



# Asset Management & GIS Update

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

A central circular diagram with "ASSET MANAGEMENT" in the center, surrounded by various icons representing different aspects of asset management: a gear, a bar chart, a refresh symbol, a target, a line graph, and a network diagram.

**ASSET  
MANAGEMENT**

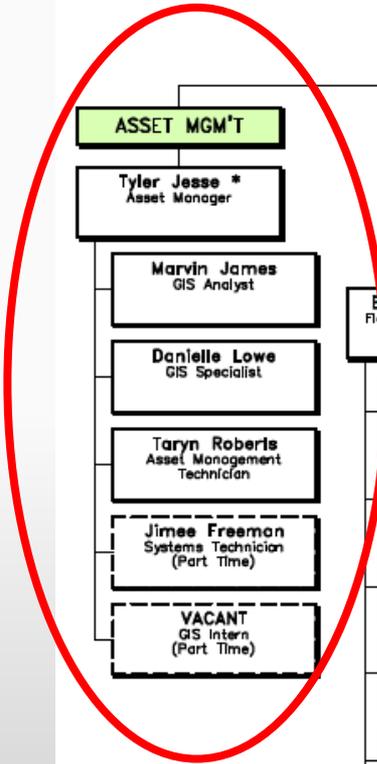
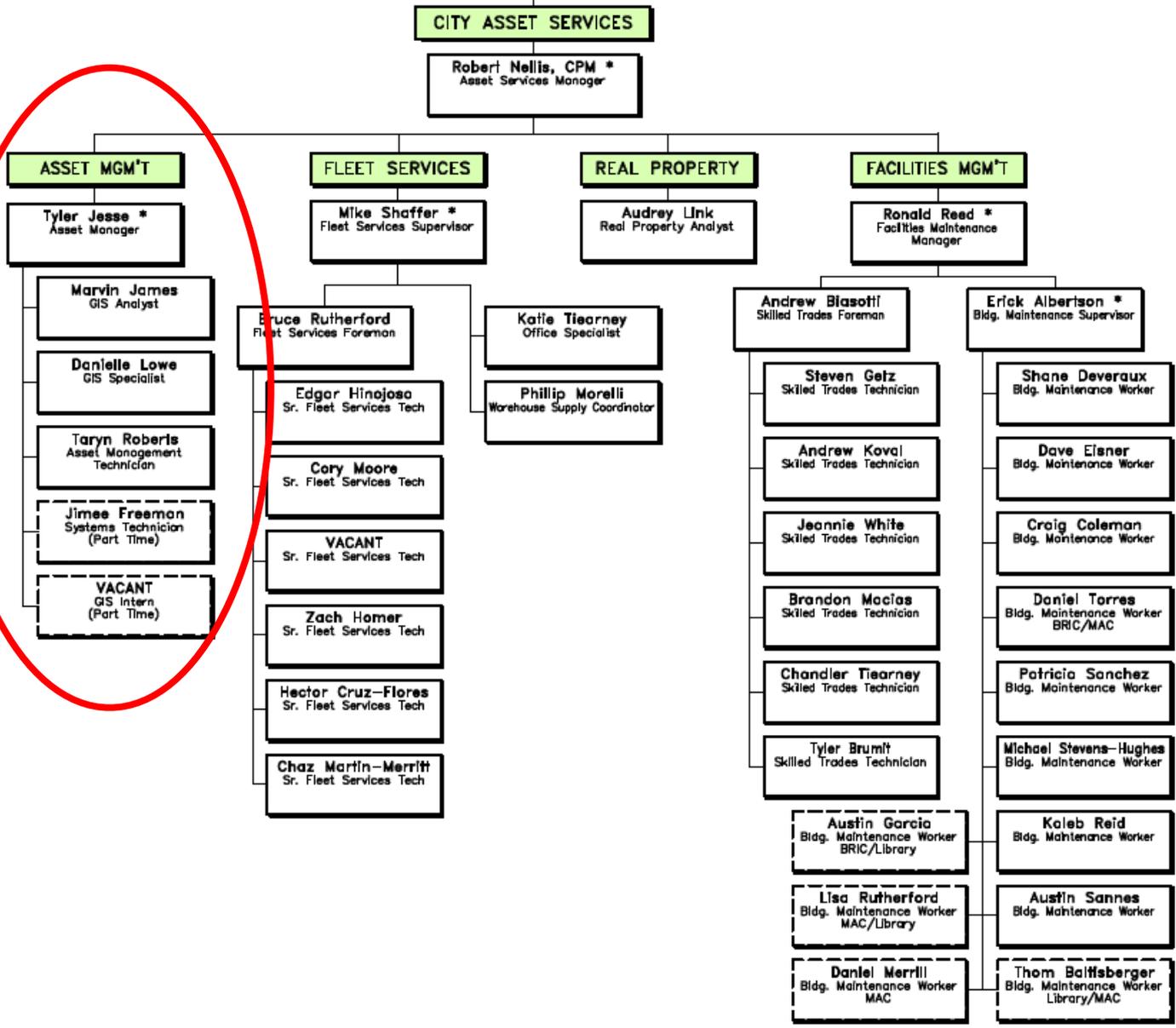
**Tyler Jesse  
Asset Manager**

