**TAM Update**

**Notes for meeting with Joe Wire, CFO**

**Attendee: Joe Wire, Amy Frye, Chi Chow**

**8/11/2020**

# Joe’s questions - March presentation, May QA, August update

## National Transit Database

This is a subset of TAM Plan assets. The reporting is only for facilities, revenue vehicles, service vehicles.

Targets are set based on the percent of assets exceeded useful life benchmark. (Roundtable indicated ULB might change from COVID-19).

### Status

* 2020 update session opened this month
* 2020 template data will be populated this month
* Webinar 8/7/2020 indicates improved procedures and validation
* Webinar 8/5/2020 COVID-19 guidelines for reporting
* NTD team new members, Jacob, Cody, Leo

### Performance Target

* Careful update of facilities inspected will improve performance targets
* Facilities assessed in 2020 are “good” or better
* Reassigned the weighing to improve condition scores (Equipment and site)
* The last 5% of inspection will require Wilson to oversee inspection contract – similar to Moffat and Nichols. Alternatively, we ask NTD to move the waterside assessment of LFT to beyond 2026.
* LFT waterside
* LFT landside (FTA compliant)

### RTCI

* Data submitted on July 6, 2020, eliminated and reverted to the MTC version of 2019 data.
* The same custom asset classes, ferry vessels, and parts are grouped for regional assessment.
* The website not user friendly, and when the connection hangs, the records can be duplicated or entries incompletely updated.
* 8/10/2020 revert back to 2019 data and used FA050 to identify new capital assets start depreciation in FY19/20

## Status of TERMLite

### Unplanned Need integrated into Capital Planning

* Rapid workflow chart and Kaohill are integrated
* Capital projects in the budget connected to assets
* 10YP linked to TERMLite unconstrained analysis

### Current Scenario

* delay 2020 project and push out to 2021
* ramp-up deferred maintenance year 2 to 5
* 30 year need $3B

### Run TERMLite to identify a 5-year recovery strategy?

Reduce the need gap of $98M?

Remove obsolete asset, reduced $3M backlog

Delay replacement of assets that exceeded ULB (identify the type of assets – bus ULB change to 16 yrs)

Parking lot in poor condition is not a tremendous risk unless defect damages buses

Dely Bldg H seismic upgraded with risk mitigation measures – remove people from the building.

Reduce 1% maintenance and applied to 0.5% actual? (Lehnee)

TRB Transportation in COVID-19 world mentioned similar issues for that FHWA may have a slower reimbursement rate starting the spring of 2021.

## TAM Plan Status and Schedule

* Asset register (95%) – CC, BS
* Asset Metadata
* Data quality matrix (25%) - CC
* Risk matrix (0%)- need to identify working group – mid-managers?
* Update prioritization (75%) - JB
* Lifecycle cost analysis – high level (25%) - Leo
* TAM Policy (50%) – CD
* Evaluation plan - CC, AF
* Waiver for LFT inspection

## Maximo Feedback

* Strategic planning for Maximo Upgrade worked
* Bridge assets and asset class should conform to FHWA guidelines (Caltrans reports are consistent)
* Transit assets and class,
* Metadata of reporting requirements moving along

1. Need a data working group to approve the source
2. Metadata

* NTD
* RTCI
* IFAS fixed asset

1. Asset life-cycle

* Application code
* Middleware
* Services
* Push into cloud

1. Containerization

* Cost
* Complexity
* Lack of time an staff

# Five Initiatives

## Phase 1 – Collect Data (95%)

1. **RTCI and NTD reporting** *(Define rules for NTD reporting)*

* NTD 2019 Rev2 closed January 9, 2020

## Phase 2 – Transform Data to Information (60%)

1. **One clean System to store data** *(Develop Maximo for effective asset maintenance)*

* Rolling stock and service vehicle updated in Maximo production environment, 100% NTD ID.
* 47 Facilities into the asset module, with subcomponents for roof…etc.
* Calculate facility condition score inside Maximo to capture condition improvements.
* *The ferry terminal infrastructure created by JFC needs to be imported to TERMLIte.*

