

Regional Strategic Data Assessment

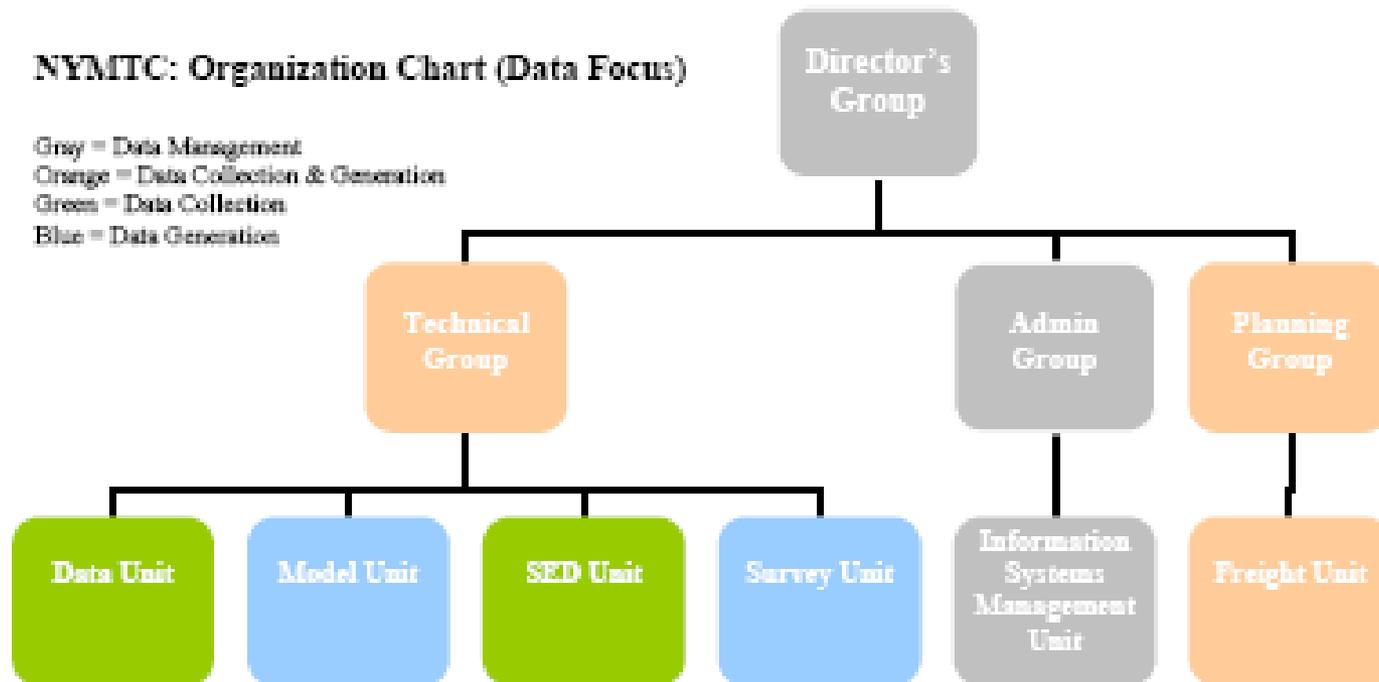
*Application of Emergent Technologies and Timely
Information Sharing for the New York Metropolitan
Transportation Council.*

Richard Barone – NYMTC September 11th Memorial Program - Brownbag Presentation: 9/21/07
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Regional Strategic Data Assessment

Organizational Overview -

The 3 Primary Data Handling Departments: Technical, Administrative, & Planning



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Critical Analysis -

Current Data Practices:

- Lack of consistent formats – hardcopy/digital
- Various different “File Types”
- Data is not defined, little or no Metadata
- Collection procedures are not standardized
- Silos of Data, no central repository