**Robert Nellis  
Asset Services Manager**

**Board of Supervisors Retreat  
February 29, 2024**



# City Asset Services





# Asset Management Refresher

## What is Asset Management?

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

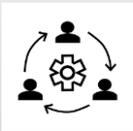
## Goals of Asset Management



Minimize risk and maximize the effective useful life of City assets



Optimize customer service



Improve succession planning and the transfer of institutional knowledge



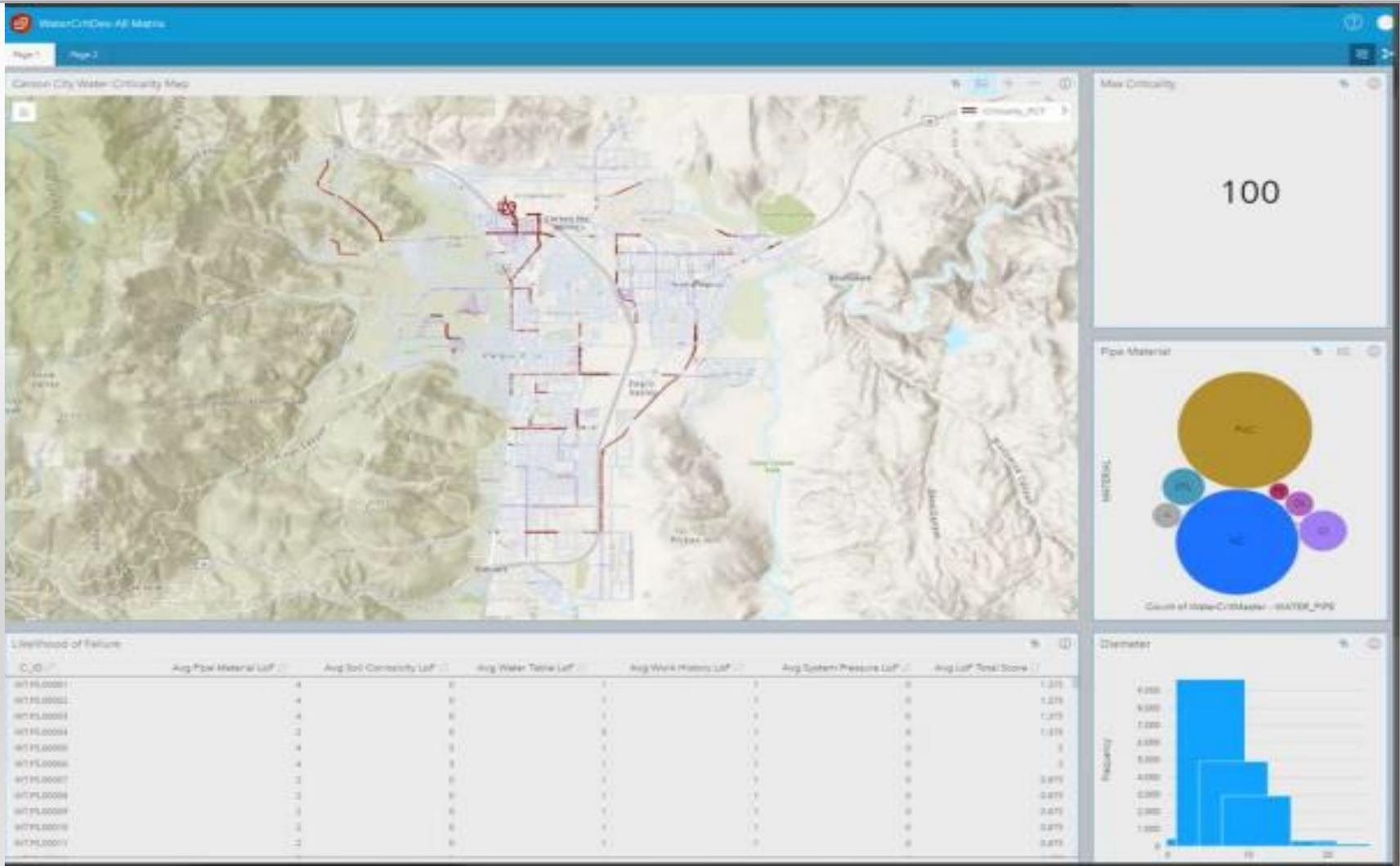
Develop a proactive maintenance and planning strategy



