



THE TRANSIT AUTHORITY OF RIVER CITY

Starting with Asset Data and Finance

Chris Ward
Maintenance Asset Manager

WE MOVE THE CITY!



TARC at a glance

- ➡ 12.4 million annual boardings
- ➡ 41,270 average weekday boardings
- ➡ Five counties, two states
- ➡ 43 routes: high frequency, express, local, circulators
- ➡ 223 fixed-route buses: 33 hybrid-electric, 15 electric
- ➡ 102 paratransit vehicles
- ➡ 645 team members



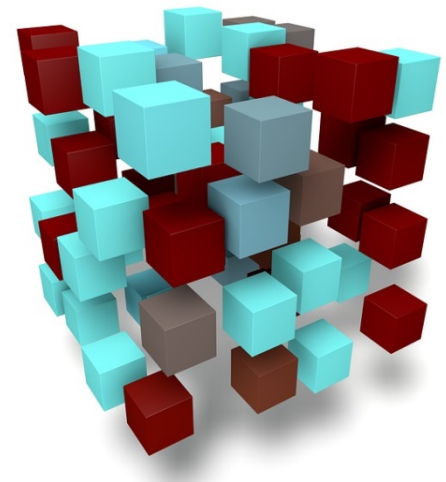
TARC at a glance

- ➡ 2 campuses
- ➡ 10 buildings
- ➡ Fixed-route fleet
- ➡ Paratransit fleet
- ➡ Service vehicles
- ➡ Maintenance shop equipment
- ➡ Rideshare vehicles
- ➡ 5310 subrecipient vehicles



TAM and Ellipse upgrade

- Coincided with upgrade of ABB Ellipse enterprise asset management system from Version 5.2.3 (2002) to version 8.9.12.2
- Monolithic to microservices architecture. Training covered the leap more than new functionality.
- ABB consultants developed TAM plan with a continuous improvement plan that is closely tied to TAM functionality.



Implementation Paths

Asset Class Driven	Driven by the managers of individual asset classes who champion asset management. Improvements focus on the lifecycle management of individual asset classes.
Capital Planning Driven	Focuses on providing information on asset condition from a centralized asset inventory in a consistent way across all asset classes. Information can be used to improve programming and prioritization to improve asset management outcomes.
Enterprise Driven	Uses consistent, up-to-date, and increasingly complete asset inventory data to align with the agency's performance management requirements and support all enterprise-level asset management business processes.

Connecting TAM to Finance

- '''→ **Asset inventory vs. equipment register**
- '''→ **Labor Costing**
- '''→ **Charging to facility components**
- '''→ **Prioritized list of investments**

Asset inventory

What belongs in an asset inventory?

Asset inventory

What belongs in an asset inventory?

It depends.

Asset inventory

What belongs in an asset inventory?

Anything that has been a line item in a capital purchase order.

- Finance department**

Asset inventory

What belongs in an asset inventory?

Anything that will require a capital expense greater than \$5,000 to replace.

- Grants department**

Asset inventory

TAM/NTD Crosswalk

Assets	TAM Plan Inventory	TAM Plan Condition Assessment	NTD Inventory & Condition Submittal	SGR Targets
Revenue Vehicles				
Owned	yes	yes	yes	yes
Direct Capital Responsibility	yes	yes	yes	yes
3 rd Party Owned (Direct Capital Responsibility)	yes	yes	yes	yes
3 rd Party Owned (NO Direct Capital Responsibility)	yes	no	yes*	no
Equipment: Non-revenue Vehicles (regardless of cost)				
Owned	yes	yes	yes	yes
Direct Capital Responsibility	yes	yes	yes	yes
3 rd Party Owned	no	no	no	no
Equipment: Over \$50,000 in Acquisition Value				
Owned	yes	yes	no	no
Direct Capital Responsibility	yes	yes	no	no
3 rd Party Owned	no	no	no	no
Equipment				
Under \$50,000 in Acquisition Value	no	no	no	no
Facilities:				
Owned	yes	yes	yes	yes
Direct Capital Responsibility	yes	yes	yes	yes
3 rd Party Owned (Direct Capital Responsibility)	yes	yes	yes	yes
3 rd Party Owned (NO Direct Capital Responsibility)	yes	no	yes**	no
Infrastructure: Non Rail Fixed Guideway				
Owned	yes	yes	no	no
Direct Capital Responsibility	yes	yes	no	no
3 rd Party Owned (Direct Capital Responsibility)	yes	yes	no	no
3 rd Party Owned (NO Direct Capital Responsibility)	yes	no	no	no
Infrastructure: Rail Fixed Guideway				
Owned	yes	yes	yes	yes
Direct Capital Responsibility	yes	yes	yes	yes
3 rd Party Owned (Direct Capital Responsibility)	yes	yes	yes	yes
3 rd Party Owned (NO Direct Capital Responsibility)	yes	no	yes	no

Included in TAM Plan

Reported to NTD

Asset inventory

The inventory must include all capital assets that a provider owns, except equipment with an acquisition value under \$50,000 that is not a service vehicle. An inventory also must include third-party owned or jointly procured exclusive use maintenance facilities, passenger station facilities, administrative facilities, rolling stock, and guideway infrastructure used by a provider in the provision of public transportation.

The asset inventory must be organized at a level of detail commensurate with the level of detail in the provider's program of capital projects.