Multiple Silos of Data

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Critical Analysis -

File Types and Formats

Report/Survey Name or File Name	Type	Format
Household Travel Survey Data	OTHER	Digital
Report: Travel Patterns in the New York Metropolitan Area, File: Long Island Ferry	WORD	Digital
Report: Travel Patterns in the New York Metropolitan Area; File: Suburb Buses Ridership - Suffolk County Buses	Excel	Hardcopy
Report Name: 2005 Truck Toll Volumes, File Name: Comparison of Quarterly PANY&NJ Truck Toll Volume by Facility	Excel	Digital
Report Name: 2005 Truck Toll Volumes, File Name: Comparison of Quarterly MTA B&T Truck Toll Volume by Facility	Excel	Digital
Section A - Bus Transit by Sector	Excel	Digital
Section B - Subway by Sector	Excel	Digital
Section C - Suburban and Intercity Rail by Sector	Excel	Digital
Section E - Vehicles by facility	Excel	Digital
Section F - Ferry & Tramway Passengers by Facility	Excel	Digital
Section G - Bicycle Volumes by Sector	Excel	Hardcopy
NYC Transit Fleet size	PDF	Hardcopy
Metro North Vehicle miles traveled	PDF	Hardcopy
LIRR annual Passengers	PDF	Hardcopy
JKF annual passengers	PDF	Hardcopy
Housing Permits	PDF	Hardcopy
Passenger Car Registrations	OTHER	Hardcopy
Population	OTHER	Hardcopy
Table 1 Total Number of Motor Vehicle Crashes	Excel	Hardcopy
Table 46 - Transit Accidents	PDF	Hardcopy

✓ Word

✓ Excel

✓ D-Base

✓ SPSS

✓ CSV

✓ Shapefiles

✓ TransCAD (Networks)

Survey of data collected by NYMTC staff – Spring 2007

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Critical Analysis -

Collection and Storage

Lacking standard collection procedures and primary contact distribution

Little consistency on how the data is collected

Overlap/duplication between and within groups

Fragmented and unmanaged data storage



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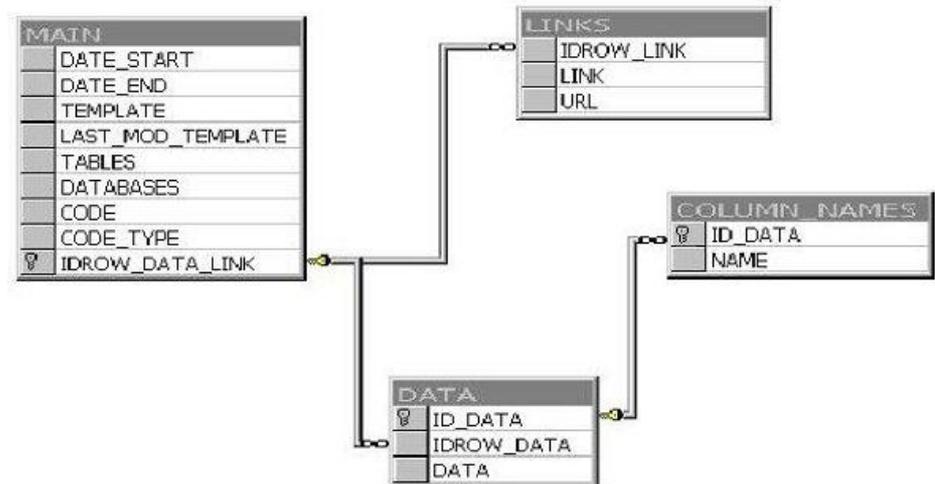
Five Point Strategy - Articulated



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Five Point Strategy -

Compatibility: *Standardize Data Format – NYMTC should acquire data in digital formats with linking fields*



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Five Point Strategy -

Definition: Require Metadata – All data should include titles, keywords, and field/attribute descriptions

The screenshot displays the ArcCatalog interface with the 'Edit DVR-MS Metadata' dialog box open. The dialog box shows the following metadata for the file 'C:\The Practice.dvr-ms':

Name	Value	Type
WM/MediaStationName	WABC	String
WM/ToolVersion	0.2003.10.8	String
WMFSDKNeeded	0.0.0.0000	String
Title	The Practice	String
WM/MediaOriginalBroadcastDateTime	2004-03-14T00:00:00.0000000-05:00	String
WM/MediaStationCallSign	WABC	String
WM/ProviderRating		String
WM/SubTitle	In Good Conscience	String
WM/Genre	Drama_Series	String
WM/ToolName	DVR-MS Editor	String

The main window shows the 'Hawaii Hillshades Raster Dataset - TIFF' with a preview of a hillshade map. The metadata panel includes the following information:

- Description:** Spatial, Attributes
- Keywords:** Theme: elevation, Place: Hawaii, Maui
- Description:** Abstract: Hillshades, or shaded relief products, for the State of Hawaii were produced by the Pacific Disaster Center from 10 meter Digital Elevation Models (DEM).