Promote data driven decisions and increase transparency



# GIS Asset Management





# 2022 BOS Recap

## Major themes of last presentation:

### A. GIS:

- GIS architecture upgrade
- GIS Assessor migration
- Covered important apps: CityView, Lead and copper

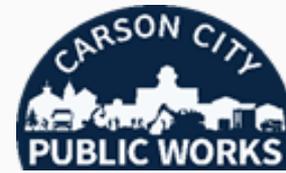
### B. AssetMGMT:

- ISO55000 SAMP

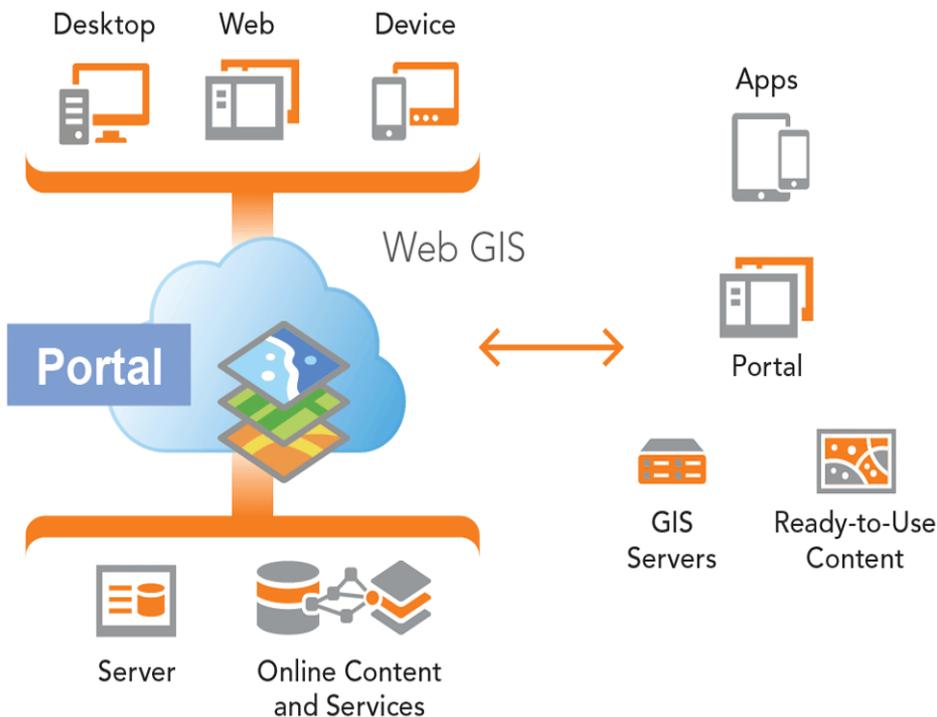
### C. Next Steps were:

- Attain Forecasting CIP Software
- Update GIS Strategic Plan
- Parks onboarded into EAM





