

Proof of Concept: Federated Data Sharing Model

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North Jersey Transportation Planning Authority

NJTPA Region

Bergen

Essex

Hudson

Hunterdon

Jersey City

Middlesex

Monmouth

Morris

Newark

Ocean

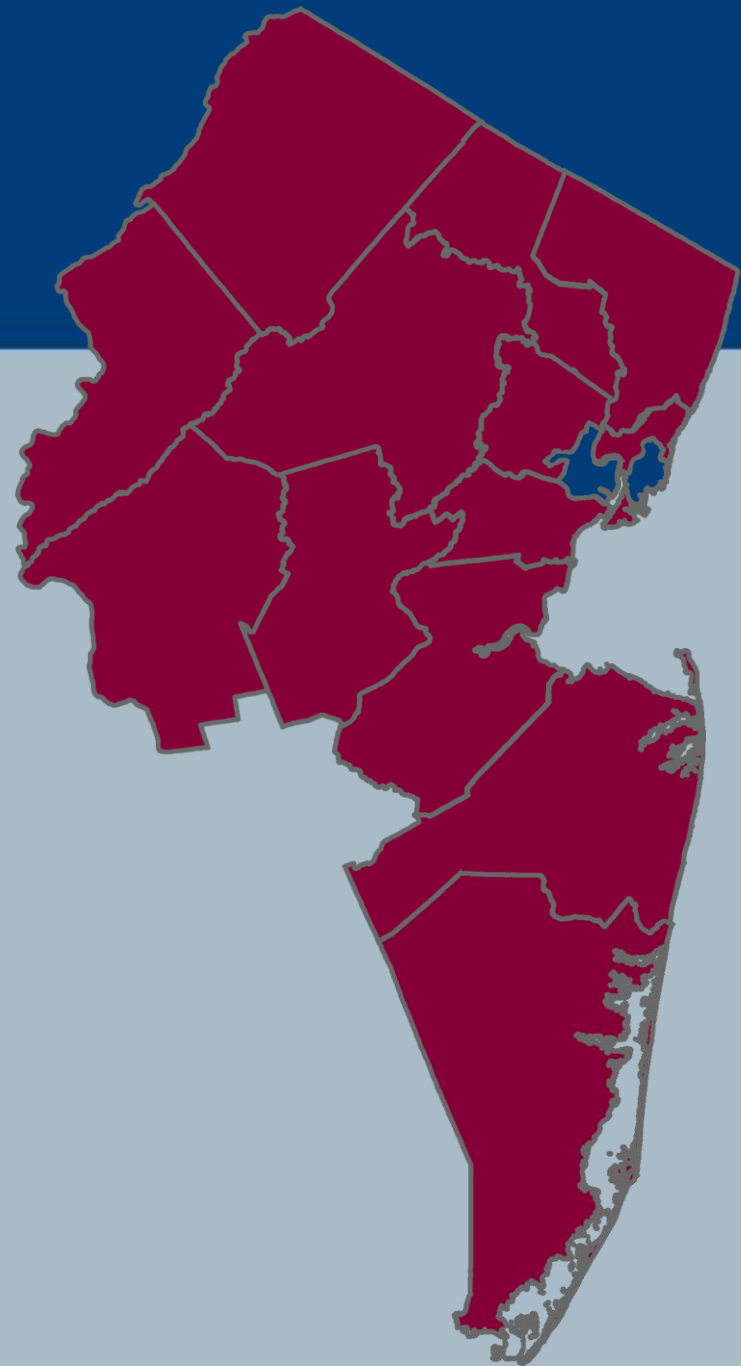
Passaic

Somerset

Sussex

Union

Warren



North Jersey Transportation Planning Authority

The Metropolitan Planning Organization for Northern New Jersey



STANDING COMMITTEES

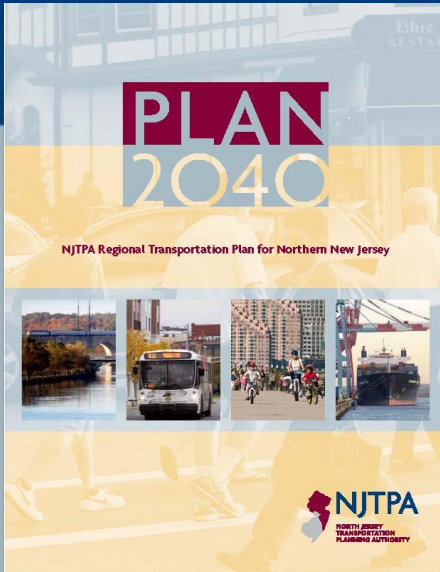
Planning & Economic Development Committee

