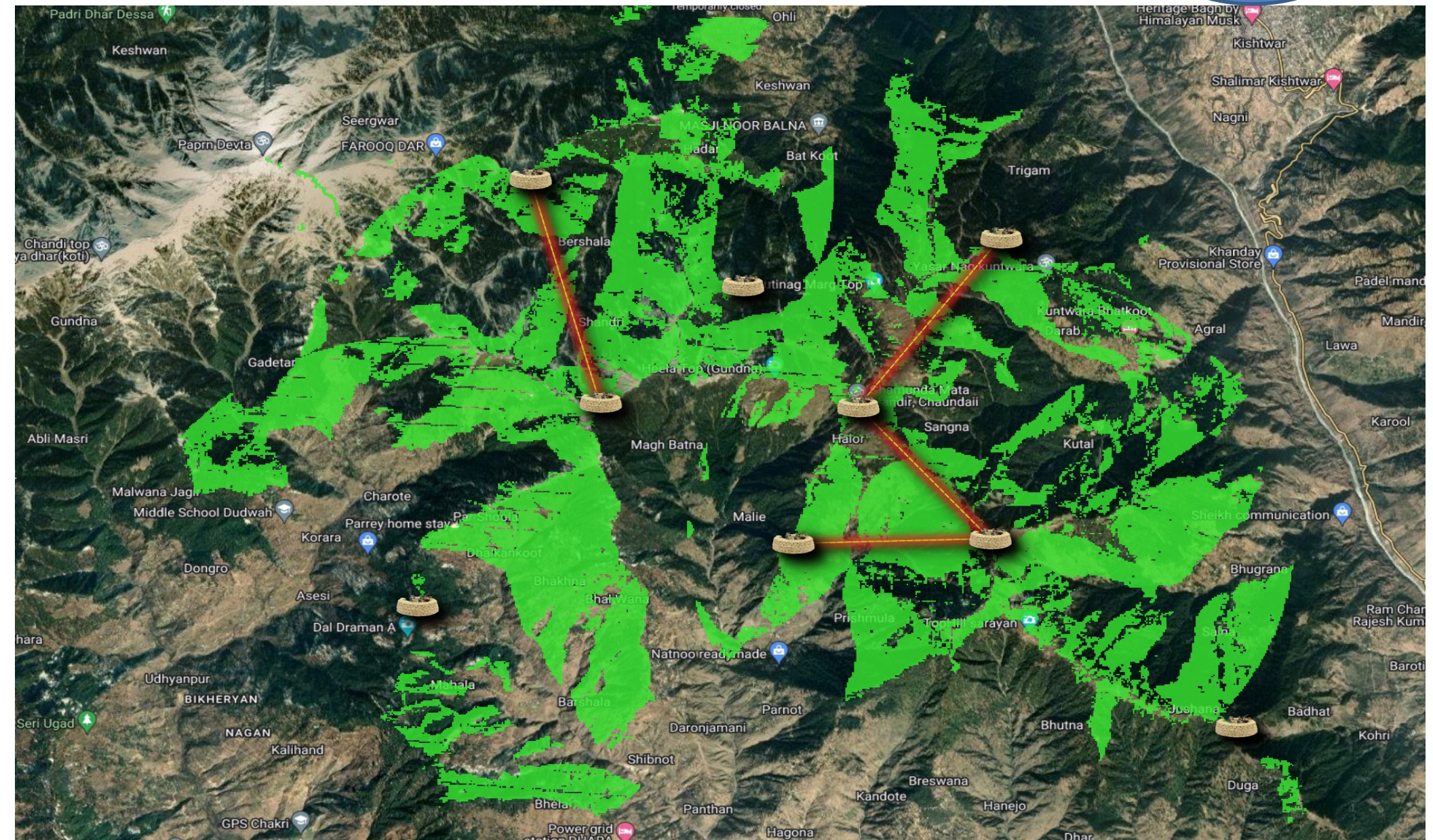
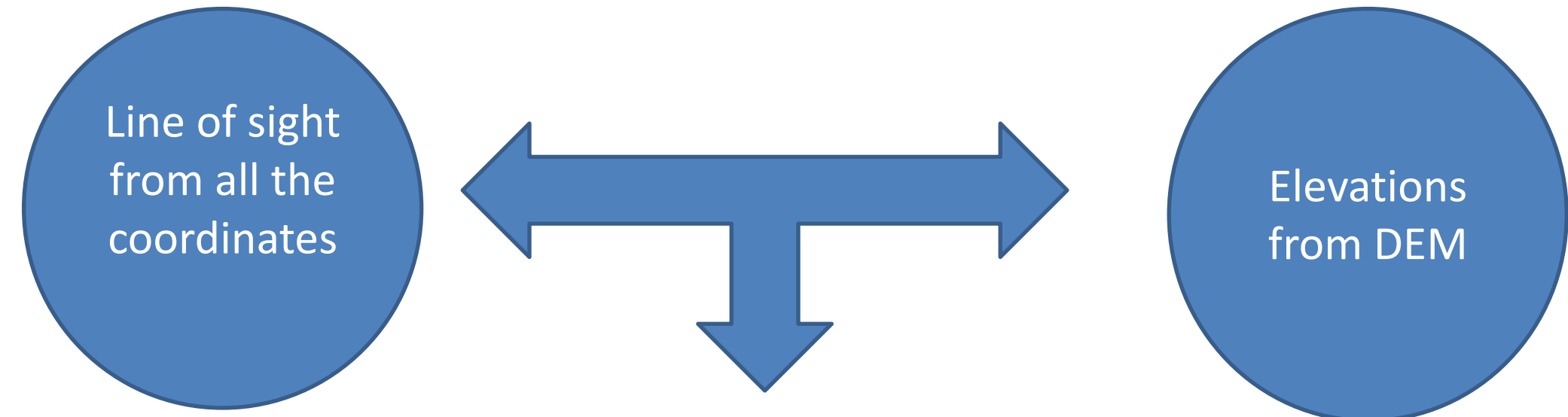