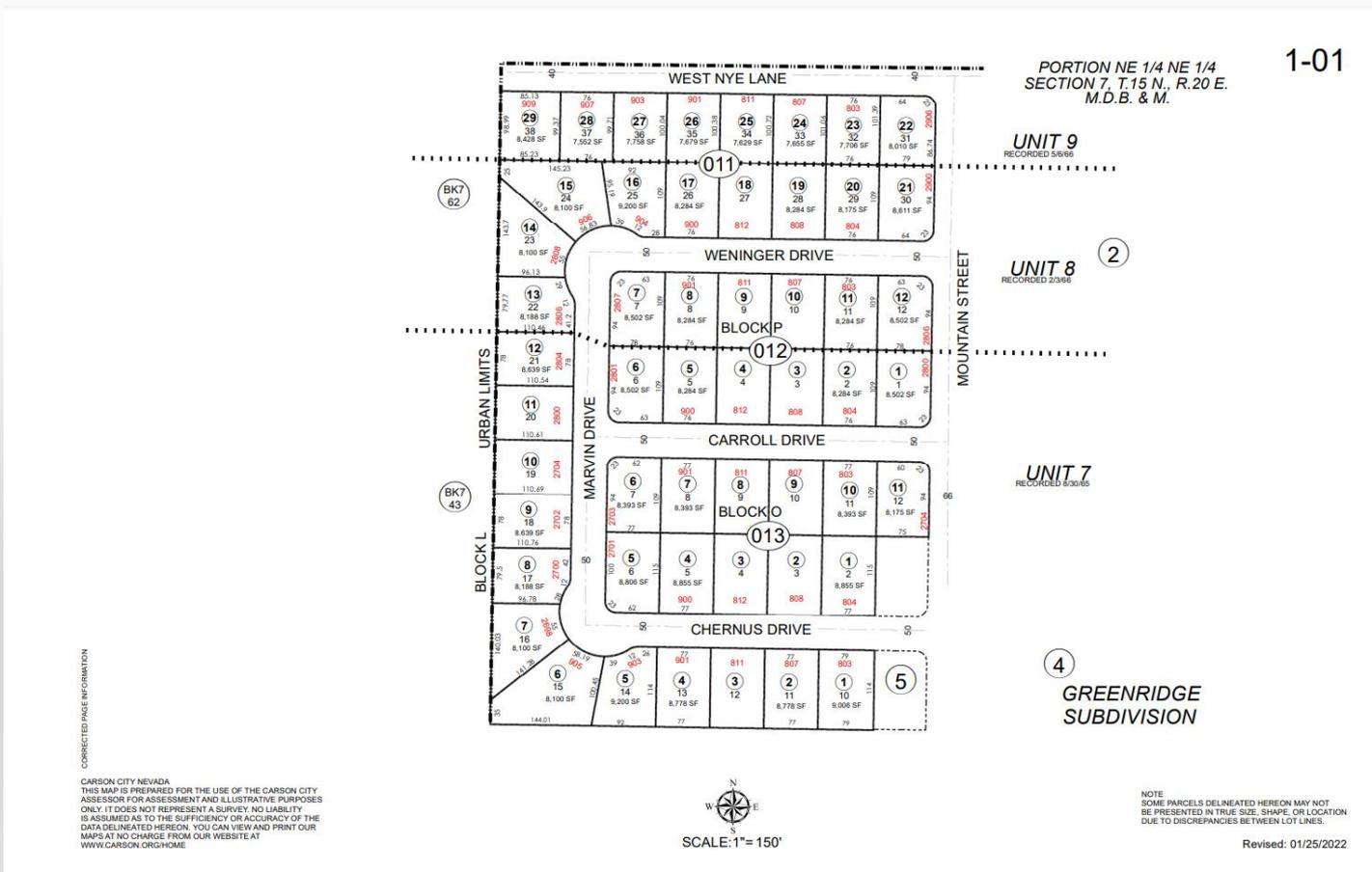
# GIS Architecture Upgrade



- **Maximize ArcGIS value**
  - **Deploying new mobile apps is easier**
  - **Internet facing capability**
  - **Splits user load for more throughput**
  - **Enables use of all licenses**
  - **High availability**



# 2022: GIS Assessor Migration





# GIS Lead and Copper

https://carsoncity.maps.arcgis.com/apps/webappviewer/index.html?id=51730f3a059d4e68ab4865fe8d7d5685

