Digital Transformation in Automotive Industry by Using ArcGIS

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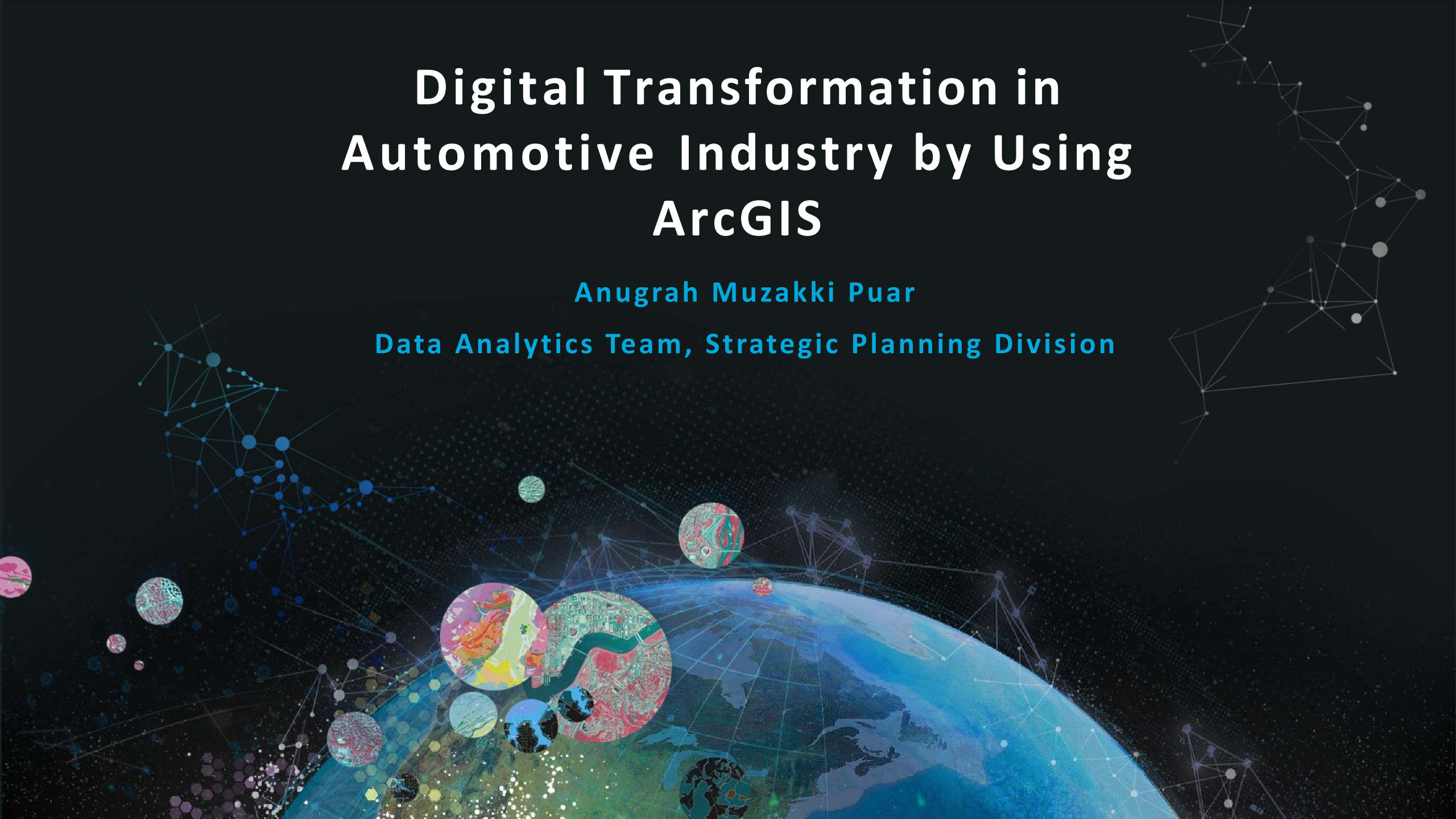