Large text on the right side of the image reads "Road Map".

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Five Point Strategy -

Collection: *Create a Uniform Process for Data Collection*

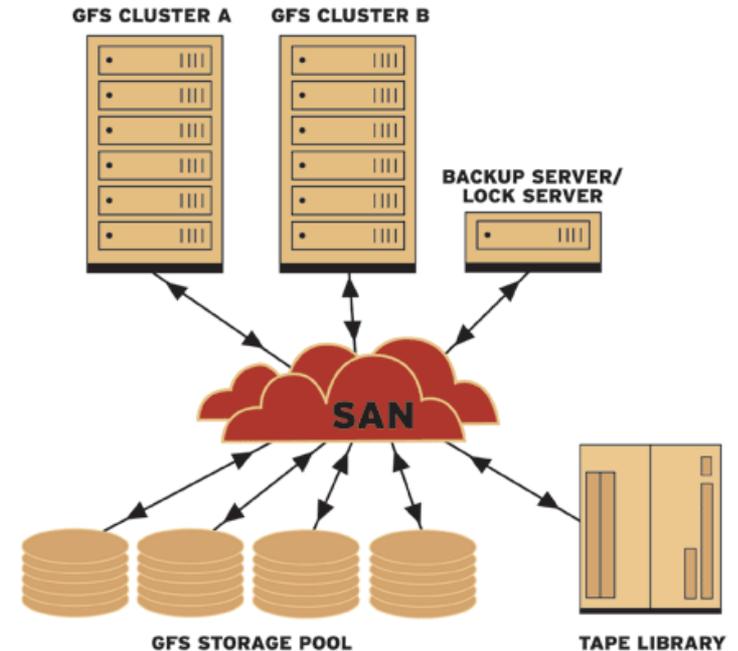
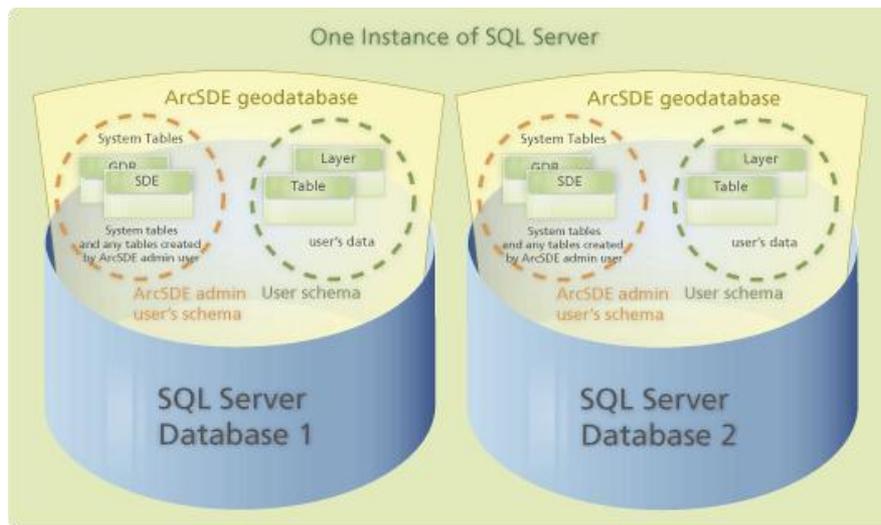


Formalize Relationships for Data Collection & Dedicated Analyst

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Five Point Strategy -

Organization: *Install an Enterprise Level Data Repository/Warehouse*



Implement an Enterprise Level Data Warehouse & Storage Schema

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Five Point Strategy -

Accessibility: Develop GIS and Additional Web Applications to Allow for Maximum Access to Data.