## Lead Service Line Viewer

Unverified or Unknown Service Lines

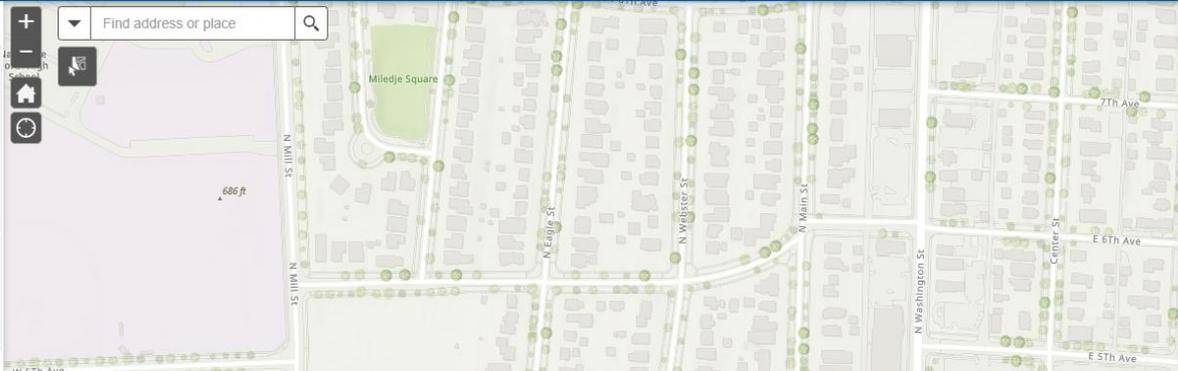
Lead Categories

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

### Lead Verification Dashboard

**6** Verified Properties

**401** Potential Properties

Property List	Potential Lead Properties
124096	Parcel ID: 0713304012
110991	Owner: Shankwer, Jonathan B
106663	Address: 9 N West St
108023	City: Reno
	State: NV
	Zip: 89540
	Year Built: 1,941.00
	Cost: 1,339





# GIS CityView App

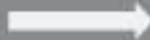
The screenshot displays the GIS CityView app interface for 'Utility Infrastructure'. The main map area shows a satellite view of Carson City, Nevada, with various utility lines overlaid in green and blue. A search bar at the top left contains the text 'Address, APN, Owner, Inde'. A search icon is located to the right of the search bar. The map is bounded by a 'LIMIT OF STUDY' line. A scale bar at the bottom left indicates 0.4 miles. The bottom left corner shows the coordinates -119.801 39.203 Degrees. The bottom right corner shows the text 'Esri Community Maps Contributors, Carson City GIS, California State Parks, Esri, HERE C'. The bottom of the screen has two tabs: 'Utility Infrastructure' and 'Transportation'. The right side of the screen features a 'Layer List' panel with the following layers:

- Construction Drawings
- USA Flood Hazard Areas
- Storm Water Utilities
- Water Utilities
- Sanitary Sewer Utilities
- Reclaimed Water Utilities
- Landbase
- NFHL - Study\_Info



# Strategic Asset Management (SAMP)

## WHAT IS A SAMP



### SAMP



TRANSLATES

MNPB CORPORATE GOALS

INTO

ASSET MANAGEMENT GOALS

MISSION, GOALS, OBJECTIVES

WHY YOU EXIST

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

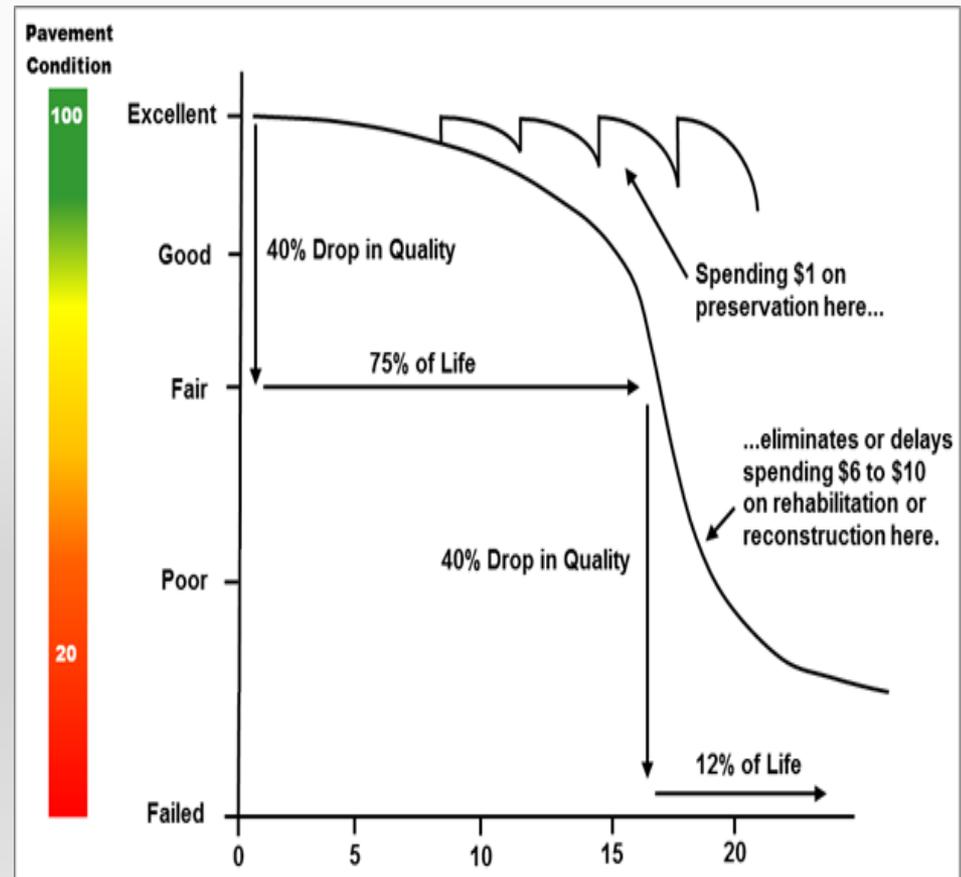
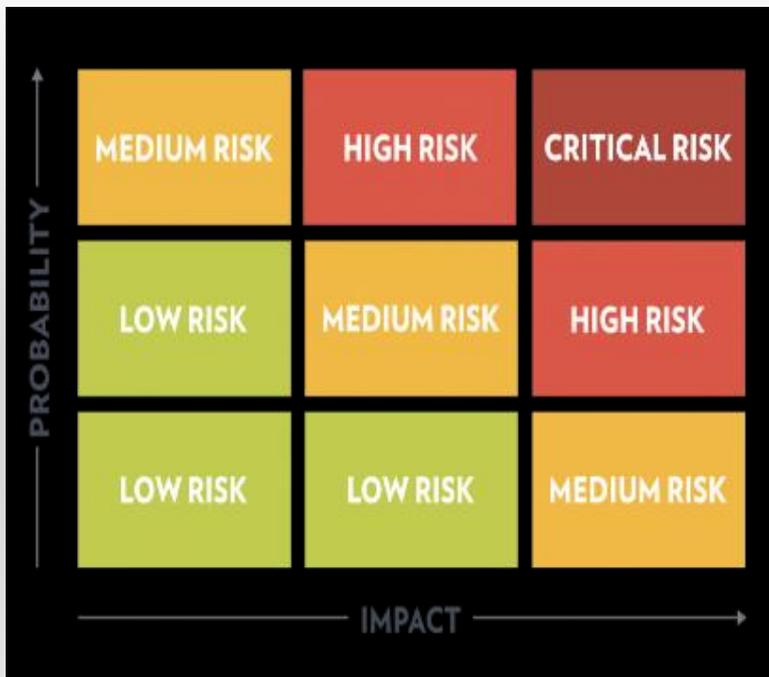
ASSET MGT. PLANS





