Tampa Bay Area Regional Transportation Authority & GIS
GIS in Transit Conference
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Presenters

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  PB Americas

- Joe Shoffner
  Senior Planner
  Jacobs Engineering

- Terry Walters
  GIS Specialist
  Jacobs Engineering
What is TBARTA?

- Tampa Bay Area Regional Transportation Authority (TBARTA)
- Regional agency created by state legislation on July 1, 2007
- Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, and Sarasota Counties

Capabilities: plan, develop, finance, construct, own, purchase, operate, maintain, relocate, equip, repair, and manage multimodal transportation systems

Purpose: Improve mobility and expand multimodal transportation options for passengers and freight throughout the seven-county region.
Developed Regional Transportation Master Plan for Mid-Term (2035) and Long-Term (2050),
- Commuter Rail, Light Rail, Bus Rapid Transit, Express Bus, Managed Lanes, and Supporting Local Bus Network
- Activity Centers
- Transit-Oriented Development
- Land Use
- Public Involvement

How Did TBARTA Use GIS?
- Cartography
  - Maps!!!!
    - Public Presentations
    - Public Meeting
    - Media Campaign
    - Display Graphics
How Did TBARTA Use GIS?

- Estimates
  - Environmental
  - Socio-Economic
  - Right-of-Way
  - Cost

- Land Use and Regional Anchors
  - Analysis for specific population, employment, and hotel unit densities
  - Tracking developments
  - Comprehensive Plans
How Did TBARTA Use GIS?

**Modeling**
- Transportation Analysis Zones
  - Ridership Estimates
  - Socio-Economic Forecasting
- Re-Allocating Future Projections
- “Splitting Zones”

**Public Involvement**
- Track Public Involvement Activities
- Monitor Public Participation
TBARTA TOD Scenario

- Transit Oriented Development (TOD) is compact, mixed-use development near transit facilities and high-quality walking environments.

TBARTA Technical Analysis

Transportation Analysis Zones (TAZs)

- Forecasted Population (2035)
TBARTA TOD Scenario

Regional Anchors (RAs)
- Downtowns
- Colleges
- Major Airports
- Stadiums
- High-Density Residential
- High-Intensity Commercial

Model Builder

What is Model Builder?
- Graphical environment to set up a geoprocessing workflow
- User-friendly way to automate a series of tools
TBARTA TOD Scenario

Results
- 30% increase in ridership

What Can We Animate

In ArcMap, ArcScene, or ArcGlobe
- Feature class layers
- Raster catalog layers
- NetCDF layers (feature, raster, or table)

Some Important Terminology:
- Keyframe: A snapshot of an object’s properties at a certain time. Objects can be camera, layer, scene, map view, and time layer.
- Animation Track: A collection of keyframes of the same type. Objects or keyframes are bound to the track and determine their behavior in the animation timeline.
- Animation: One or more animation tracks executed in parallel.
Animation Building Blocks

* Remember each track is tied to an object or each track is tied to a map view, map layer, time layer, or camera.

Animation Track 1

Keyframe Keyframe Keyframe

Keyframe Keyframe Keyframe

Keyframe Keyframe Keyframe

Timeline of Animation Normalized 0 to 1

Transpose Time Fields Tool

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Temporal Animation Occurs Across Records Not Fields

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<tr>
<td>Polygon</td>
<td>Idaho</td>
<td>1980</td>
<td>222</td>
</tr>
</tbody>
</table>
Need to be able to identify start field or start and end fields

- Date, string, integer, and double
- Strings:
  - YYYYMDD  YYYYMDD
  - YYYYMMDD  YYYYMDD
  - YYYYMMDD hh:mm:ss
  - YYYYMMDD hh:mm:ss

- Integer and double field
  - YYYYMDD  YYYYMDD hh:mm:ss; 00-23

- See help for formatting a date string using the field calculator

Stay Informed
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Thank You
& Questions