Project Prioritization Committee

Freight Initiative Committee

Regional Transportation Advisory Committee

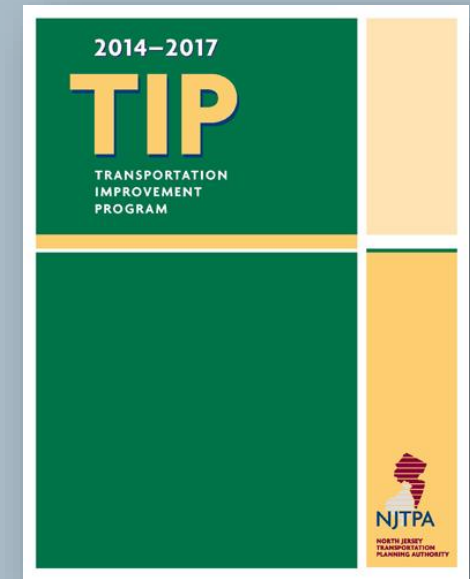
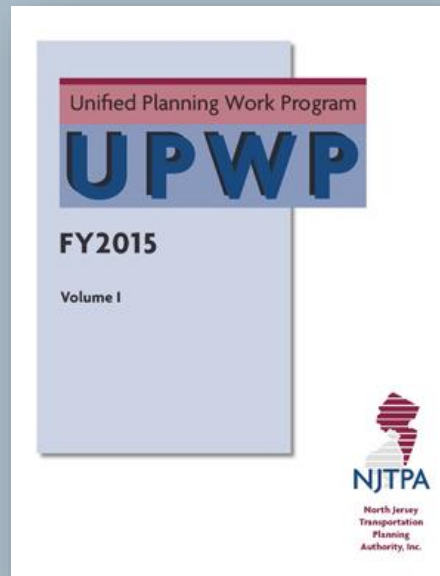
MPO Key Products



Regional Transportation Plan (RTP)

Updated every four years

Planning



Transportation Improvement Program (TIP)

Updated every two years

Regional Transportation System

Road Network:

- 147 million vehicle miles each day
- 26,000 miles of roads, including 177 miles of toll roads
- 4,800 bridges

Transit Network:

- 732,000 trips daily
- 13% of commuters ride transit
- 250 bus routes
- Commuter rail: 390 miles of track, 150 stations

Federated Sharing Model

The Beginning



Federated Sharing Model: The Beginning

- Enterprise Geographic Information System database developed and implemented in 2009
- Data repository for the region
- Web-interface for data exchange

Federated Sharing Model: The Beginning

Email GIS
Technical
Contacts
every
quarter

Data
updates
uploaded to
FTP site

Data QA/QC
by GIS staff
at NJTPA

Uploaded to
the Web-
Interface

Federated Sharing Model: The Beginning

- Challenges:
 - Changing technology
 - Static process



Federated Sharing Model

A Technology Shift



Federated Sharing Model: A Technology Shift

[HOME](#) [GALLERY](#) [MAP](#) [GROUPS](#) [MY CONTENT](#) [MY ORGANIZATION](#)

Gabrielle ▾



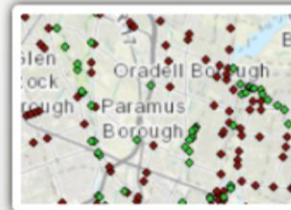
NJTPA Featured Content



[Accessibility](#)



[Base Map](#)



[Bergen_County_Assets](#)



[Bergen_County_Assets](#)

The NJTPA is the federally authorized Metropolitan Planning Organization for 6.6 million people in the 13-county northern New Jersey region. Each year, the NJTPA oversees more than \$2 billion in transportation improvement projects and provides a forum for interagency cooperation and public input. It also sponsors and conducts studies, assists county planning agencies and monitors compliance with national air quality goals.

Federated Sharing Model: A Technology Shift

Approach:

- Identification of seven pilot organizations
- Informational Session on project vision and goals
- On-site support for set-up of AGO
- Initiate exchange

Federated Sharing Model: A Technology Shift

Group Types:

– Operational

- Admin
- NJTPA Share
- NJTPA Feature Content

– Content

- Transportation
- Economics
- Land Use
- Environmental

The screenshot displays the 'My Groups' page for NJTPA. At the top, there is a 'CREATE A GROUP' button. Below this, the page is divided into three main sections: 'Show', 'You are a member of 23 groups', and 'Find...'. The 'Show' section lists 'All My Groups' with sub-categories: 'Owned by Me', 'Owned by Others', and 'With New Membership Requests'. The 'You are a member of 23 groups' section lists several groups, each with a thumbnail, title, description, creator, and creation date. The 'Find...' section provides search filters for 'The organization's groups' and 'The organization's groups that are public'. A 'Featured Groups' sidebar on the right lists various groups like 'National Maps for USA', 'Esri Maps and Data', and 'Community Basemaps'.