# 2022 Next Steps

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





# Asset Management Today

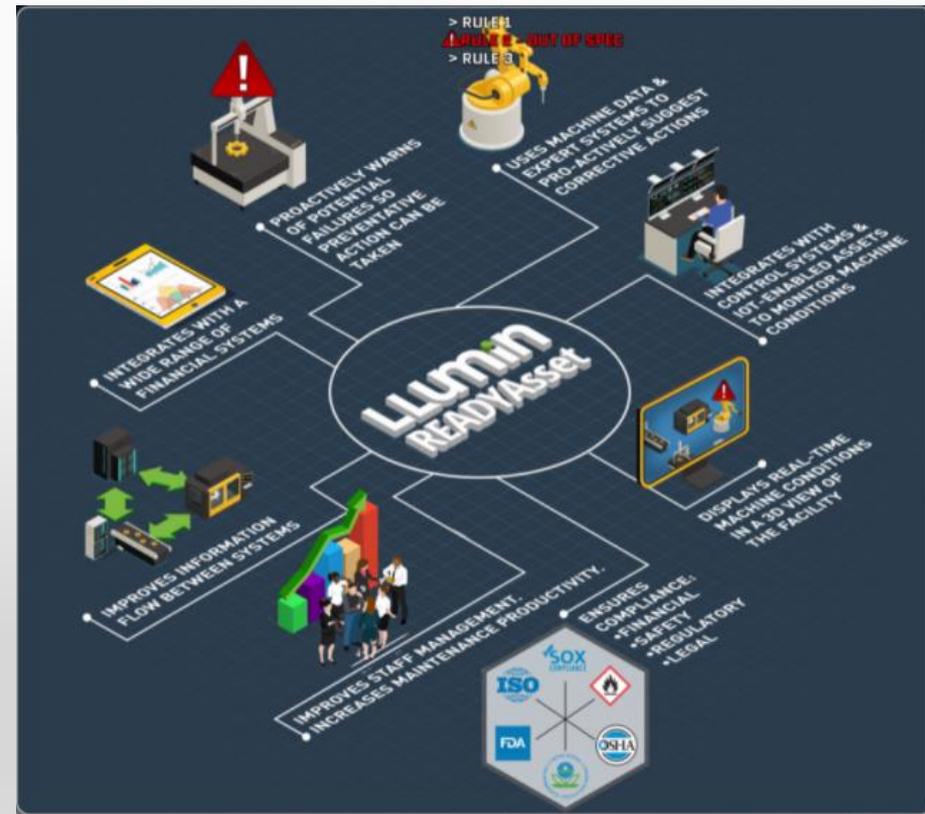
1. Asset Management Initiatives
2. GIS:
  - a) Small Government Enterprise Agreement
  - b) GIS initiatives
3. Data Optimization Technology (DOT)