Equipment register

TARC ELLIPSE PRODUCTION 8.9.12.2

MSE60A - Update Equipment Register

Submit

Refresh

New

Save As

Delete

Open

Up

New Search

Disposal

EGI APL

Equipment APL

MSTs

Standard Jobs

Work Orders

Condition Monitoring

TARC TARC Maintenance Administration

BLDG TARC Buildings and Grounds

BLDG10 10th Street Buildings and Grounds

ANNEX Annex/Training Center

AX-CON Conveyance (ANNEX)

US-AX-ELEV Elevator

AX-EL Electrical (ANNEX)

AX-EQ Equipment (ANNEX)

AX-EQ-COMP Air Compressor, GX7FF

AX-EQ-LIFT Lift, Mobile System (4 Units)

AX-FIRE Fire Protection (ANNEX)

AX-HVAC HVAC (ANNEX)

AX-INTR Interior (ANNEX)

AX-PLM Plumbing (ANNEX)

AX-SHL Shell (ANNEX)

AX-SITE Site (ANNEX)

AX-SUB Substructure (ANNEX)

BAGGAGE Baggage Building

BARN Barn

HOIST Car Hoist

TRANSOP Transportation and Operations Building

USTA Union Station

BLDG29 29th Street Buildings and Grounds

BW-BARN Barn

BW-PAINT Paint Booth

CALLCTR Call Center

NIACTR NIA Center

UNITSHOP Unit Shop

EQUIP Capital Equipment

RLSTCK Rolling Stock

NONREVENUE Non Revenue

REVENUE Revenue

Equipment Number100000000753

DescriptionAnnex/Training Center

Associated Equipment Item

General

Costing

Tracing

Condition

Classifications

Location

Extended Desc

Nameplate

Alternate References

Equipment ClassPUProductive Unit

Equipment Type

Plant NumberANNEX

StatusAVAvailable

Equipment LocationUSTAUnion Station

Productive UnitBLDG10

10TH STREET BUILDINGS AND GROUND

Custodian

Custodian Position

Operator Id

Operator Position

Input By

Customer Number

Shutdown Equip

Warranty Stat. Type

Warranty Stat. Value

Warranty Date

Name Code

District CodeTARCTARC 8.9.3 PROD

Active

Equipment Pool ID

IAA Asset

Primary facility levels

▼ ANNEX Annex/Training Center

▼ AX-CON Conveyance (ANNEX)

US-AX-ELEV Elevator

▶ AX-EL Electrical (ANNEX)

▼ AX-EQ Equipment (ANNEX)

▶ AX-EQ-COMP Air Compressor, GX7FF

▶ AX-EQ-LIFT Lift, Mobile System (4 Units)

▶ AX-FIRE Fire Protection (ANNEX)

▶ AX-HVAC HVAC (ANNEX)

▶ AX-INTR Interior (ANNEX)

▶ AX-PLM Plumbing (ANNEX)

▶ AX-SHL Shell (ANNEX)

▶ AX-SITE Site (ANNEX)

▶ AX-SUB Substructure (ANNEX)

Labor costing

- ▢→ Intended use of data
 - ▢→ Actual rate vs. Standard rate
 - ▢→ Charge overtime to assets?
- ▢→ Challenges for Diesel work group
 - ▢→ Speed of data entry amid break-in work
 - ▢→ Road calls
- ▢→ Already seeing labor cost trends

Capital work requests

“Build a healthy backlog.”

Search Method All

Work Request Id

General

Requester

Address

Assigned / Estimate

Reference Codes

Classification

[Equipment Reference](#)

User Status

Source Reference

Service Level Agreement

Region

Required By Date From

Required By Date To

Request Type

Status











Priority

SLA Failure Code

Raised Date From

Raised Date To

Search Results

Work Request	Request Description 1	Classification Desc	Request Type Desc	Status Desc	Raised Date	Priority	E
 000000000004	Folding furniture purchase	Office Equipment	Capital Request	Closed	03/01/2019	3 - Medium	
 000000000005	Solar Array for Union Station Barn	Facility	Capital Request	Open	07/02/2019	2 - High	
 000000000006	Construct Extended Bay - Diesel West	Facility	Capital Request	Open	07/02/2019	3 - Medium	
 000000000007	Renovate Transportation dispatch office	Facility	Capital Request	Open	07/03/2019	3 - Medium	
 000000000008	Patch and recoat shop floors (USTA)	Facility	Capital Request	Open	07/03/2019	4 - Low	
 000000000009	Remove and replace 6 in-ground lifts	Facility	Capital Request	Open	07/03/2019	3 - Medium	
 000000000010	Roof replacement, Union Station building	Facility	Capital Request	Open	07/03/2019	3 - Medium	
 000000000011	Purchase automated fuel mgmt system	Facility	Capital Request	Open	07/09/2019	2 - High	
 000000000012	Purchase replacement utility vehicle	Shop Equipment	Capital Request	Closed	07/11/2019	1 - Immediate	
 000000000013	Supply and delivery of two (2) Ford F250	Shop Equipment	Capital Request	Open	07/23/2019	1 - Immediate	

Final points

- ➡ **Content and costs associated with the equipment register are the basis for all planned TAM actions**
- ➡ **Enterprise driven approach is viable with a disciplined approach to building and maintaining asset data**





THE TRANSIT AUTHORITY OF RIVER CITY

Questions?

Chris Ward
Maintenance Asset Manager