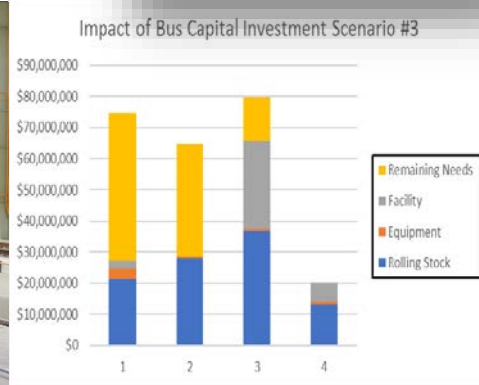
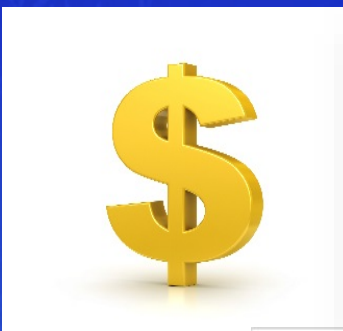


Transit Asset Management

"Connection to Capital Planning"



Sharon Okoye, PMP
Transit Asset Management Lead

Connecticut Department of Transportation



Analytical Tool for Capital Planning

Decision Support Tool:

- *Predicts Future SGR Capital Needs*
- *Recommends Asset Rehab/Replacement Work*
- *Directs Future Capital Investment Based On Performance Data*



Transit Asset Prioritization Tool (TAPT)

Transit Cooperative Research Program - Transit Asset Prioritization Tool

Version 1.00

Start Screen

MODEL PARAMETERS

ASSET GROUP ADMINISTRATION

Opens worksheet to enter or edit information for a new asset group. You will be asked for an Asset Group ID Code and model type (vehicle, age-based, or condition-based).

Create Asset Group

Edit Asset Group

Delete Asset Group

BUDGETS AND PARAMETERS INPUT

Opens worksheet to input budget amounts for each year and review (and, if desired, override) default economic analysis parameters.

Budgets & Parameters

PRIORITIZATION MODEL

PRIORITIZATION MODEL ADMINISTRATION

Runs the prioritization model using current budgets, parameters, and asset groups. You will be asked to specify a Run ID Code.

Run Prioritization Model

Delete Previous Run

PRIORITIZATION MODEL RESULTS

Displays a summary table showing prioritization model results by year for a selected run. You will be asked to select a Run ID Code.

Display Summary Table

ASSET REPLACEMENT PROGRAM

Displays a listing of the asset replacement program from a prioritization model run. You will be asked to select the Run ID Code.

Display Program List

SUMMARY STATISTICS

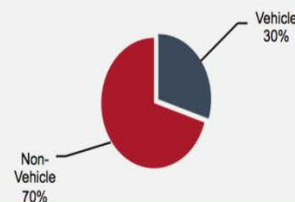
ASSET GROUPS

Vehicle	2
Non-Vehicle	10
Total	12

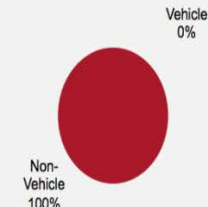
INITIAL CONDITIONS

Replacement Value (\$ 000)	1,796,260
Initial Needs (\$ 000)	45,023
Avg. Age (years)	11.5
Mean Distance Between Failures (miles)	32,553
Avg. Condition (non-vehicle)	4.7
CO2 Emissions (tons)	139,353

Replacement Value



Initial Needs



CHARTS

ONE AND TWO RUN CHARTS

Displays a chart showing prioritization model results by year for one model run or two. You will be asked to select a Run ID Code(s) and the output variable to be charted.