My Groups
NJTPA

CREATE A GROUP

Show

All My Groups
Owned by Me
Owned by Others
With New Membership Requests

You are a member of 23 groups

- Administration**
Provides information and data for the administrators of the site.
created by gfausel_NJTPA on February 19, 2014
- Basemap**
NJTPA Basemap Gallery
created by gfausel_NJTPA on January 23, 2014
- County Sub Regions**
This group will be dedicated for those NJTPA County Sub regions to access their asset data
created by Nick.Hutton_NJTPA on August 5, 2014
- Economics**
Provides information on data related to demographics such as forecasting, employment, population, and household income as well as other economic related data.
created by gfausel_NJTPA on February 14, 2014
- Environmental**
Provides information on climate change, air quality conformity, and other environmental related datasets.
created by gfausel_NJTPA on January 27, 2014

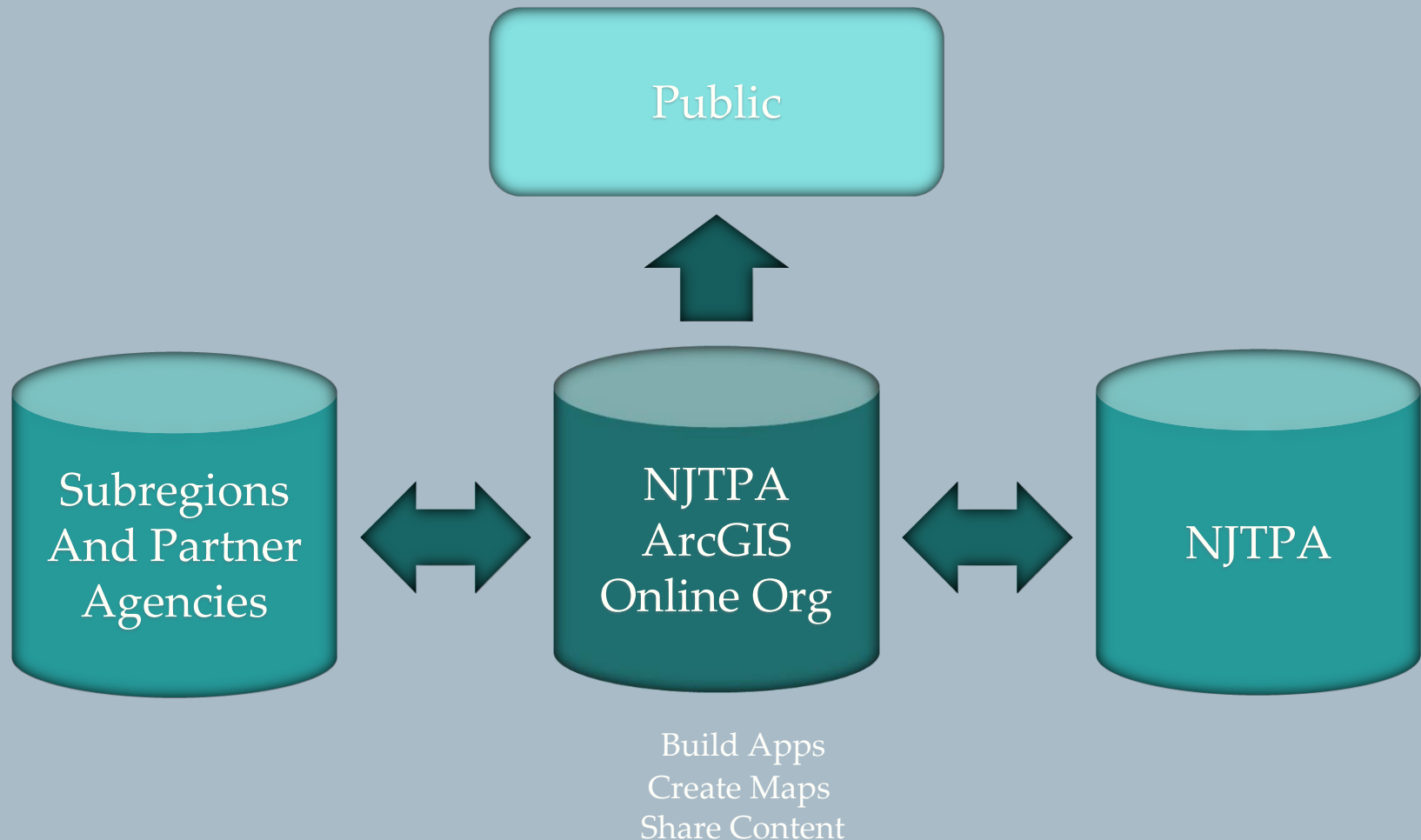
Find...

