URBAN GEOGRAPHY

Issue: GIS accessibility, cost, and application
Lesson inquiry: How valuable is comprehensive GIS data?
Career connection: Nikolas Smilovsky, Director of Geospatial Solutions, Bad Elf, LLC

GEOGRAPHIC QUESTIONS:

- *How can GIS data be used at different scales?*
- *What different ways can field data be collected and integrated?*
- *How has field data collection evolved?*

RELATED GEOGRAPHY CAREERS:

- *Logistics Analysts*
- *Geographic Information Systems Technologists and Technicians*
- *Urban and Regional Planners*

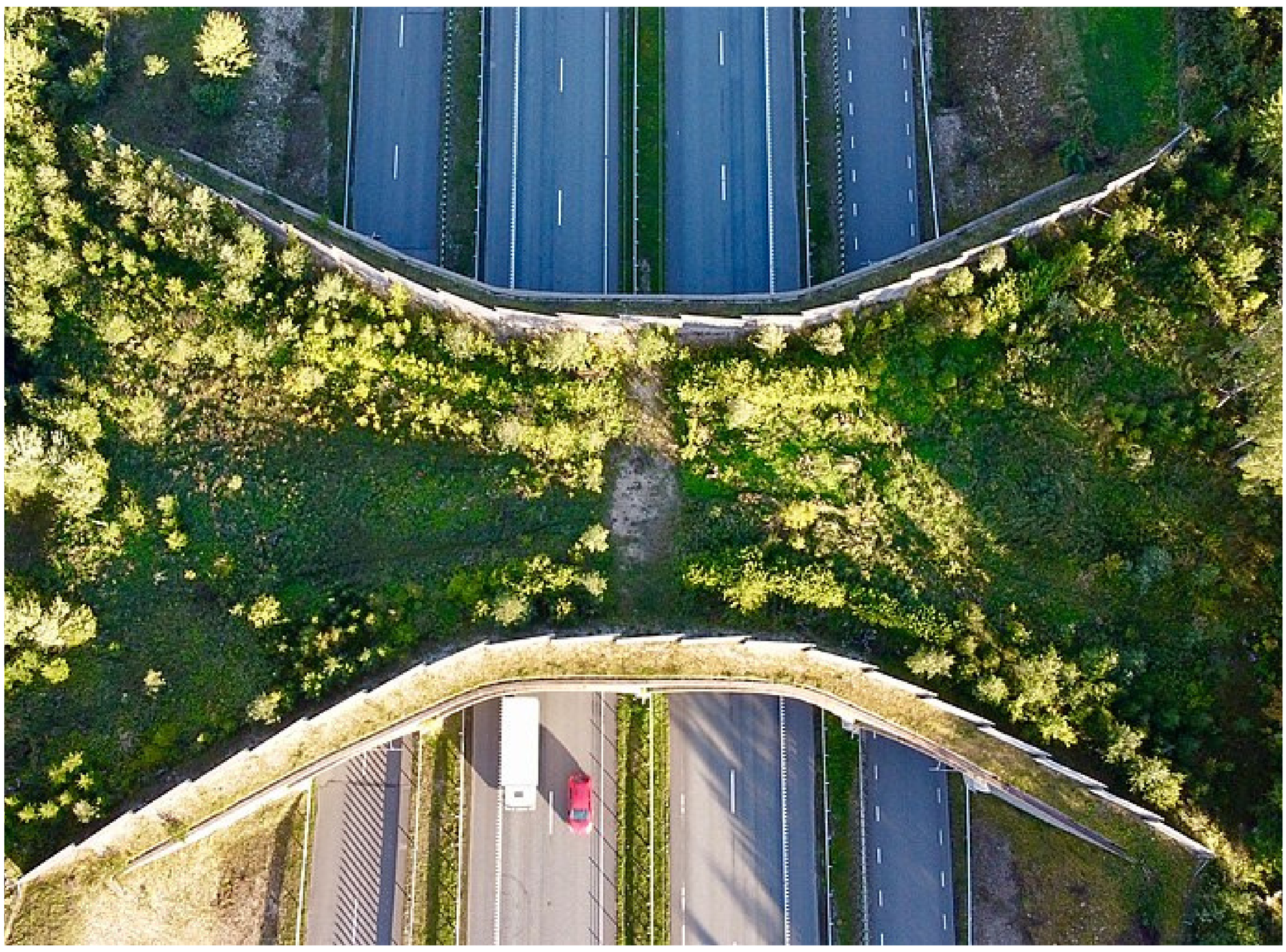


Photo: A wildlife land bridge crosse over a freeway

APPLICATIONS:

- *Examine the accessibility of field data collection*
- *Use free software to create different themed inventories*

INTERVIEW DIGEST: NIKOLAS SMILOVSKY

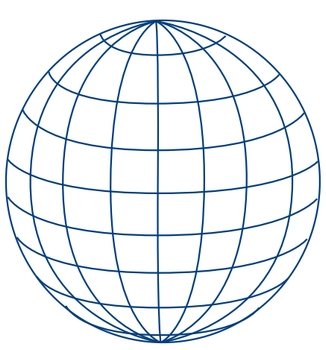
"I deal with every type of individual, organization, or entity that completes geospatial field data collection. The amount of technology and science that Bad Elf works and integrates with is expansive. We help so many efforts out around the world. Let's just say, if you don't have good geospatial data, you won't complete good work."

