



## STAFF REPORT

**Report To:** Board of Supervisors      **Meeting Date:** March 17, 2022

**Staff Contact:** Darren Schulz, Public Works Director

**Agenda Title:** For Possible Action: Discussion and possible action regarding an update on the City's Asset Management Program and direction on the future of the Program. (Tyler Jesse, TJesse@carson.org; Robert Nellis, RNellis@carson.org; Randall Rice, RRice@carson.org)

**Staff Summary:** Staff will provide a brief update to the Board of Supervisors regarding the progress of the City's Asset Management Program. Discussion topics include: updates on Geographic Information Systems ("GIS") services including mobile data collection, apps, dashboards and data conversion; how Carson City is leveraging its Enterprise Asset Management system ("EAM"); how the City's Facility Condition Assessment data is being leveraged; and the current status of Carson City's first-generation Strategic Asset Management Plan ("SAMP") and direction on the future of the program.

**Agenda Action:** Formal Action / Motion      **Time Requested:** 20 minutes

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### **Proposed Motion**

Depends on discussion.

### **Board's Strategic Goal**

Sustainable Infrastructure

### **Previous Action**

On July 1, 2021, the Board of Supervisors approved: (1) Contract No. 21300038 for On-Call GIS Services with Atkins North America, Inc., for a not-to-exceed amount of \$120,000 through June 30, 2022; and (2) Contract No. 21300034 for On-Call GIS Services, with Michael Baker International for a not-to-exceed amount of \$130,000 through June 30, 2022.

On September 17, 2020, the Board of Supervisors approved purchase No. 20300163 for Asset Management On-Premise Software Licensing and Integration Services with LLumin, Inc. ("LLumin") for a one-time lump sum total amount not to exceed \$104,500, plus an annual amount of \$29,088 beginning on August 1, 2021 for support fees.

### **Background/Issues & Analysis**

Staff will present information to the Board of Supervisors regarding the progress of the City's Asset Management Program, specific goals and objectives, and future plans. The presentation will include updates on Carson City's EAM solution, LLumin's READYAsset software and implementation of that software.

Staff will also provide updates on the on-call consultant GIS services, which have provided support critical to the success of the Asset Management Program and related GIS improvements, including application development, database management and system administration support.

Staff will summarize the development of the first-generation SAMP, which will become the City's guiding asset management document by defining the means and methods for managing City assets based on the City's objectives. The documents will describe the long-term approach to management of the City's physical assets, define the approach for developing asset management plans and outline the role that users and City departments play in developing and supporting the achievement of asset management objectives.

Finally, staff's goal is to ensure that the City's Asset Management Program is consistent with best practices for asset management. To that end, staff is exploring ISO 55000 certification for the City, which is the gold standard for entity asset management practices. In addition, the City has engaged a consultant that is an ISO 55000 Certified Lead Auditor, and the City's Asset Manager has begun pursuing that same certification. Staff will discuss the importance of this objective and how staff has leveraged quality consultants to help achieve this goal.

**Applicable Statute, Code, Policy, Rule or Regulation**

Carson City Charter § 2.140

**Financial Information**

**Is there a fiscal impact?** No

**If yes, account name/number:** N/A

**Is it currently budgeted?** No

**Explanation of Fiscal Impact:** N/A

**Alternatives**

Depends on discussion.

**Attachments:**

[2022 AM BOS Orientation Final Draft.pdf](#)

**Board Action Taken:**

Motion: \_\_\_\_\_

1) \_\_\_\_\_

Aye/Nay

2) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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(Vote Recorded By)



# Asset Management Update

**Saving Money   Maximizing Useful Life   Minimizing Risk   Provide High Quality Infrastructure**





# Overview

## Outline:

- Brief refresher on Asset Management, objectives and future plans
- Updates with GIS improvements and related developments
- Development of first-generation SAMP
- Define ISO 55000 and discuss importance of this standard in Asset Management