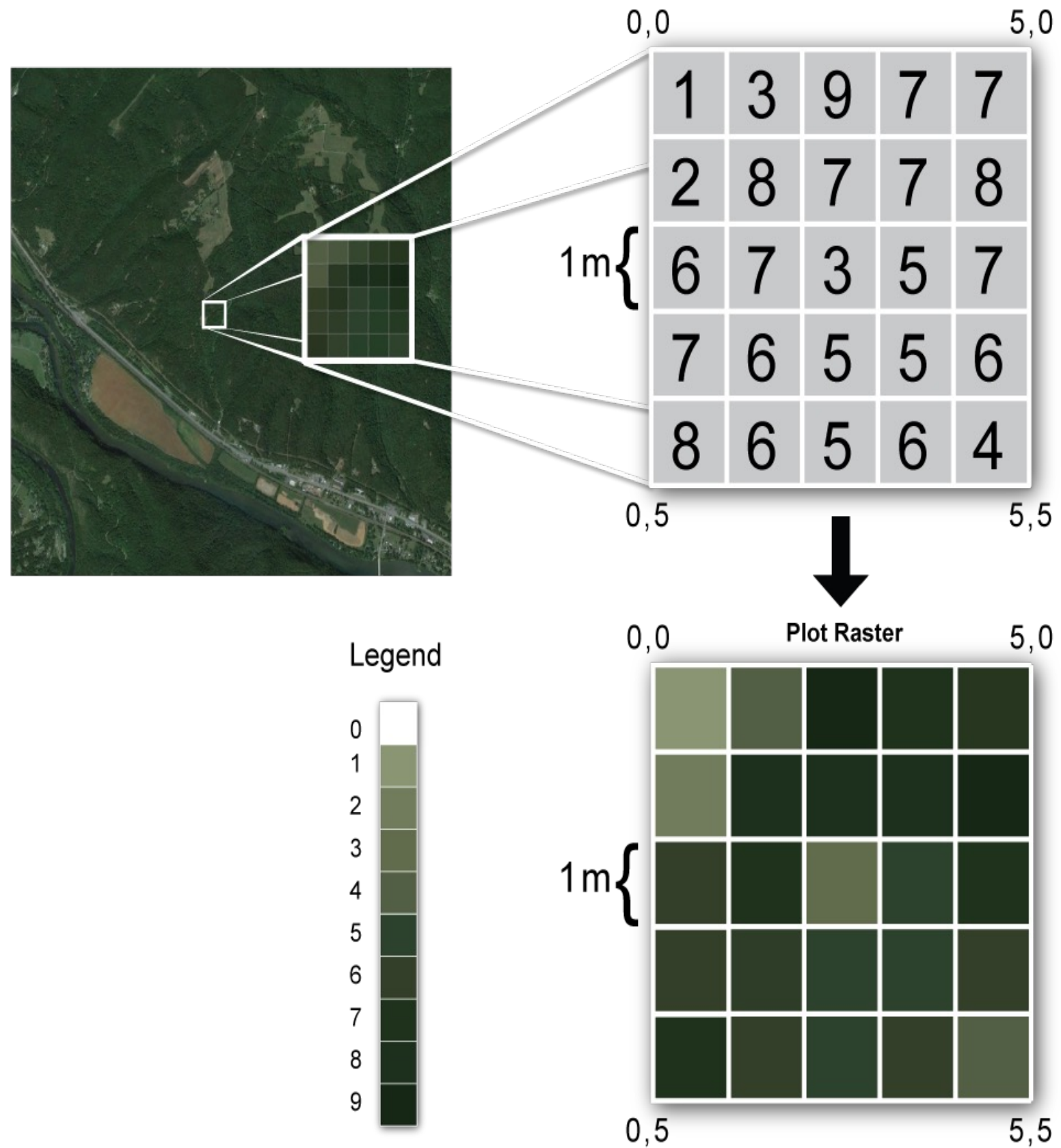
Line of sight from each slope