1. **One System of record (*Hybrid Multi-Cloud* <= OnBase, Maximo, IFAS, EJ Ward)** *–*

* Facilities – comparing Location table ID and TAM ID in *Maximo demo environment*; the match is 75%. Beverly may be working with Keith to make the connection.
* Focus on Maximo work orders to calculate deterioration rate, service life, cost-effectiveness ratio, and other life-cycle cost indices. See operating cost per mile (Agency benefit only).
* Life-cycle cost in IFAS before Maximo and after Maximo. (NJNYPA)
* Bus – Utilization report, Operating Cost report – working with Beverly two days a week

## Phase 3 – Convert Information to Business Metrics (15%)

1. **Calculate service life for capital project planning** (*Refine uniform asset life and capitalization policy***)**

* On-time preventative maintenance report.
* Operating $ per mile.
* Gillig deployed to routes with equity consideration.
* Manpower calculation in IFAS not to be reproduced.
* Shared equipment list for physical inventory with a location for bus and ferry.

## Phase 4 – Business Metrics to be shared with District with 2021 TAM Plan (On Hold)

* We are not ready for the dashboard because we need to improve the following:
* Data silos, inconsistencies and incompleteness. (various dept, IS)
* Challenges cleaning and migrating data from legacy system to enterprise plate form. (various dept, IS)
* Inability to have a single unified data repository due to a variety of platforms. (JFC)
* Lack of process documentation and integration across departments. (Kaohill, IS)
* The line department has changing needs. (Bus, Ferry)
* Roles not sufficiently established to support the program. (JFC)

## On-going - Continuous Communication –Pull not Push

**Joe – E team as needed**

* GM – Cable News, Budget Book, CAFR – Mission, Goals, Objective by Division (intranet, annual)
* Dash Boards – graphs and performance metrics (intranet, quarterly)

**Amy – Mid manager**

* Policy – TAM Policy refined; (intranet, annual)
* Process – Budget CIP process and State of Good Repair (monthly meetings, annual budget document)
* Round Table’s 5-year CIP and MODA
* Risk Matrix next C&G meeting to be discussed in November, December.

**Chi – Staff**

* Asset Inventory and Value – (IFAS, Maximo, OnBase, quarterly)
* Asset Condition – (Facility Management System, every four years)
* Life-cycle cost Pilot Course here
* FTA TAM Roundtable here
* TRB Asset Management in COVID-19 World here

***AF - Improve TAM Update monthly with Joe***

*Two-day before meeting with Joe do a mock discussion with Amy*

***Write up 1pg***

* 1. *State topics, what, why*
  2. *Most important point/question first.*
  3. *Provide verbal headline*
  4. *Remove factors that increase frustration.*
  5. *Discuss high-level examples with no details*
  6. *Prepare questions for Joe*
  7. *Make sure requests are covered*

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**TAM Update**

**Notes for meeting with Joe Wire, CFO**

**Attendee: Joe Wire, Amy Frye, Chi Chow**

**1/9/2020 and 2/11/2020**

Hi Chi,

FYI, Please see notes below from today’s meeting with Joe on TAMP. Hope this helps and great work! You’ve been doing a lot and getting the District TAM-ready. 

* Stop-gap funding is money we’ll pay for an asset that **doesn’t achieve our goal** of bringing assets up to a state of good repair (asset doesn’t move up in the chart); and money **that we have to pay (cannot avoid paying**)
* Chi, your role is to articulate what Keith is doing with Bus (inspections, work orders) and share with Ferry/Bridge (using work orders to update condition score)
* Goal – capture different deterioration curves for different assets, add the stop-gap costs
* Define what you want; keep it simple, and explain when you would use the codes to collect data for stop-gap analysis
* What does it take to get from where we are today, to where we would be proud of the state of the District’s assets? (what is our goal?)
* Consider doing a sensitivity analysis – show 20 yrs vs 30 yrs ($3B over 30 yrs)
* How do the cap/op needs assessments compare to how we do our capital planning process (10 yr plan)?
* Ferry terminal floats, facilities – cost estimates growing; WETA’s costs for new ferry facilities $40M
* Make sure we include ferry’s facilities in the capital/op needs
* What can we do about Bridge assets?
  + Use Engineering’s info, add work orders
  + Use Engineering’s inspections data
  + Want – cost estimates for what Eng needs to get to SGR for Bridge
* If we expand service as part of the operating needs survey, we should be adding something to the capital side as well.
* Toll subsidy projections – for up to 10 years, can keep constant at $50M; but consider increasing over 30 years
* Maximo status update given
* Joe wants to see facilities in the CIP, all assets in System