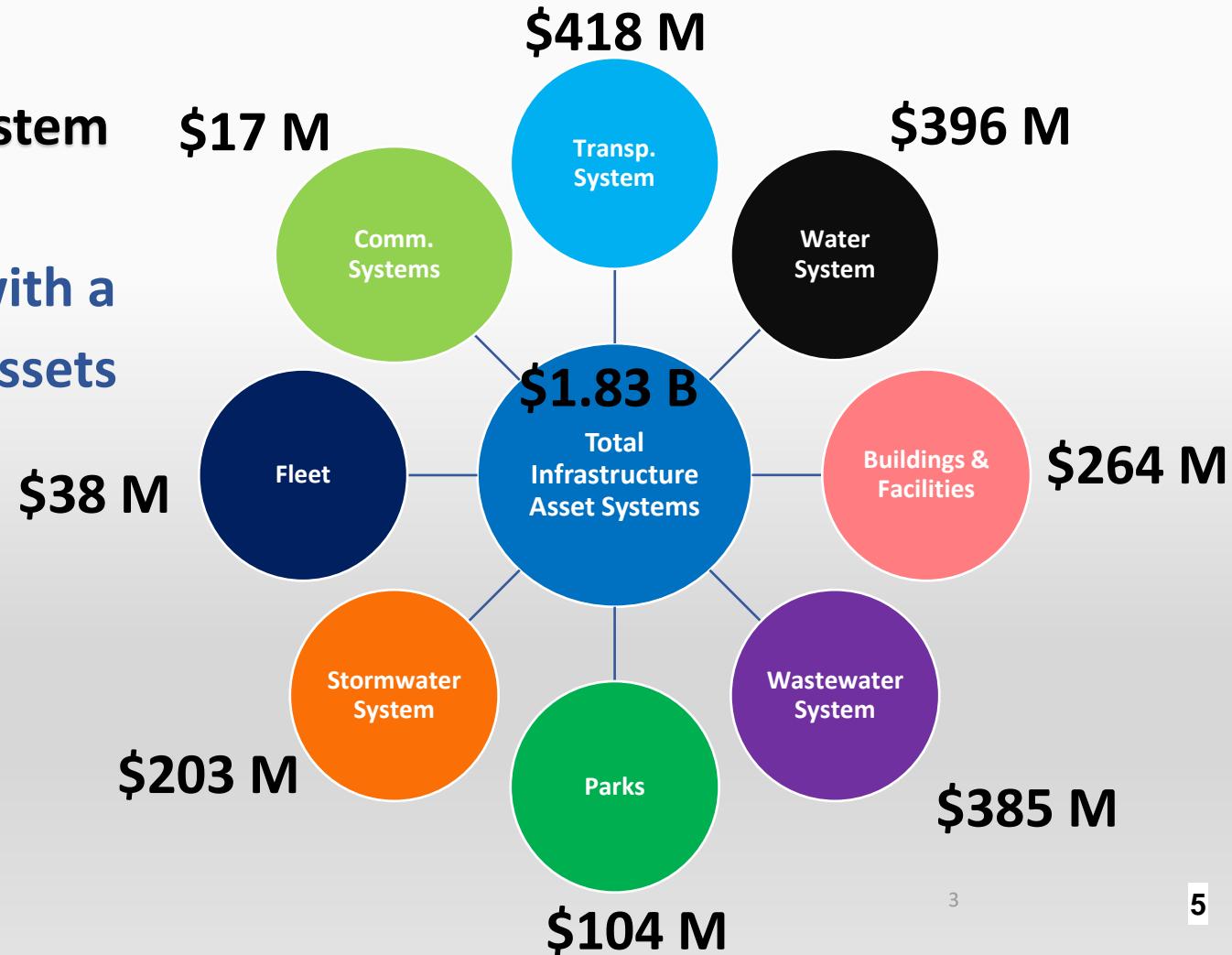




# Asset Management Refresher

## Carson City Asset System

- **Consolidated Municipality with a broad mix of assets**





# Asset Management Refresher

## What is Asset Management?

- **ISO 55000 Definition: Ensuring that the assets deliver maximum value.**

This means making sure that an asset:

- Delivers its functional requirements in line with the business objectives and
- Does so in the most economical, safe, sustainable and reliable manner.

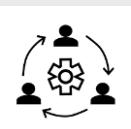
## Goals of Asset Management



Minimize risk and maximize the effective useful life of City assets



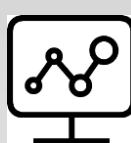
Optimize customer service



Improve succession planning and the transfer of institutional knowledge



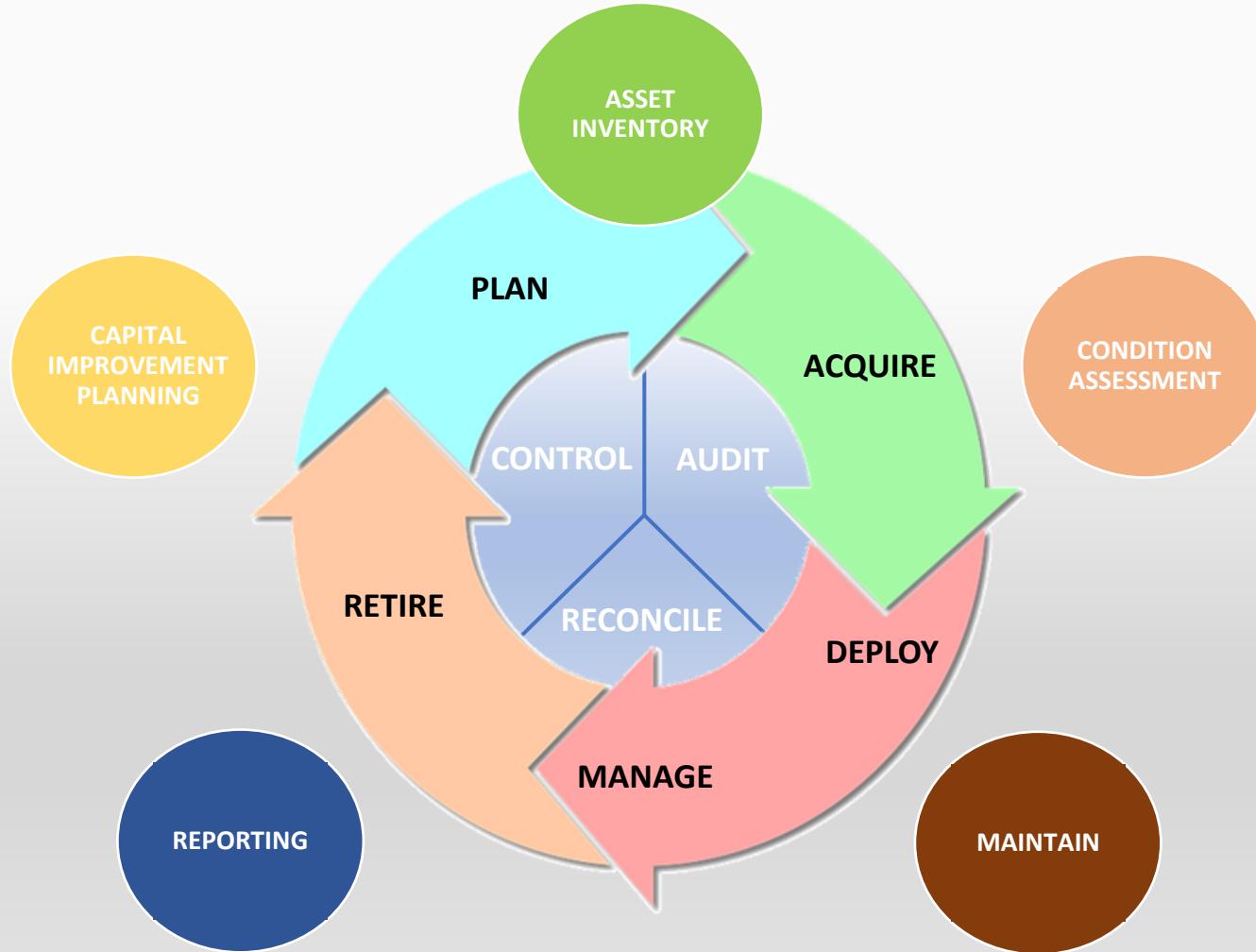
Develop a proactive maintenance and planning strategy