Photo: Nikolas Smilovsky collecting data

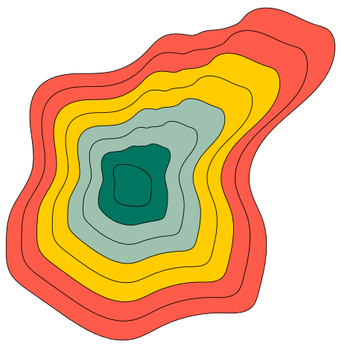
LESSON ACTIVITY EXAMPLE:

- Have students complete a field data collection inventorying trees on the grounds of the high school and map them using QGIS. Then explore the possibility of accurately mapping other themes at the school e.g. fire extinguishers, bathrooms, trash bins, vending machines, exits, etc.
- Have students read through this case study and do their best to explain the process back in a one-page summary identifying the issue, solution, and results.

GLOSSARY:

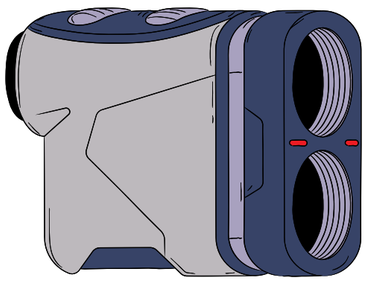


LATITUDE/LONGITUDE

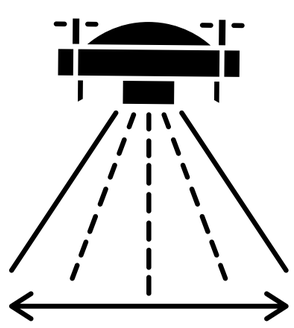


ELEVATION VALUES

UTILITY LOCATORS



RANGEFINDERS



LIDAR

SKILLS:

- *ArcGIS, QGIS*
- *Remote Sensing*
- *Geographic information systems (GIS)*
- *Computer aided drafting and design (CADD)*
- *Drone work*

BACKGROUND RESOURCES:

- *Field collection with QGIS app*
- *Map a single set of coordinates in QGIS*

DATA:

- *Field collected latitude and longitude coordinates*
- *Elevation values*
- *Aerial imagery*
- *Point clouds*
- *Temperature readings*
- *Light Spectrum*

Photo: San Diego's urban sprawl

{ RppforCS : ENCODING GEOGRAPHY }