## **District Success Stories**

**People**

* Business Process (fixed asset, capital grants, procurement) documented by KOAHill for ERP (IS)
* Maximo Road Map – completing needs analysis and upgrade (IS)
* Leading the asset management practice with 7% on-time PM (Bus)
* Planning set performance measures for District - ridership (Plng)
* Business Impact Analysis (Emergency Management and Safety Solutions)
* Support Physical inventory with TAM Inventory > $50K (Accounting)

**Policy**

* The proposed useful life for various assets (C&G and Accounting)
  + Commodity useful life matches revenue vehicles, service vehicles (See Below)
  + Engineering useful life for facility useful life?
    - NIST ASTM, RSMeans
* Short Range Transit Plan (Plng)

**Tools**

* Prepare OnBase, IFAS, EJWard, Maximo for asset management
  + Interoperability
  + Data governance and standards
* One System of records
  + (NTD, RTCI, Maximo, IFAS)
* Support Bus Maintenance track performance
  + Life-cycle cost per mile (need loaded labor cost per hour)
  + Geographic equity (HASTUS age of vehicle used per area)
* Refine framework for asset and condition data
* Digital Archive – working with Clifford, Elizabeth to update grants close-out retention policy.

## **2020 Major Milestones**

## **Triennial Audit – TAM documents**

* TAM Plan prepared 9/28/2018 to be amended 10/1/2020
* Performance Target set 2018, 2019
* Shared with MPO 10/1/2018
* Inappropriate TAM Plan – all nine modules 9/28/2018
* Group plan (MTC) 9/28/2018
* Sufficient oversight of Marin Transit on-time PM
* Designated executive – GM video clip, executives strategic plan, Controller’s strategic financial plan

## **TAM Plan Elements deficiencies**

* + QAQC condition assessment procedure - field trips, improve quantification of defects
  + Cross function communication at staff level
    - Discussed roles and responsibilities for condition score with Engineering, Bus Maintenance
    - Met Sean from Safety and Risk Management to share TAM Inventory on fire protection systems, flood plains, liquefaction zones

## **TAM Plan Evaluation Criteria**

* + Continuous improvement – Quality Data
    - LFT can be brokend down into WSF economic and risk model
  + Tools for improvement – Multi-Cloud
    - Cloud native architecture
    - Kubernete / containers to manage multi-clouds

## **Sub-recipient Collaboration**

* + On-time performance
  + Operating cost

## **Centralized Capital Planning Process**

* + Create Asset Management Policy for Facilities
  + Show facilities in Maximo
  + Use GIS parameters
  + Maintenance management work orders
  + Engineering replacement and rehab projects

## **Condition Driven Capital Improvements**

* + August 7 Federal Register requires a list of capital projects in TAM Plan
  + TAM Plan Amendment: “Define criteria for updating TAM Plan”
    - Significant change in governance, responsibility, or resource
    - A substantial change in the 10-YR Plan (Earthquake, ZEB, Project Overruns)

## **Plan Bay Area 2050 Collaboration with Planning**

MTC (Shruti, Bill and Rob) are looking at operating and capital needs for the next 30-yrs.