Promote data driven decisions and increase transparency



# Asset Management Refresher





# Major themes and objectives

## Data Driven Decisions:

- Facility Condition Assessment (FCA)
  - Has been entered into ReadyASSET
- EAM Procurement
- Asset Inventory
- Data Collection and Condition Assessment
- Reporting



# FCA Update



- ❖ 20/21 FCA Report identified significant deferred maint. Backlog (\$16.9M Immediate Need / \$59M next 10-years)
- ❖ Significant BOS actions:
  - **\$7.2 M in Facilities CIP Approved in FY22 Budget**
  - **Approved Facilities Maintenance FTE in FY22 Budget**
    - Allows for more in-house maintenance
  - **Nearly 120 projects completed or in-progress in FY22**
  - **\$2M in ARPA funds allocated for HVAC needs**
  - **\$8.68M in Facilities CIP proposed in FY 23**
  - **Exploring opportunities to consolidate buildings and perform space optimization needs city wide**

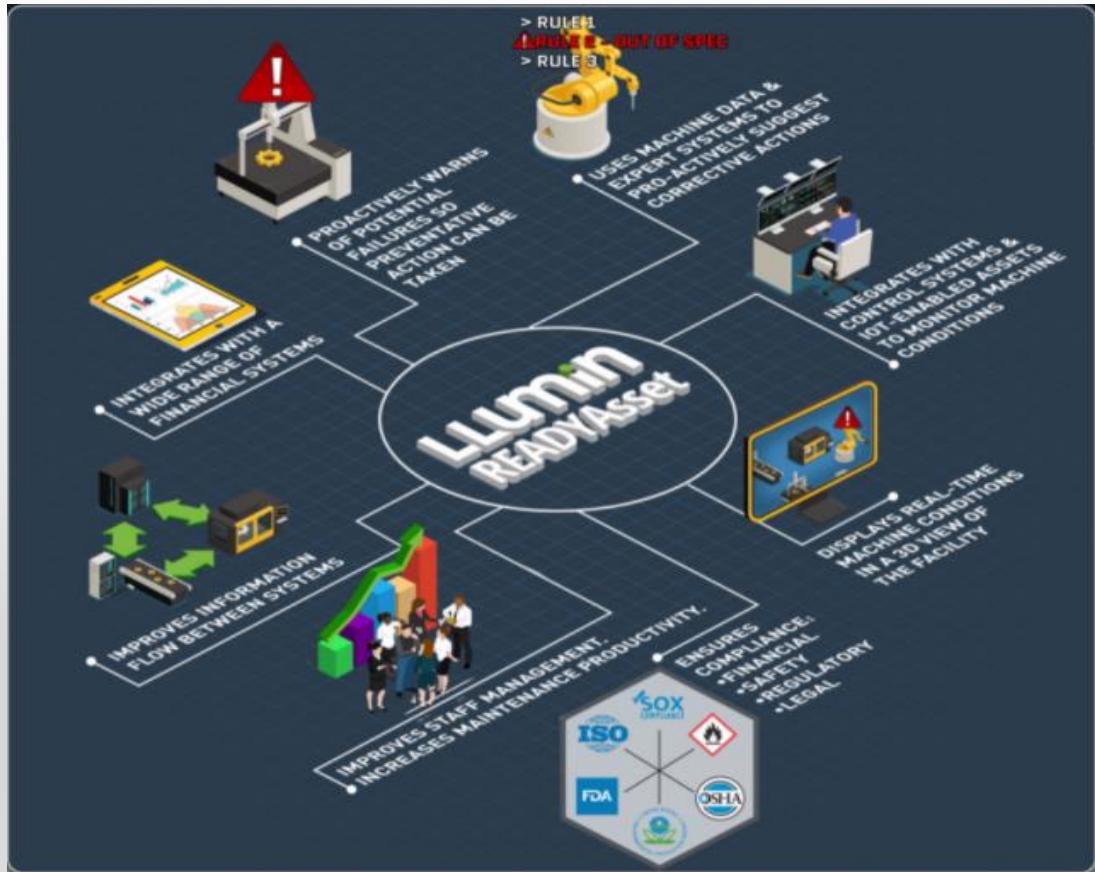


# Current Objectives





# Enterprise Asset Management System

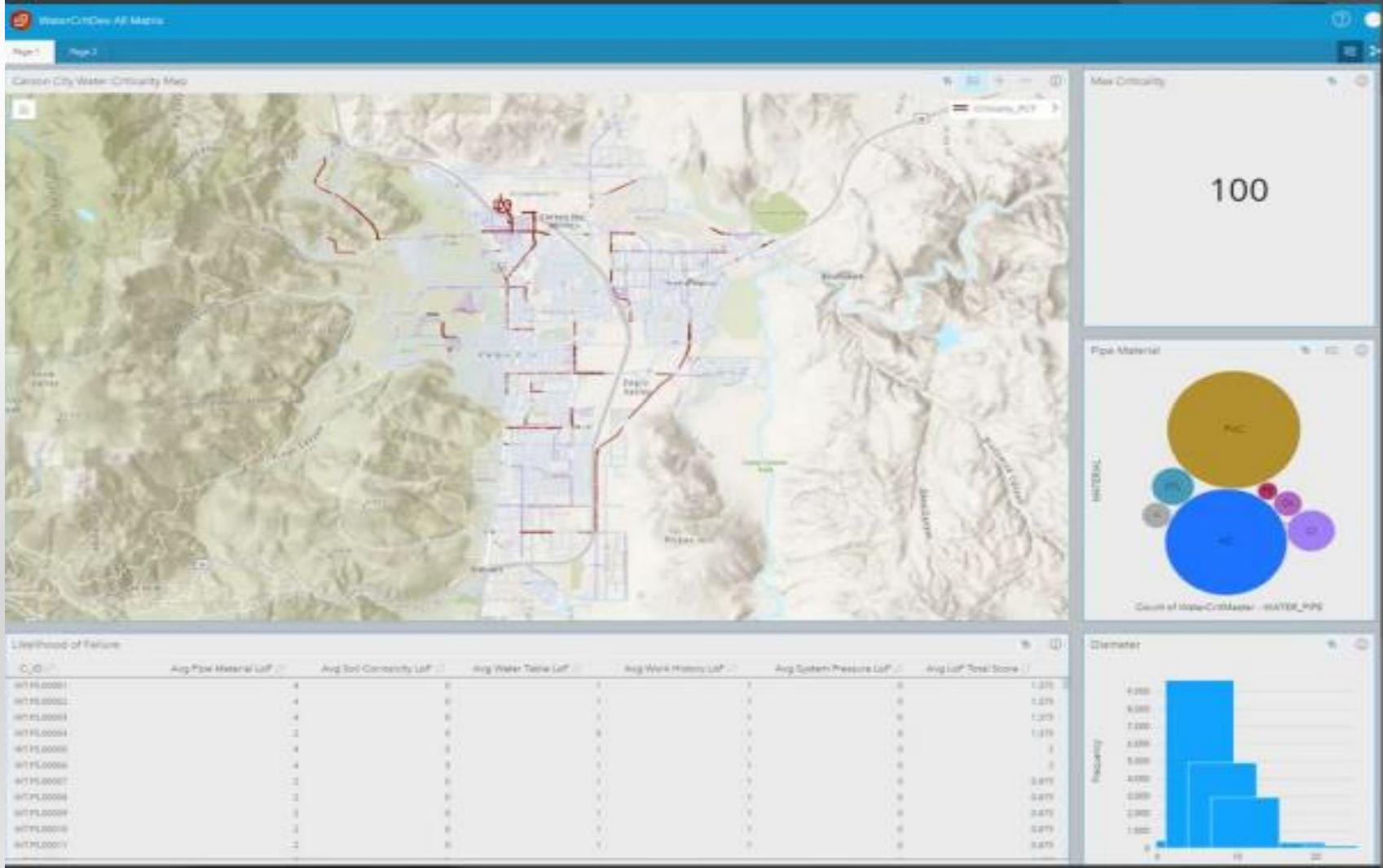


## Llumin ReadyAsset

- Bar Coding
- Inventory and Asset
- Fuel QAQC and Policy
- SCADA Integration
- GIS Normalization
- Custom Configuration

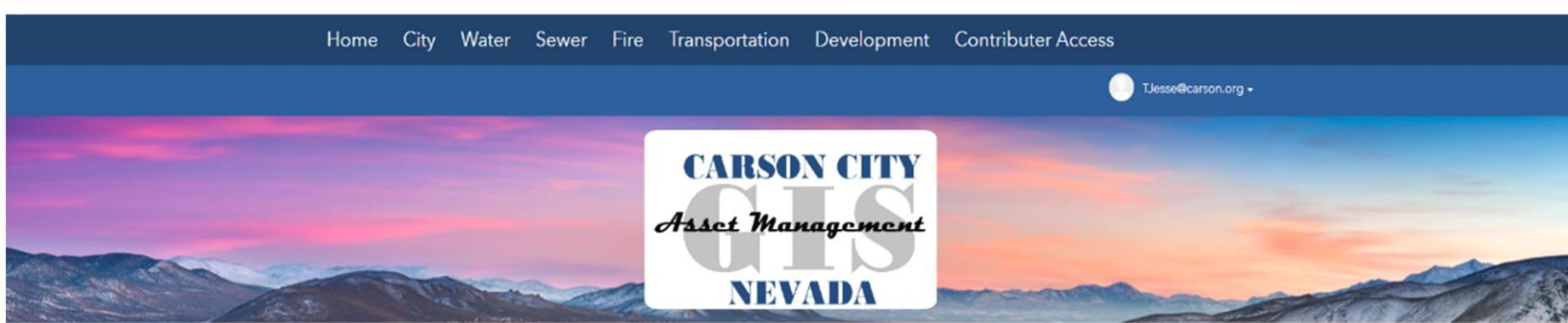


# GIS Asset Management





# GIS Architecture Upgrade



A screenshot of the Carson City GIS Portal. The top navigation bar includes links for Home, City, Water, Sewer, Fire, Transportation, Development, and Contributor Access. A user profile icon is on the right. The main content area features a large image of a mountain range at sunset. Overlaid on this is the "CARSON CITY GIS Asset Management NEVADA" logo. The bottom of the page has a light blue footer bar.