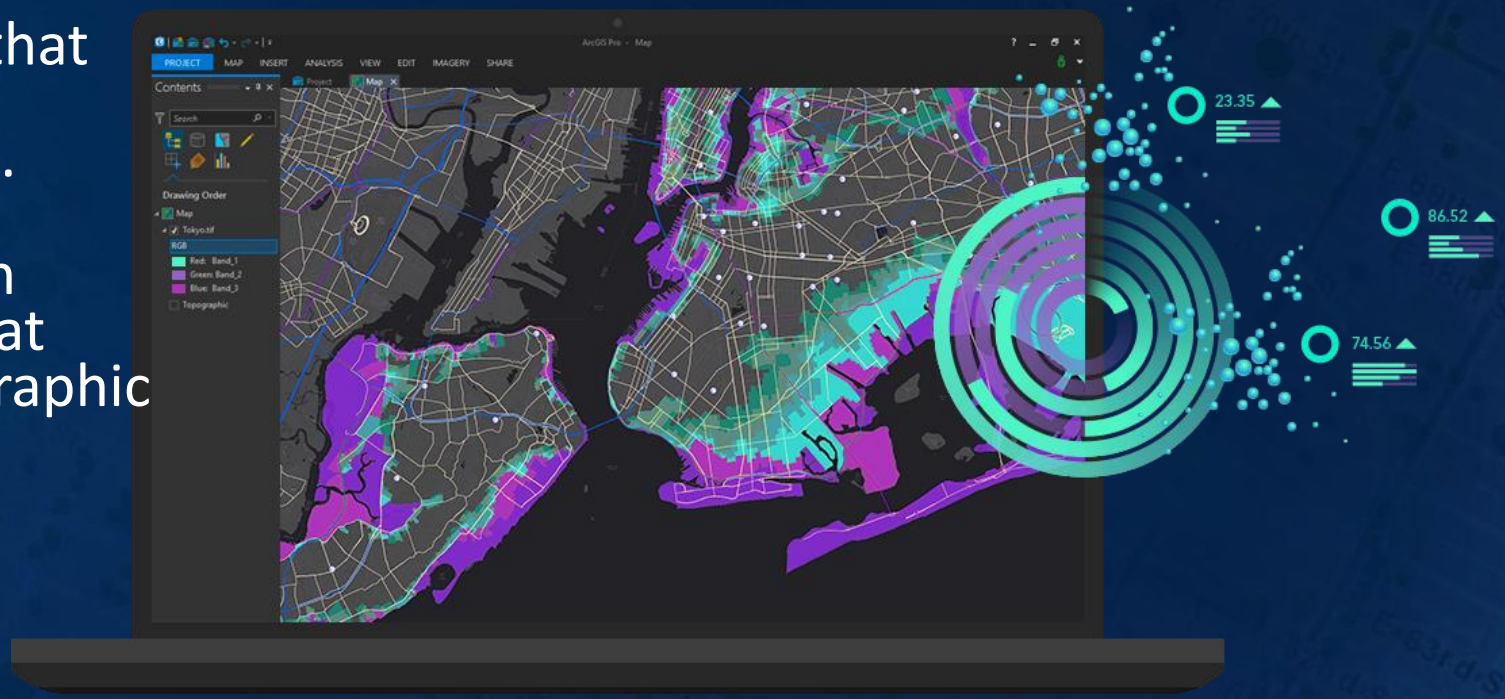
Outline :

1. What is GIS?
2. Why do we need GIS?
3. How do we utilize GIS?

1. What is GIS?

GIS is a conceptualized framework that provides the ability to capture and analyze spatial and geographic data.

ArcGIS is a geographical information system (GIS) one of the software that allows handling and analyzing geographic information
by visualizing
geographical statistics through
layer building maps