# Asset Management Initiatives

- Fleet Software Review
- Parks Equipment Onboarding
- Parks Operations Onboarding
- Bar Coding
- Enterprise Asset Management Tutorials
- Dashboarding and Reports
- Landfill Assets inventoried





# Small Government Enterprise Agreement (SGEA)

## ArcGIS GeoEvent Extension for Server

*Integrates and Exploits real-time data*

- Integrates real-time streaming data into ArcGIS
- Performs continuous processing and real-time analytics
- Sends updates and alerts to those who need it where they need it





# GIS HUB

- **Visibility for Public and Employees**
- **Centralization**
- **Access from Granicus**
- **Content**
  - **GIS HUB Mission**
  - **GIS at Carson City video**
  - **Data portals (Public and Employee)**
  - **Featured Applications**
  - **Training Storymaps**
- **Future Development**





# Data Optimization Technology

## Risk and Forecasting Definitions:

- **Risk:** is the product of Likelihood of failure and Consequence of failure
- **Forecasting:** in this context is making predictions on the future state of our assets based on current condition and various intervention funding scenarios

50%		4		FINAL LIKELIHOOD			2	16
DETECTABILITY	Almost certain	M	S	H	H	H		
	Likely	M	M	S	H	H		
	Possible	L	M	M	S	S		
	Unlikely	L	L	M	S	S		
	Rare	L	L	L	M	S		
CONSEQUENCE		Insignificant	Minor	Moderate	Major	Extreme	3	



# Data Optimization Technology

**DOT** DECISION OPTIMIZATION TECHNOLOGY™

Erin Calcari

## Waterlines - Results

Default Charts | Custom Charts | **Performance Maps** | Risk Matrix

No. of Maps: 2

Select Scenario: Do Nothing | 2033 | Select Scenario: Budget 600K | 2033

- Select All
- Very Poor
- Poor
- Fair
- Good
- Excellent

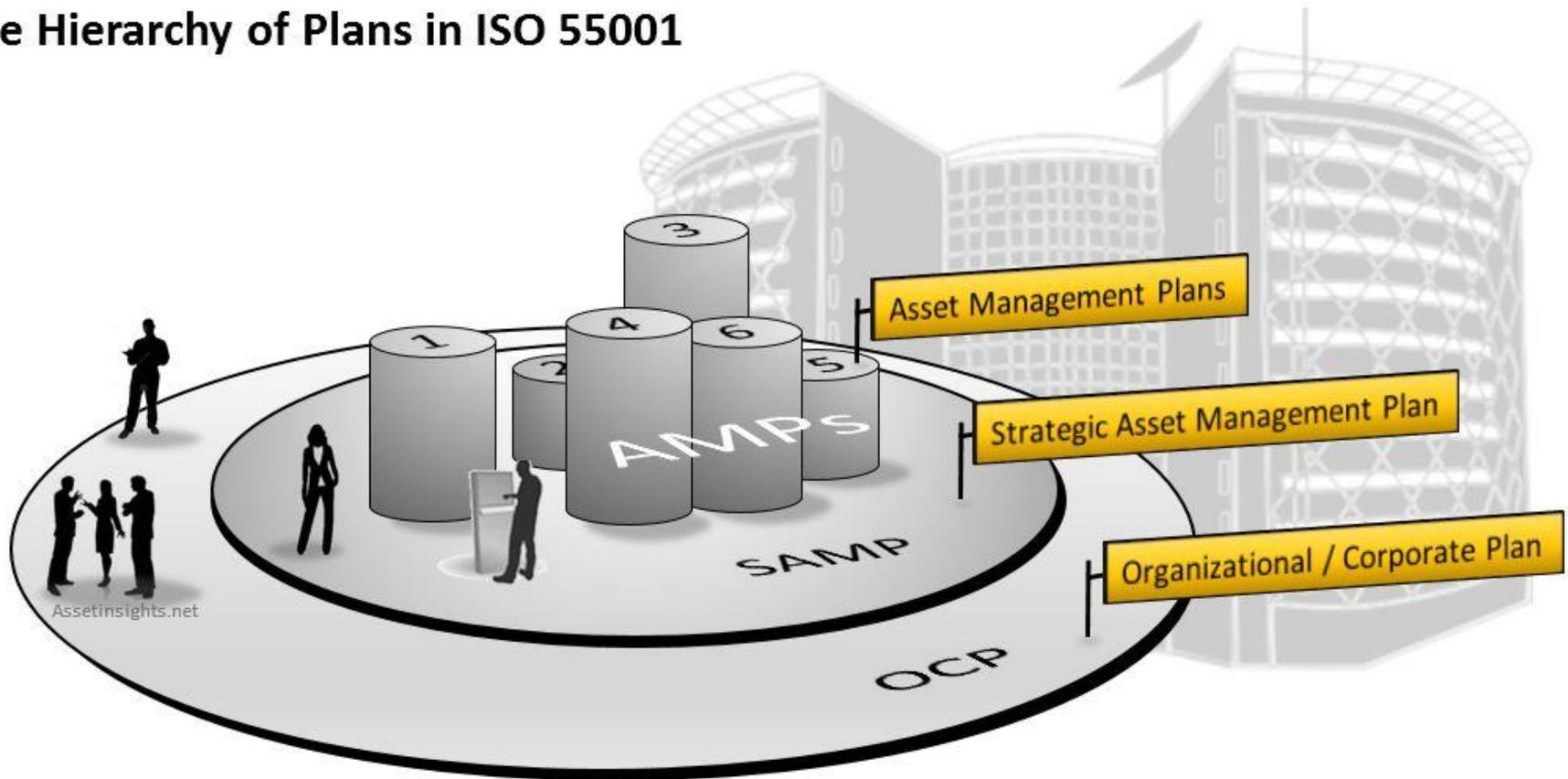
Esri, NASA, NGA, USGS, FEMA | California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of ... Powered by Esri