The Carson City GIS Portal is your destination for the city's geospatial data. This platform allows city staff to explore web applications, data, maps, and to engage with others to solve important issues. The GIS Portal can be accessed on standard web browsers, smart phones, and tablets. Providing access to the Portal from anywhere, at any time.

## Explore Content



CITY



WATER



SEWER



FIRE



DEVELOPMENT



TRANSPORTATION



Some apps require access to be granted to specific users. If you encounter an access denied message but have legitimate business reason for accessing an application, please email the GIS Administrator to request access.

## Contact Information

[gis@carson.com](mailto:gis@carson.com)



# GIS CityView App

CITYview Utility Infrastructure

Address, APN, Owner, Inde

LIMIT OF STUDY

Construction Drawings

USA Flood Hazard Areas

Storm Water Utilities

Water Utilities

Sanitary Sewer Utilities

Reclaimed Water Utilities

Landbase

NFHL - Study\_Info

0.4mi

-119.801 39.203 Degrees

Utility Infrastructure Transportation

14



# GIS Lead and Copper

**Lead Service Line Viewer**

Unverified or Unknown Service Lines

Find address or place

Lead Categories

Utility lead category is

Customer lead category is

Replacement Status

Replacement status is

**Legend**

Utility Side | Customer Side

- Lead | Lead
- Lead | Galvanized Requiring Replacement
- Lead | Non-Lead
- Lead | Unknown
- Galvanized Requiring Replacement | Lead
- Galvanized Requiring Replacement | Galvanized Requiring Replacement
- Galvanized Requiring Replacement | Non-Lead
- Galvanized Requiring Replacement | Unknown
- Non-Lead | Lead
- Non-Lead | Galvanized Requiring Replacement
- Non-Lead | Non-Lead
- Non-Lead | Unknown
- Unknown | Galvanized Requiring Replacement
- Unknown | Non-Lead
- Unknown | Unknown
- Other