- The organization's groups
- The organization's groups that are public

Featured Groups

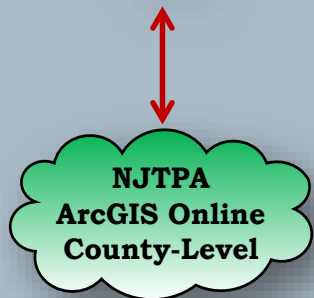
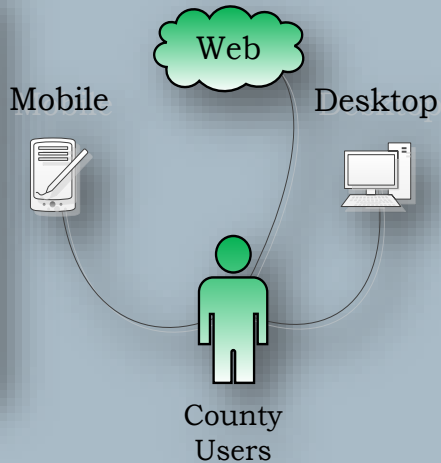
- National Maps for USA
- Esri Maps and Data
- Community Basemaps
- Landsat Community
- Web Application Templates
- ArcGIS for Local Government
- NJTPA Featured Content
- County Sub Regions

Federated Sharing Model: A Technology Shift

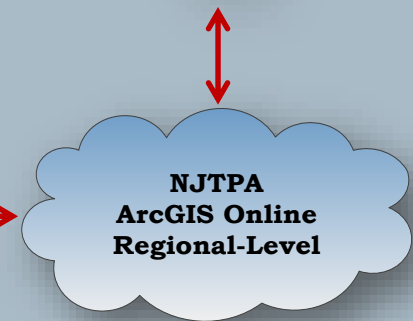
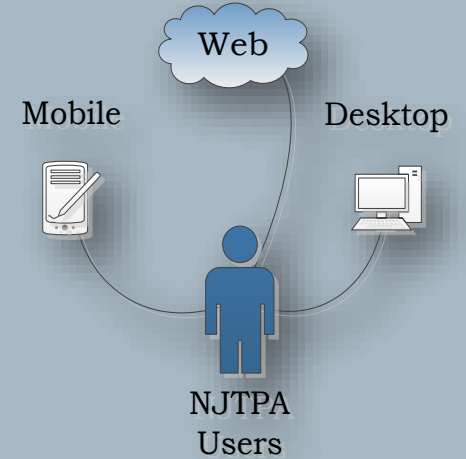


Federated Sharing Model: Example

- ⊕ Bergen.mdb
- ⊕ Essex.mdb
- ⊕ Hunterdon.mdb
- ⊕ Middlesex.mdb
- ⊕ Monmouth.mdb
- ⊕ Morris.mdb
- ⊕ Ocean.mdb
- ⊕ Passaic.mdb
- ⊕ Somerset.mdb
- ⊕ Sussex.mdb
- ⊕ Union.mdb
- ⊕ Warren.mdb



- ⊖ NJTPA_UNIFIED.gdb
 - CONFIG_Domains
 - CONFIG_Fields
 - CONFIG_Layers
 - NJTPA_Bridge
 - NJTPA_Guiderail
 - NJTPA_Inlet
 - NJTPA_Outfall
 - NJTPA_Pavement
 - NJTPA_Sign
 - NJTPA_Signal



Federated Sharing Model: Example

- Internal sharing and analysis of data for non-GIS users
 - Enhanced workflows
 - Greater accessibility to our data resources
 - Increased productivity/efficiency

Federated Sharing Model: Next Steps

- Follow up with pilot organizations for feedback
- Continue to populate the NJTPA organization with meaningful datasets
- Deployment and training for additional partner agencies and staff
- Development of new applications and GIS services to support our partner agencies

Questions



Thank You

Defining the Vision. Shaping the Future.



NJTPA

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