Display Chart - One Run

Display Chart - Two Runs

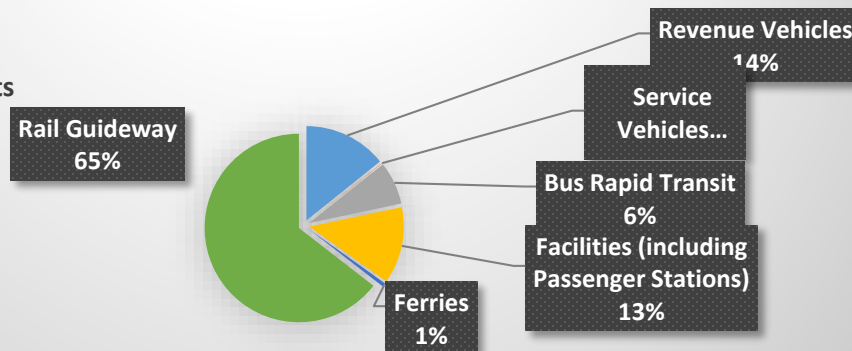


CTDOT Capital Assets

- 649 Buses
- 422 Rail Vehicles
- 3 Ferryboats
- 119 Service Vehicles
- 243 Track-miles of rail guideway (New Haven Line)
- 9.4 Miles of bus-only guideway
- 12 Administrative/Maintenance Facilities
- 53 Passenger Facilities

Tier 1 Asset Value
\$8,140,790,000*

* Based on Replacement Costs



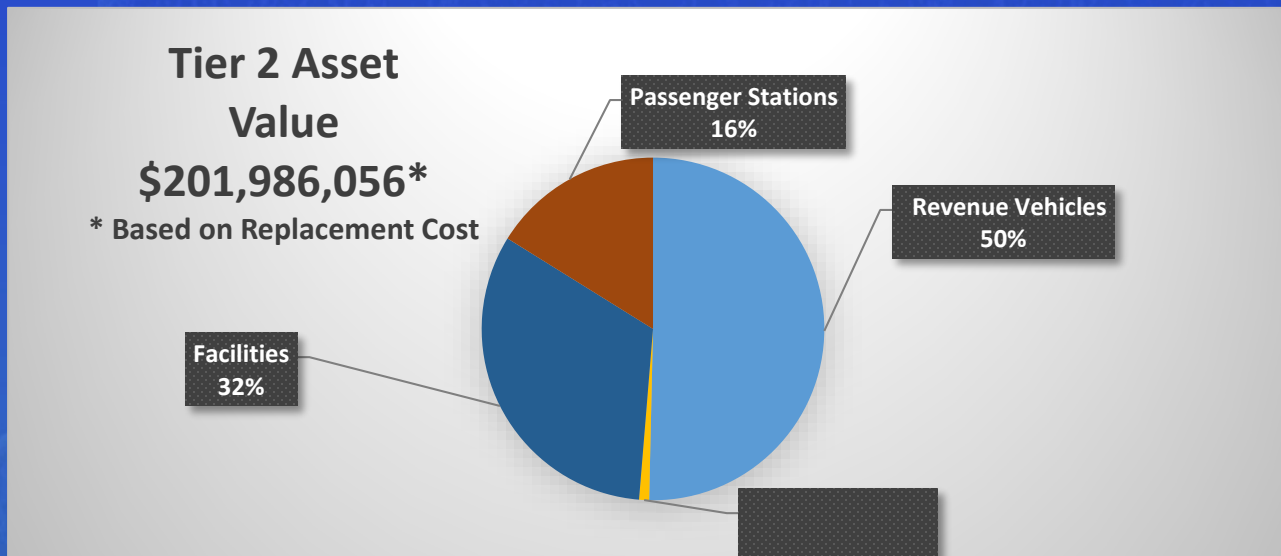
Small Providers Capital Assets

Transit Districts

- 466 Revenue Vehicles
- 58 Service Vehicles
- 10 Administrative/Maintenance Facilities
- 4 Passenger Facilities

Additional Inventoried Assets:

- 111 vehicles (funded under FTA Section 5310)
- 1 Intermodal Passenger Facility – Town of Mansfield
- 2 Revenue Vehicles – Mashantucket Pequot Tribal Nation



TAPT Budget Scenarios

- **Scenario 1: Federal Dollars with State Match**
- **Scenario 2: Federal Dollars/State Match with also State Bonding**
- **Scenario 3: Federal Dollars/State Match, State Bonding,
*Let's Go CT funds**

***State Funds Introduced through legislation**



TAPT Input Data

Useful Life Benchmarks (ULB)

Asset Type (Rolling Stock)	FTA Default ULB (years)	Connecticut ULB (years)
Locomotive (MNR)	39	35
Locomotive (SLE/HL)	39	25
Passenger coach (MNR)	39	35
Passenger coach (SLE/HL)	39	25
Self-propelled passenger car	39	25

Customized ULB's Differ Based on Historical Performance and/or Preventative Maintenance Practices.