**Lead Verification Dashboard**

Verified Lead in Service Line

6 Verified Properties

Potential Lead in Service Line

401 Potential Properties

Potential Lead Properties (1 of 1)

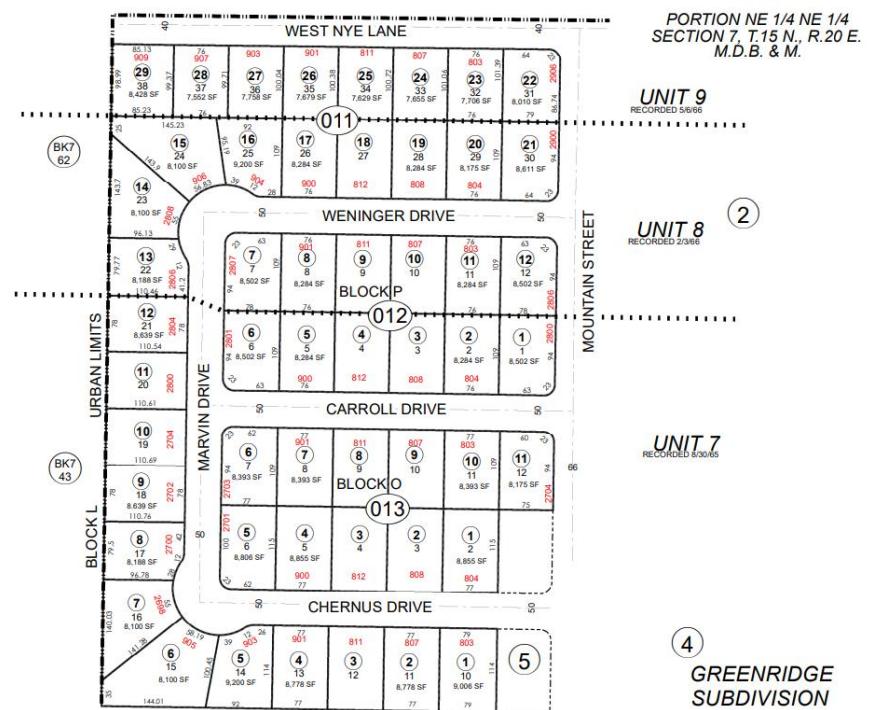
Parcel ID: 0713304012  
Owner: Shansover, Jonathan B.  
Address: 9 N West St  
City: Minneapolis  
State: MN  
Zip: 60540  
Year Built: 1,941  
Cost: 1,239

**Lead Service Line Report**

15



# GIS Assessor Migration



CORRECTED PAGE INFORMATION

CARSON CITY NEVADA  
THIS MAP IS PREPARED FOR THE USE OF THE CARSON CITY  
ASSESSOR FOR ASSESSMENT AND ILLUSTRATIVE PURPOSE  
ONLY. IT DOES NOT REPRESENT A SURVEY. NO LIABILITY  
IS ASSUMED AS TO THE SUFFICIENCY OR ACCURACY OF THE  
DATA DELINEATED HEREON. YOU CAN VIEW AND PRINT OUR  
MAPS AT NO CHARGE FROM OUR WEBSITE AT  
[WWW.CARSON.GOV/HOME](http://WWW.CARSON.GOV/HOME)

SCALE: 1" = 150

NOTE  
SOME PARCELS DELINEATED HEREON MAY NOT  
BE PRESENTED IN TRUE SIZE, SHAPE, OR LOCATION  
DUE TO DISCREPANCIES BETWEEN LOT LINES.