The screenshot shows the 'Infoshare Online' web application in a Microsoft Internet Explorer browser. The main interface has a navigation menu on the left with options like 'New Compare', 'Main Menu', 'User Guide', 'Account', 'FAQs', 'Links', 'Email Us', and 'Log Out'. The central area is titled 'Select Data to display for Census Tracts in Census Tract 15.00'. It includes a search field, radio buttons for 'DEMOGRAPHICS', 'SOCIO-ECONOMICS', and 'HEALTH', a dropdown for '1990 Census', and another dropdown for 'Population by Language and Age'. Below this, there are 'Go' buttons and a table of columns to be displayed. A 'Download Data' dialog box is open in the foreground, listing available file formats: Excel Spreadsheets (*.xls), Comma-Separated Values (imports into Excel, Lotus, etc.) (*.csv), xBase/FoxPro Database (*.dbf), and Table Details & Field Catalog Only (for use with DBF) (*.csv). A 'Done' button is at the bottom of the dialog.

The screenshot displays the 'nyc oasis' GIS application. At the top, there is a search bar with 'Search By: Street Address' and a dropdown for 'Borough:'. Below the search bar are navigation and control buttons: 'Redraw Map', 'Help', 'Select all layers', 'Unselect all layers', 'Garden Search', and 'Estuary Search'. The main map area shows a geographic view of New York City with various colored overlays representing different data layers. A legend on the right side of the map lists categories such as 'Photos and Imagery', 'General Labels and Boundaries', and 'Transportation'. Below the map, there are buttons for 'Print Layout', 'About the Data', 'Help with Map', and 'Tutorials'. At the bottom right, there is a 'New Search' panel with a search bar and a 'Map Legend' section showing a list of selected and available layers like 'Subway Station', 'Air School Program', and 'Day Care Center'.

Table Builder Web-based Applications

GIS Applications

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Implemented Technologies & Future Steps -

Current Tools

NEW YORK METROPOLITAN TRANSPORTATION COUNCIL
UPWP
NYMTC.org

The session year is set at : 2008
Welcome Howard Mann

Enter session year in box

List of Functions :

- Projects**
 - Make a New Project
 - View List of Projects for Session Year
 - View List of Projects for All Years
- Budgets**
 - Budget Cost by PIN
 - Budget Cost by Staff Member
- Reports**
 - Interactive Reports
 - 2007-08 UPWP Report 3/15/07 -corrected 3/29/07
 - 2007-08 UPWP Management Summary 3/15/07
 - 2006-07 UPWP Management Summary 2/1/06
 - 2006-07 UPWP Report 2/1/06
 - 2006-07 UPWP Summary by Project (Report 3) 1/25/06

Log Out
Log Out

NYMTC.org

NYMTC Project Information Management System
New York Metropolitan Transportation Council

Your search returned 8 results.
Click [here](#) to add a new project

PIN	County Code	Project Type	Name of Facility	From	To	Status	Editable	Options
235H548	New York (Manhattan)-1	Transit	2ND AVE	1st street	10th street	NEW		view edit
5486	Richmond (Staten Island)-5	Other	HYLAN BLVD	uyyu	opk	NEW		view edit
A345	Kings (Brooklyn)-4	Other	18TH ST	1st street	12th street	NEW		view edit
APPROVAL	New York (Manhattan)-1	Other	86TH ST TRANSVERSE RD	1st Street	10th street	NEW		view edit
APPRTST	Queens-2	Other	112TH ST	1st Street	10th street	NEW		view edit
AR366	Nassau-6	Other	BALDWIN RD	1st street	10th street	NEW		view edit
DAVID1234	Bronx-3	Highway	ASTOR AVE	1st Ave	3rd Ave	NEW		view edit
X345CS243	Kings (Brooklyn)-4	Highway	13TH AVE	1st Ave	12th Ave	NEW		view edit