TAPT Input Data

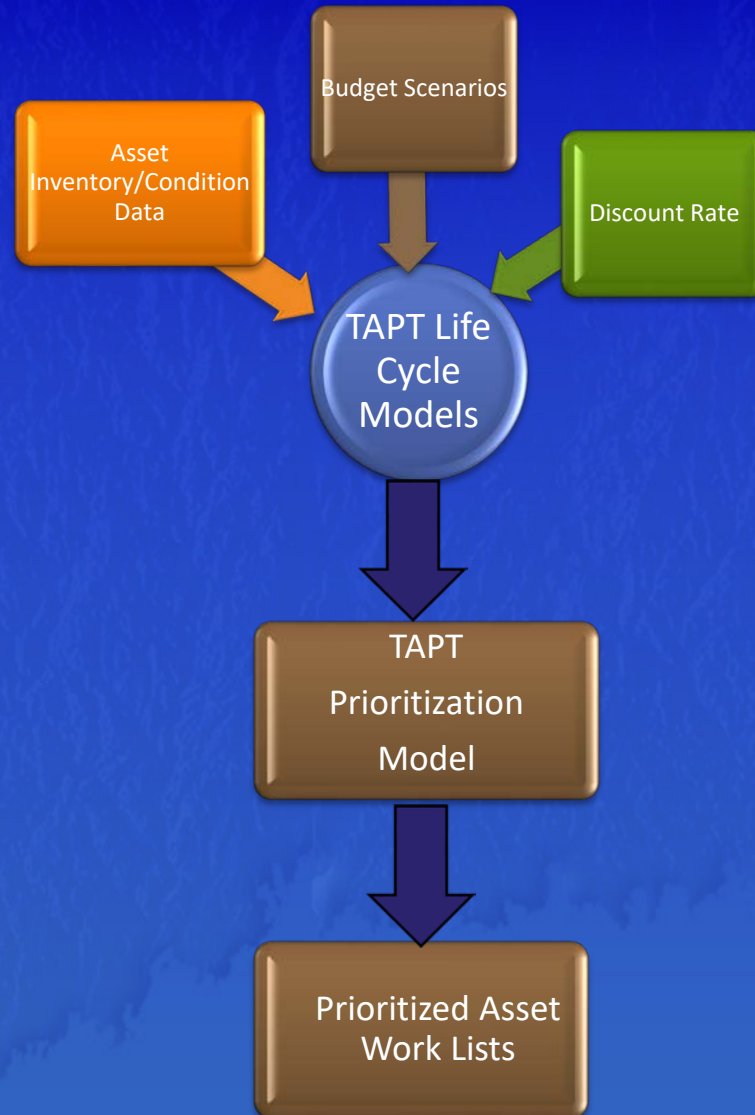
Converting ULB to TERM Rating Scale

Asset Age as % of ULB	Rating	Condition
New	5	Excellent
$\leq 50\%$	4	Good
$>50\%$ and $\leq 100\%$	3	Adequate
$>100\%$ and $\leq 125\%$	2	Marginal
$>125\%$	1	Poor