Revised: 01/25/2022



# Other Initiatives

- Redistricting
- CATSMP
- William Street Corridor
- Covid Dashboard



**CONNECTING**



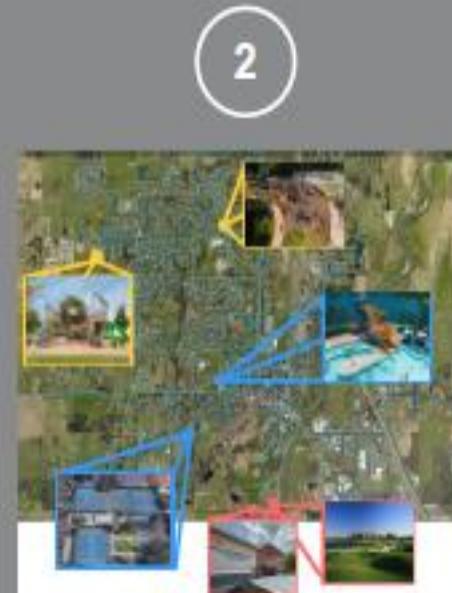


# Asset Management Progression

## Strategic Asset Management



HOW THE ORGANIZATION



MANAGES THESE THINGS

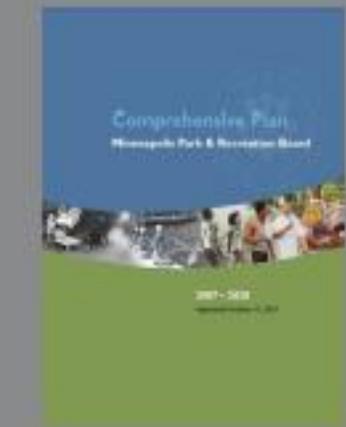


TO CREATE VALUE



# Strategic Asset Management (SAMP)

## WHAT IS A SAMP



MISSION, GOALS, OBJECTIVES

WHY YOU EXIST



TRANSLATES

MNPB CORPORATE GOALS

INTO

ASSET MANAGEMENT GOALS

HOW ASSETS  
CONTRIBUTE TO  
MNPB'S OBJECTIVES

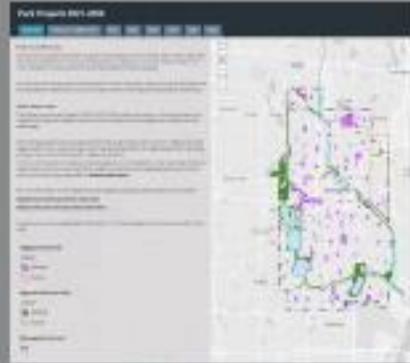