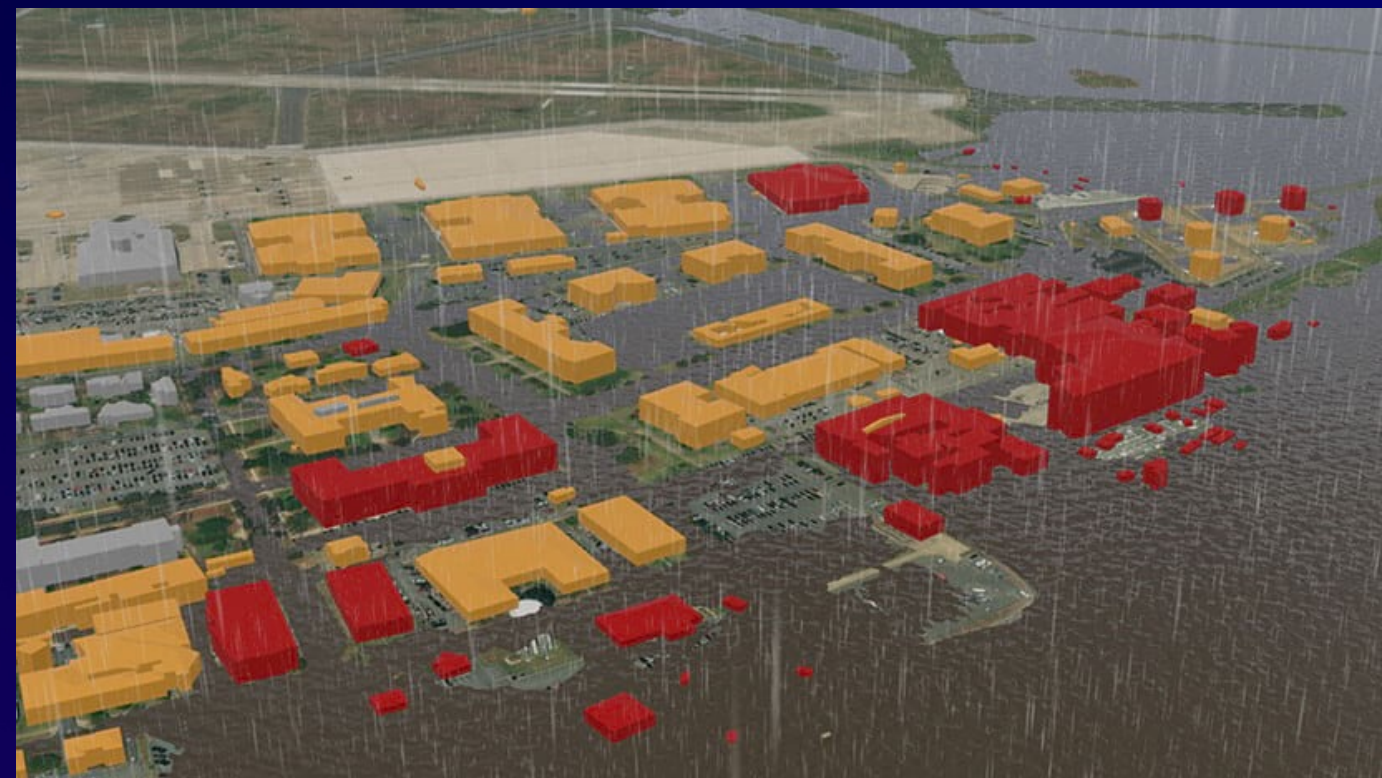
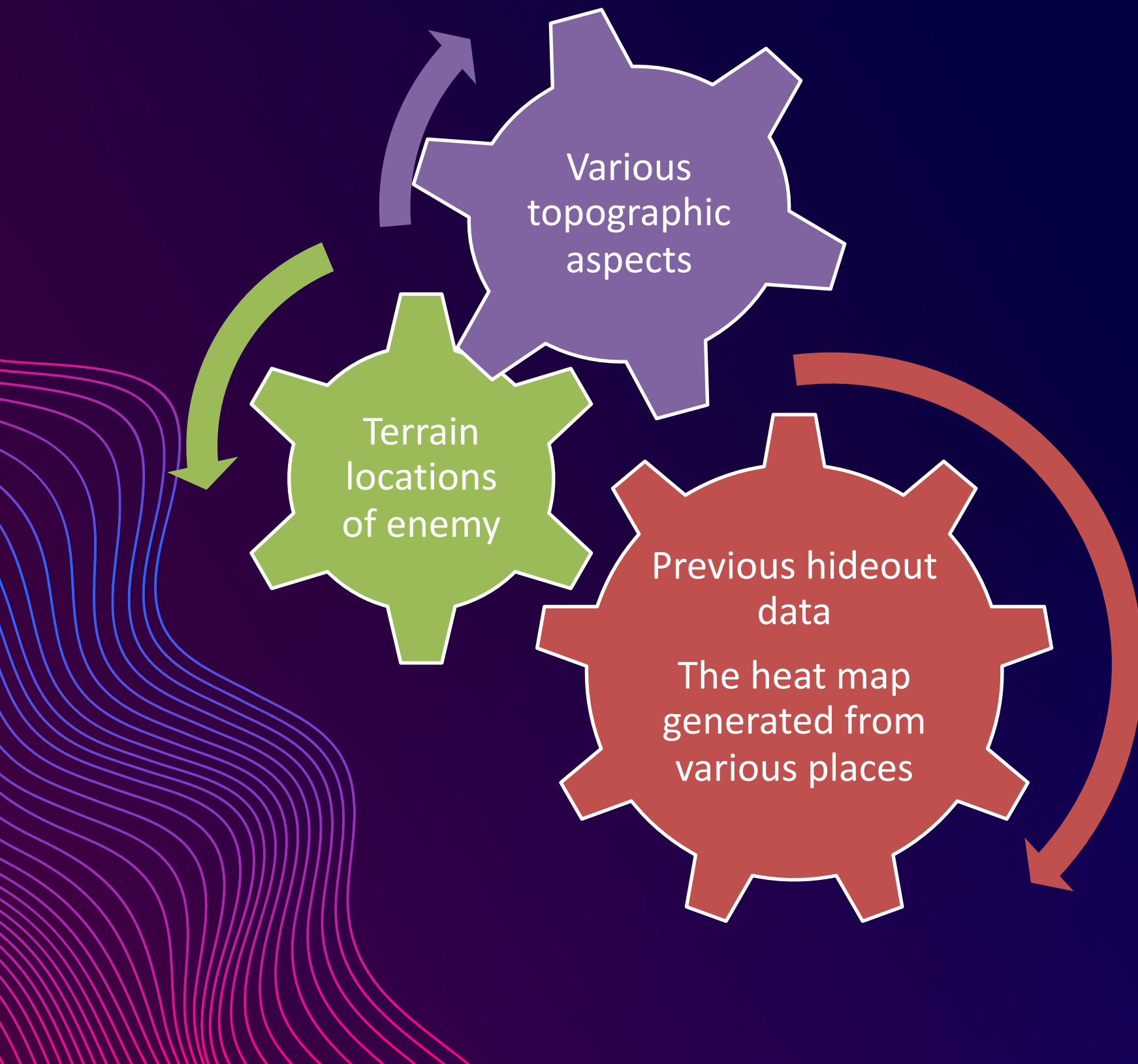
3D-Map of the land cover types on different heights



AI Predicted bunker locations for native soldiers



AI predicted enemy locations



The role of Artificial Intelligence and Metaverse



Parameters to enhance the training using AI in Metaverse

Parameters for assessment of Soldiers performance	Parameters of inclusion in metaverse for training the soldier
➤ Type of personality of the Soldier (Physical and mental fitness)	➤ Strategy planning
➤ Constraints on food accessibility	➤ Choice of terrain
➤ History of geographical data previously resided by the soldier	➤ Choice of weapon
➤ Immunity test in various weather conditions	➤ Choice of additional accessories



Thank you

12/27/2020
5:00:00 AM - 5:59:59 AM

X Axis	Y Axis	Aggregation	Interval
time	float rainfall	Sum	1 Hour

Sum rainfall over Time