Conversion used to Estimate Condition for
Guideway Subcomponents



Work Flow Diagram



TAPT Recommended Prioritized Investments

Table 6-1. Draft Initial Prioritized List of Investments – Tier I Bus

Rank	Description	Type	Count	Cost	Year	Funded*
1	CTTransit New Haven 2000 Chevrolet Cargo minivan	Service-Van	1	\$46,182	2018	Y
1	CTTransit Stamford 2000 Chevrolet 2500 cargo	Service-Van	1	\$46,182	2018	Y
3	CTTransit New Haven 2007 Ford Fusion 4 door sedan	Service-Auto	2	\$39,358	2018	Y
3	CTTransit Stamford 2007 Ford Fusion 4 door sedan	Service-Auto	1	\$19,679	2018	Y
5	CTTransit Hartford 2007 Chevrolet Cargo minivan	Service-Van	2	\$92,364	2018	Y
5	CTTransit Stamford 2007 Chevrolet CG23405 Cargo	Service-Van	1	\$46,182	2018	Y
5	CTTransit Waterbury 2007 Ford E150	Service-Van	1	\$46,182	2018	Y
8	CTTransit Hartford 2008 Toyota hybrid	Service-Auto	2	\$39,358	2018	Y
9	CTTransit Stamford 2011 Ford Escape	Service-SUV	3	\$98,145	2018	Y
10	CTTransit New Haven 2011 Ford Escape	Service-SUV	5	\$163,575	2018	Y
11	CTTransit Stamford 1990 M7-Plow/Dump and Sand Truck	Service-Truck	2	\$335,550	2018	Y
12	CTTransit Hartford 1995 International Service Truck	Service-Truck	1	\$167,775	2018	Y
12	CTTransit Waterbury 1995 International Service Truck	Service-Truck	1	\$167,775	2018	Y
14	CTTransit Stamford 1997 M8-Rack Body & Plow	Service-Truck	1	\$167,775	2018	Y
15	CTTransit Hartford 1999 Chevrolet Pick Up	Service-Truck	1	\$167,775	2018	Y
16	CTTransit Waterbury 2014 Chevrolet Traverse	Service-SUV	4	\$130,860	2018	Y

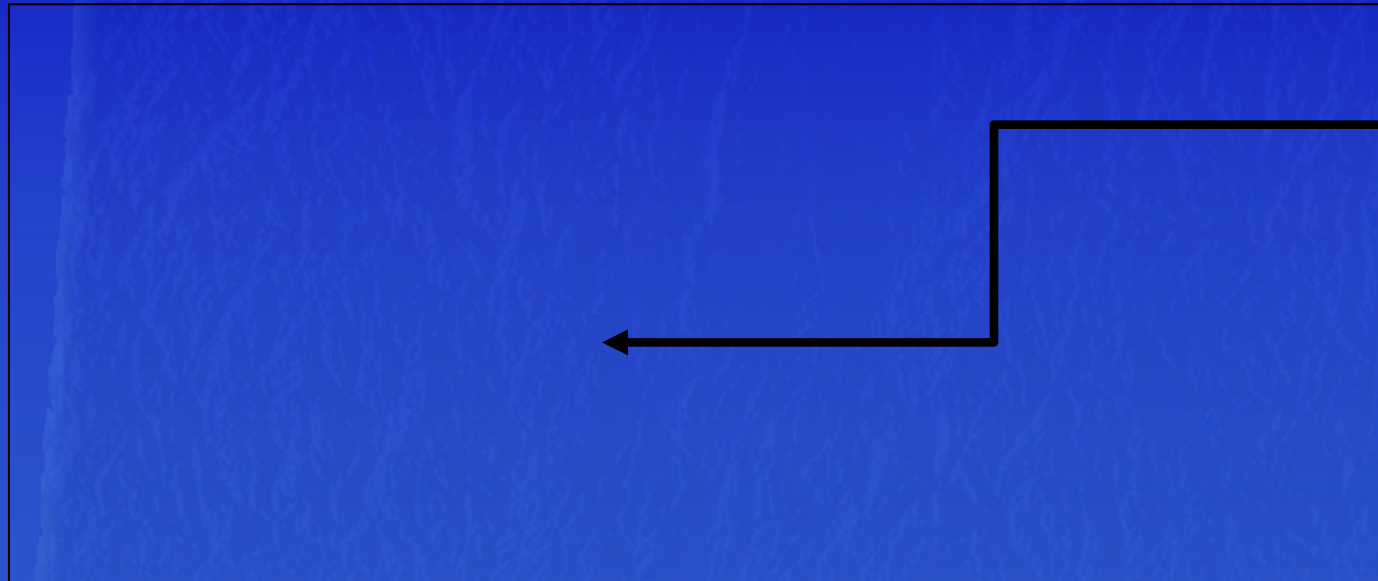
High Risk



Low Risk



Recommended Investments at Subcomponent Level



Facility Asset
Component
Work

TAPT Benefits/Limitations

Benefits

- *Estimate Funding Needs for SGR Backlog*
- *Assist with Capital Project Planning and Project Prioritization*
- *Assist with Development of Performance Targets*

Limitations

- *Tool Uses One Funding Stream, not Multiple Sources*
- *Support Tool, Not Account for “Real World” factors
i.e. Geographical Investment Equity between Regions*



Questions?

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