HOW PORTFOLIO  
OBJECTIVES  
CASCADE TO  
INDIVIDUAL ASSETS

DECISION CRITERIA

LEVELS OF SERVICE

RISK

SCOPE OF ASSET  
MGT. SYSTEM



CAPITAL IMPROVEMENT PLANS



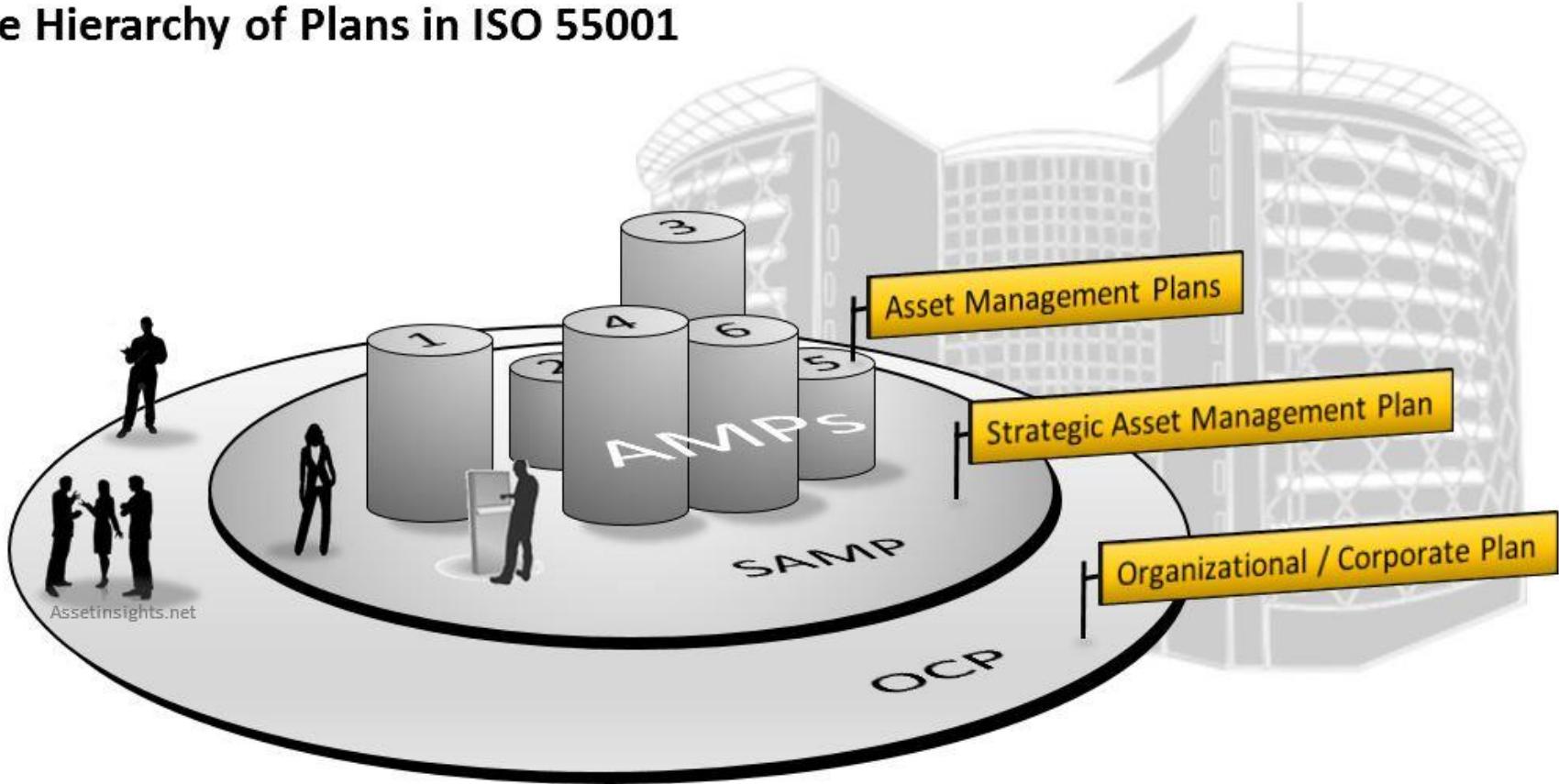
ASSET MGT. PLANS

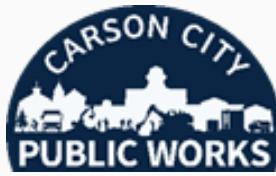


# SAMP Next Steps

Visualizing (and Vision-izing) Asset Management

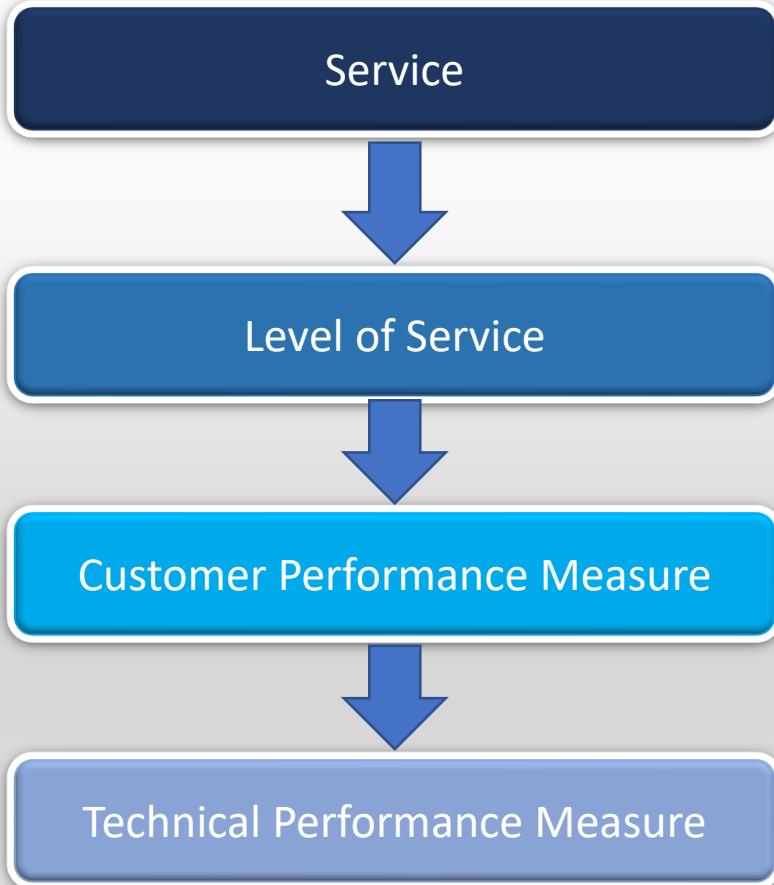
## The Hierarchy of Plans in ISO 55001



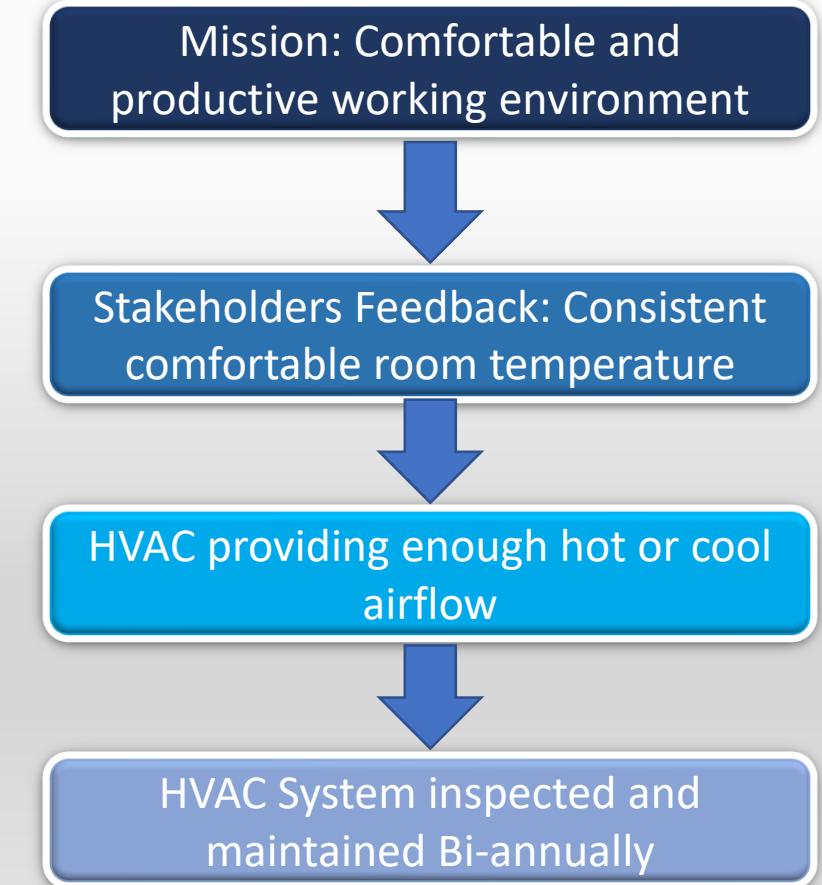


# SAMP and AMPs in Action

SAMP



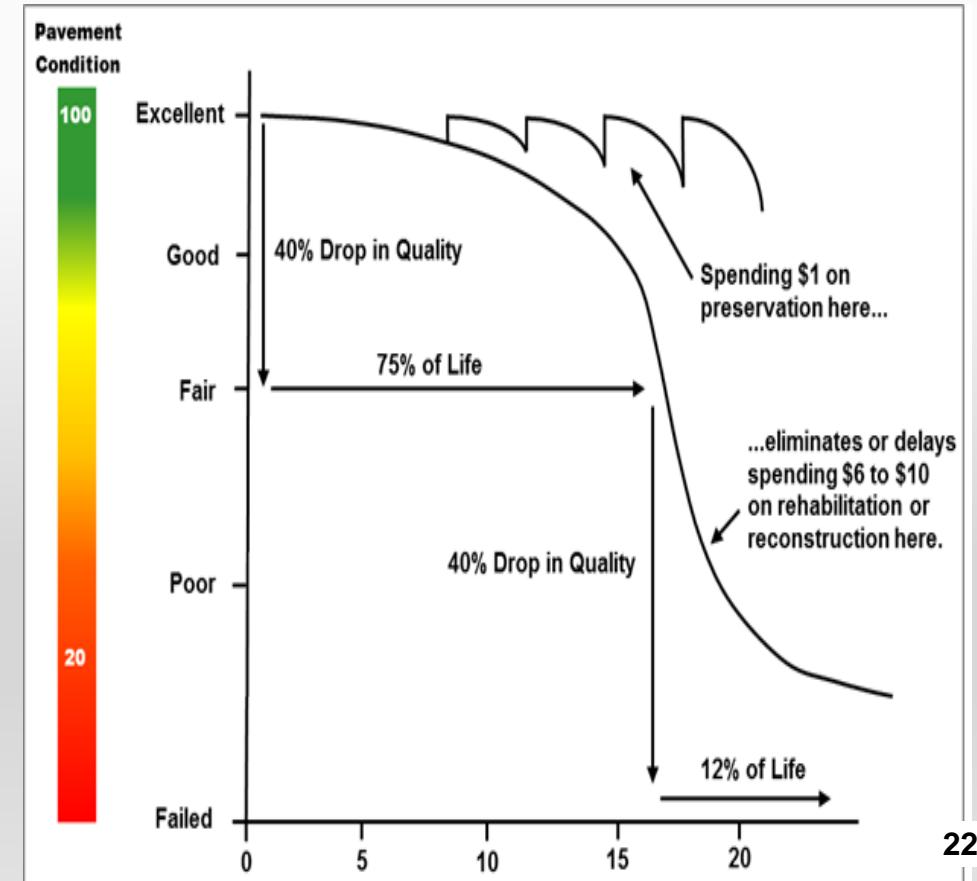
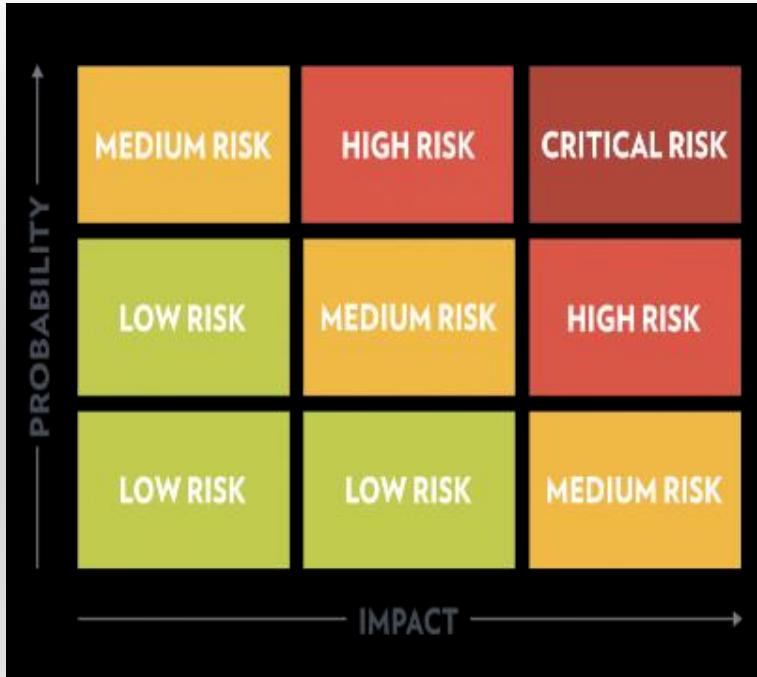
AMP (Facilities-HVAC System Example)