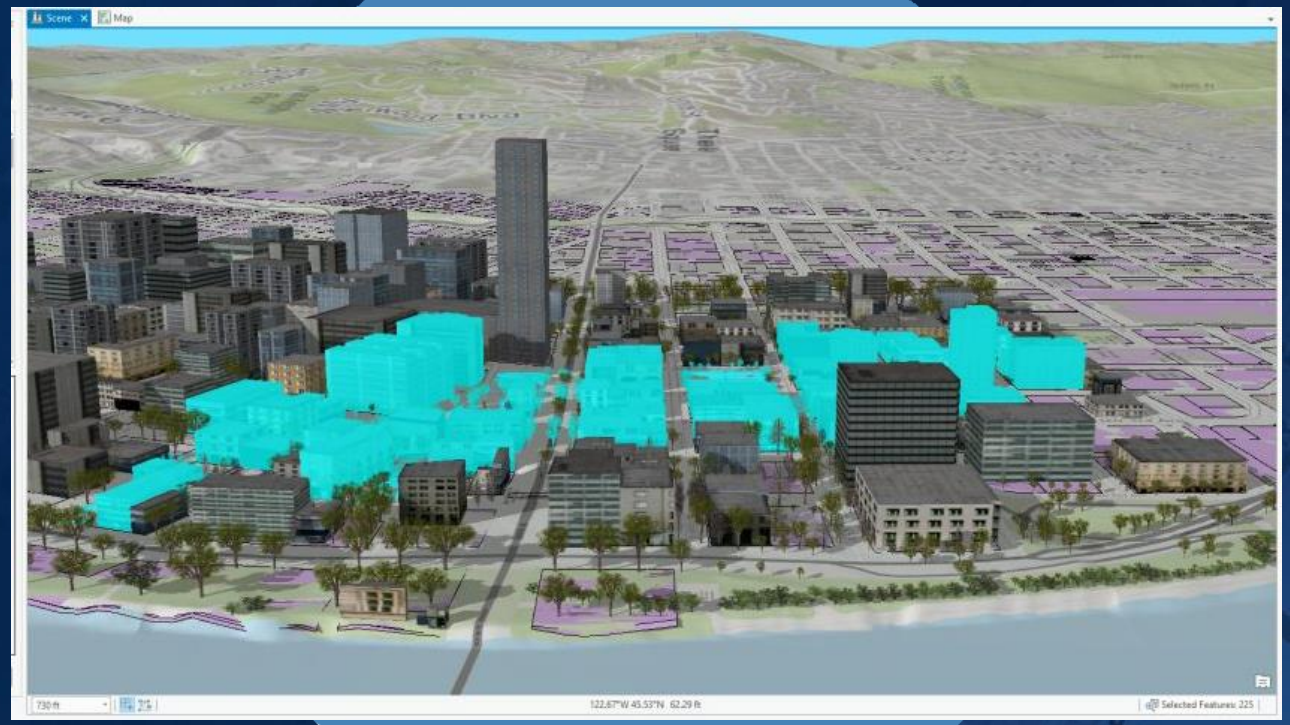
How does it work?

Each layer is registered spatially → the program lines them up properly → create a complex data map.

The base layer is almost **always a geographical map**

The first 4 layers are called feature, each containing individual functions distinguished through the platform. These are:

- **points** (like landmarks, buildings)
- **lines** (like roads and other 1D schemata)
- **polygons** (like political information and geographical census, called 2D data)
- **raster images** (a base vector layer like an aerial picture)



2. **Why** do we need GIS?

Geospatial location information continues to be the 3rd most important data type,

after transactional and log data.

Source: Gartner

Geospatial Infrastructure Is Transforming Organizations

Integrating and Leveraging Many Technologies

3. How do we utilize GIS?

GIS in Automotive Industry :

All Phases Existence

THE SCIENCE OF WHERE

Provides the Framework . . .

. . . And Process

Marketing Analytics

1. Identify the best mix of vehicles to offer consumers.
2. Analyze **competitor distribution** and where potential customers live.
3. Overlay with data about **people's purchasing power** (or any other important marketing parameter) to **predict customer demand**

Design Consideration

- Gain an **accurate understanding** of actual driving conditions prevalent in each of its target market
- Team models and analyze some factors including **weather**, average **rainfall**, temperature, **humidity**, etc.
- Based on those analysis result, designers and engineers **optimize the design**

Supply Chain Risk Management

- Give faster and accurate understanding about problem arise in supply chain process.
- team can focus on a specific part & trace it
- If it looks like a part shortage could threaten production, management can activate their contingency plans much sooner

Source

1.https://en.wikipedia.org/wiki/Geographic_information_system

2. https://www.geospatialworld.net/blogs/what-is-arcgis/

3.https://www.esri.com/about/newsroom/publications/wherenext/gm-maps-supply-chain-risk/

3. https://www.esri.com/en-us/arcgis/products/spatial-analytics-data-science/gm

“Better to do something imperfectly than to do nothing perfectly”

– Robert H. Schuller