Click [here](#) to add a new project

New Search Summary

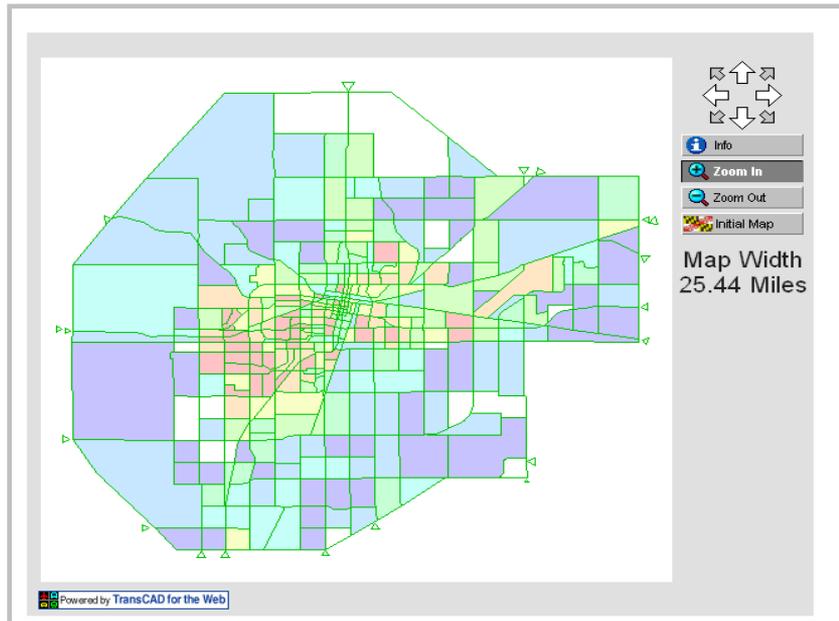
Project Information Management System (PIMS)

Unified Planning Work Program (UPWP) Online

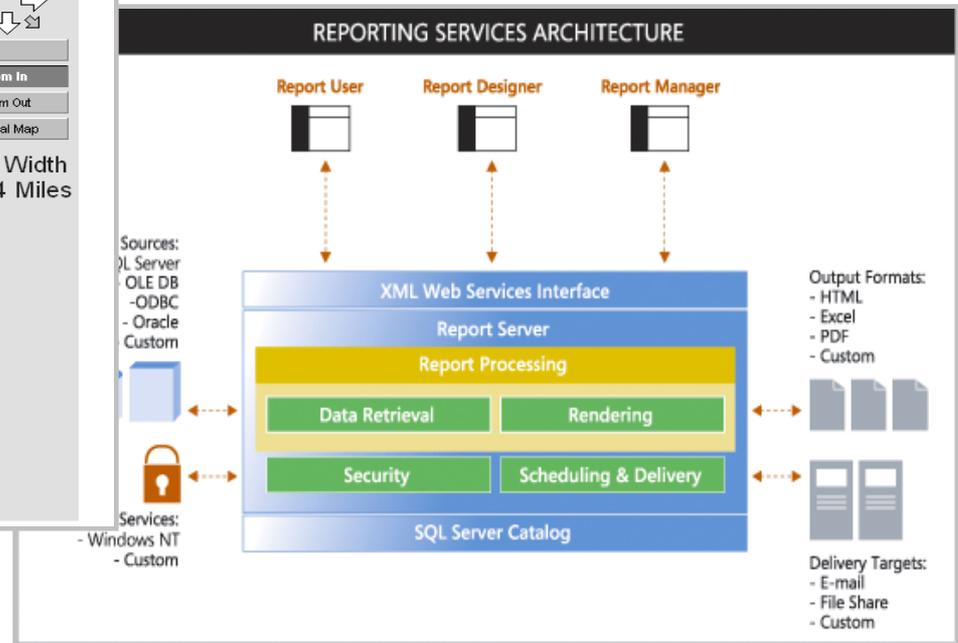
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Implemented Technologies & Future Steps -

Planned Tools



Best Practice Model & Caliper -
TransCAD for the Web



Transportation Information Gateway
& Website Redesign (CMS)

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Five Point Strategy - Review

Organizational Benefits

- Greater public access to NYMTC's data offerings.
- Reduction in information request loads on Analysts, freeing up time to focus on improving data offerings.
- Greatly improved internal efficiencies through centralized data repository and management.
- Reduced misinterpretation of fields in data-sets.
- Improved data redundancy and disaster recovery ability.

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Concluding Thoughts -

Recommendations

- Implementation of Five Part Data Management Strategy
- Integrate existing web-based applications and data sources
- Create a robust disaster recovery plan around new data management practices
- Expedite data sharing/collaboration initiatives that are in the development pipeline: TIG & NYMTC Website Redesign (CMS)

THANK YOU



QUESTIONS/COMMENTS