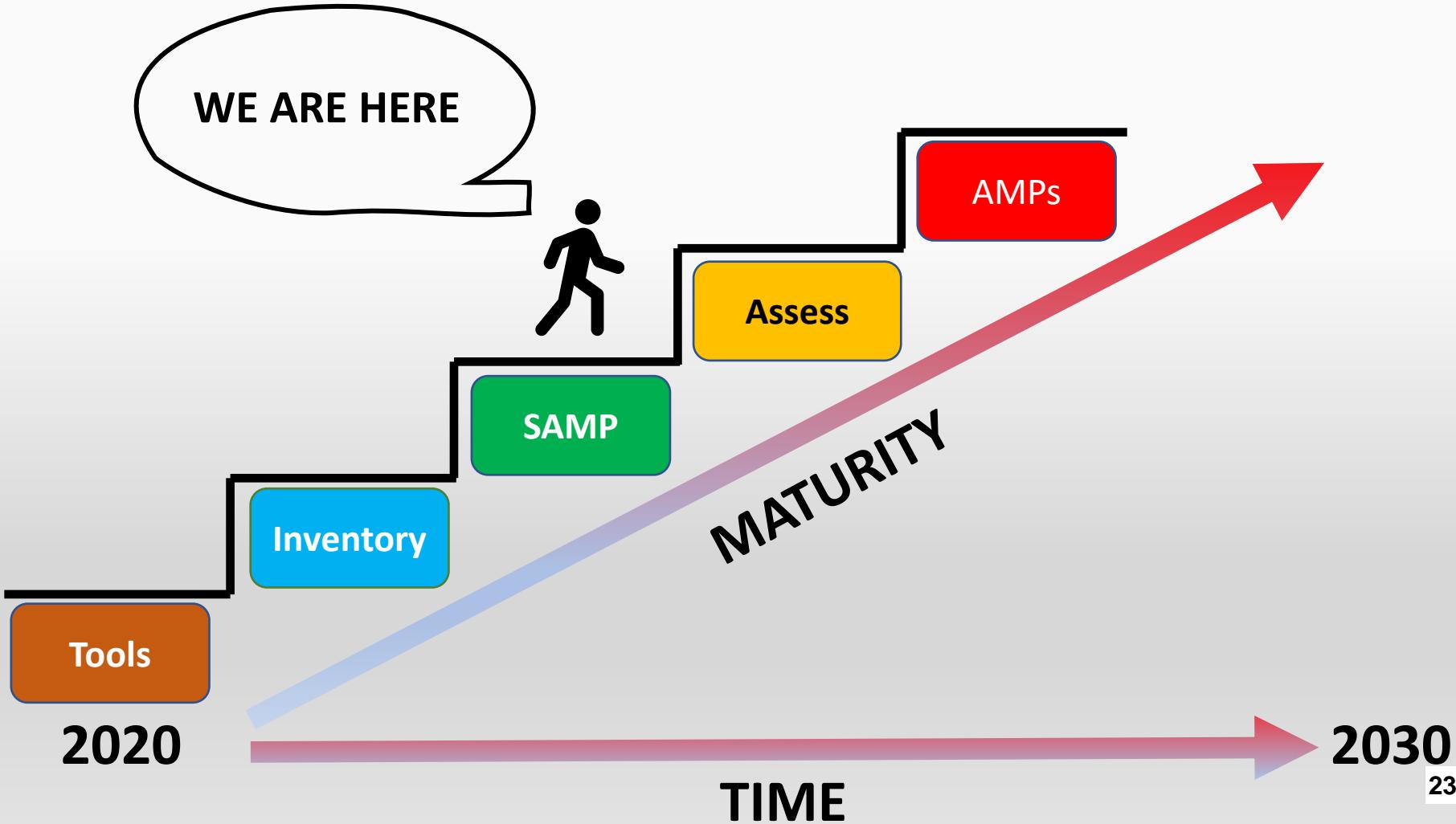
# Next Steps at Large

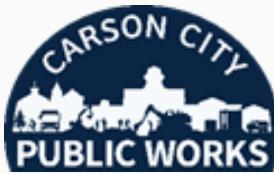
- Acquire and Implement CIP Forecasting Software
- Update GIS Strategic Plan
- Parks Asset Inventory





# Asset Management Roadmap





# Questions?

## **Carson City Asset Management / GIS Team:**

- **Tyler Jesse, Asset Manager**
- **Robert Nellis, Real Property Manager**
- **Randy Rice, City Engineer**