**Operating needs** looks at existing and expanding service

* **$7.9B** **needs with $4.1B shortfall**
* Toll subsidy is conservative 8-yr average and increment per resolution
* **Need to ask Mona and Jim how the ZEB requirements might impact operating costs.**
* **Amy will discuss the results at TCP to make sure District is not under reporting.**

**Capital needs** looks at Maintain existing condition to SGR

* **$2.8B to $3.3B** (Rick is working on it)
* Rick and Nicholas are collaborating on final version of TERMLite results.
* Need to *create custom AssetTypes that model District Ferry Terminal and Vesse*ls.
  + **Maximo has 400 operating assets and IFAS has 250 to 300 active assets. Are we under reporting?**
* District maritime assets are different from WETA. We are continuous rehabilitating and improving ferry vessels. Larkspur ferry terminal is 60 year old.
  + **WETA vessels mostly catamaran $12M holds approx. 400 passenger**
  + **District catamaran are $25M (summary of pieces) holds approx. 450 passenger**
  + **District Spaulding are $25M to $30M holds 750 passengers.**

## **NTD and Useful Life Analysis**

* NTD revision 2 submitted 1/8/2020.
* Gillig has useful life of 12-yrs.
* Asset Management Policy – proposed useful life
  + **Clean up useful life policy with accounting and post it on website.**
  + **Asset management policy**
    - **Car = 7 yrs or 150,000 miles**
    - **Van, SUV, Truck = 10yrs or 150,000 miles**
    - **Admin and Maintenance building = 50 yrs**
      * **Building components = 20yrs**
    - **Bus Stations building (50yr)**
    - **Ferry Terminal building (50yrs)**
      * **Gangway (40 yrs);**
      * **piers (35 yrs);**
      * **docks (35 yrs);**
      * **floats (10yrs)**
    - **Bus Yards = 15 yrs**
    - **Car Parks = 20 yrs**
    - **Cutaway = 5, 7, 10 or 150,000 miles**
    - **Bus** 
      * **Hybrid = 12 yrs or 500,000 miles**
      * **ZEB (TBD)**
    - **Over Road Coaches = = 12 yrs or 500,000 miles**
    - **Vessels**
      * **Catamaran = 20 yrs or xxx nauticle miles or xxx operating hours**
      * **Spaulding = 25 yrs or xxx nauticle miles or xxx operating hours**

**Maximo Roadmap Workshops (**Target Maximo 7.6 upgrade in September 2020**)**

* JFC has conducted interviews with Procurement, Bridge, Bus, Ferry, C&G. Risk and Safety. Notes for November in H drive.
* JFC will conduct workshops with other departments in December.

## **Maximo User Group**

* Do the best we can with BIRT report. Upgrade will eliminate customization. All the work that IS and I do are only configuration, no coding. Plan to eliminate Rules Manager.
* Conference call meeting 10/4/2019, 11/15/2019 with Marcus and Lisa
  + Alias or vehicle number should be available in asset module, so users can easily maintain the information inside the System. Marcus created public queries on 10/7/2019 available for use.
  + Scan monthly inspection and improvement work orders into Maximo
  + Facility Data will be combination of engineering capital projects and regular maintenance work orders
  + Bridge Data will be combination of engineering Caltrans report and regular maintenance work orders

## **Preliminary Analysis for Bus**

* 2019 On-time preventative maintenance for GGT = 7.03%
* 2019 On-time preventative maintenance for MT = 11.79%
* Operating cost per mile from other transit agencies is much lower. (not revenue miles and including all rehab and PM costs.)
* Defining rules on using fueling mileages in FY18-19. (topping off, no miles between fill-up)
* Hybrid useful life set at 12 years or 500,000 miles (FTA circular 5010.1E).
  + Contacted AC Transit to get real numbers of mileage and operating hours.
* Hybrid operating costs need careful monitoring.
  + ZEB cost = facility improvements and vehicle purchase and additional maintenance
  + Hybrid cost = vehicle purchase and additional maintenance
  + ZEB increased labor new PM plan?
  + ZEB increased vehicle shorter routes?
  + ZEB infrastructure development and maintenance safety requirements to be determined.

## **In-house Improvements (Chi, Amy)**

* Example Presentation
* **Amy suggested presenting the results of three priorities at spring manager meeting:**
  + - **Bus/Vessels priority 1 and 30-yr shortfall**
    - **Facilities priority 1 and 30-yr shortfall**
    - **Show audience the connection between condition data and financial planning.**
* **C**ollect contract unit cost on facility components to adjust the weighting.
* Asset Updated facility age, size, assessor number in all systems: Engineering, IFAS, Maximo.
* Create project candidates from TERMLite.

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* Risk Matrix next C&G meeting to be discussed in November, December.

**Chi – Staff**

* Asset Inventory and Value – (IFAS, Maximo, OnBase, quarterly)
* Asset Condition – (Facility Management System, every four years)
* NTI training between June and October 2020

**Section 6 Audit of Triennial Review - Transit Asset Management**

**1. Has the recipient developed a TAM plan?**

APPLICABILITY

– Recipients that own, operate, or manage capital assets used for providing public transportation

INDICATOR(S) OF COMPLIANCE

* + Written plan/plan participation
  + Sub-recipients – MTC and Marin Transit

POTENTIAL DEFICIENCY DETERMINATION(S)

* + TAM plan not prepared/participated in
  + Group plan not prepared/missing sub-recipients

**2. Did the recipient develop the appropriate tier plan and does the plan have the required elements?**

APPLICABILITY

– Recipients that own, operate, or manage capital assets used for providing public transportation and are not a group plan participant

INDICATOR(S) OF COMPLIANCE

* + Modes operated
  + Vehicles in peak revenue service
  + Plan type (Tier I)
  + Plan contents – 9 modules

**3. Have TAM responsibilities been assigned to an accountable executive?**

APPLICABILITY

– Recipients that own, operate, or manage capital assets used for providing public transportation

INDICATOR(S) OF COMPLIANCE

* + a. Accountable executive designation
  + b. Accountable executive responsibilities – Approval; inform staff; asset management system development; out-reach;

POTENTIAL DEFICIENCY DETERMINATION(S)

* + No designation of accountable executive
  + Accountable executive responsibilities not implemented

**4. Has the group plan sponsor fulfilled its obligations in the development of the group TAM plan?**

APPLICABILITY

* Recipients with Tier II sub-recipients

INDICATOR(S) OF COMPLIANCE

* + Plan participants
  + Accountable executive for plan participants
  + Plan development
  + Plan availability – on intranet

POTENTIAL DEFICIENCY DETERMINATION(S)

* + Group plan missing Tier II sub-recipients
  + No designation of accountable executive by group plan participant
  + Group plan development lacked coordination with participants
  + Group plan not available to plan participants

**5. Have group plan participants fulfilled their obligations in the development and implementation of the group TAM plan?**

APPLICABILITY

* + Group plan participants – Marin Transit

INDICATOR(S) OF COMPLIANCE

* + Single group plan participation
  + Participation in group plan development

POTENTIAL DEFICIENCY DETERMINATION(S)

* + Participating in more than one group TAM plan
  + Information not provided by group plan participant

**6. Has the recipient set performance targets annually?**

APPLICABILITY

* + Recipients that own, operate, or manage capital assets used for providing public transportation and are not a group plan participant

INDICATOR(S) OF COMPLIANCE

* + Performance targets
  + Annual targets

POTENTIAL DEFICIENCY DETERMINATION(S)

* + No calculations for performance targets
  + Performance targets not set annually
  + Performance targets not approved by the accountable executive

**7. Does the recipient share its TAM plan, any supporting records or documents, performance targets, investment strategies, and annual condition assessment report with the state and/or MPO that provides funding?**

APPLICABILITY

* + Recipients that own, operate, or manage capital assets used for providing public transportation and are not a group plan participant

INDICATOR(S) OF COMPLIANCE

* + Plan sharing

POTENTIAL DEFICIENCY DETERMINATION(S)

* + Information was not shared with state and/or MPO

8. Does the recipient monitor sub-recipients for compliance with TAM requirements?

APPLICABILITY

* + Recipients with sub-recipients that have opted out of the group plan

INDICATOR(S) OF COMPLIANCE

* + Monitoring
  + Plan review
  + Accountable executive designation
  + Information needed for planning

**POTENTIAL DEFICIENCY DETERMINATION(S)**

* + Insufficient oversight of sub-recipients for TAM requirements