# Strategic Plan Next Steps

Visualizing (and Vision-izing) Asset Management

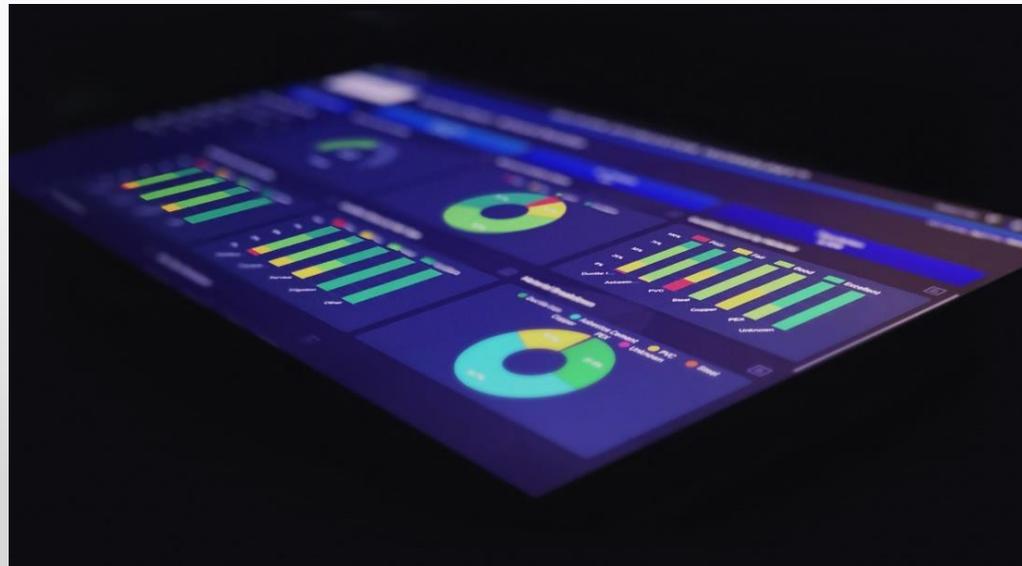
## The Hierarchy of Plans in ISO 55001

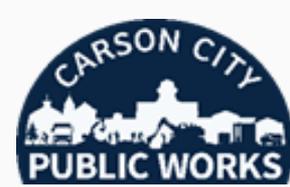




# Strategic Asset Management Plan (SAMP)

- Ensure alignment with Board's strategic goals
- Identify Stakeholder needs & expectations
- State of Asset Management and proposed strategy to meet objectives





# GIS Strategic Plan

## Key Initiatives

- **Inter-Departmental Collaboration**
- **Business Process Support**
- **Mobile GIS Enhancement**
- **Citizen Engagement**





# Goals & Objectives

- **Visibility**
- **Mobility**
- **Reporting**
- **Asset Management Objectives**
- **Asset Management Plans**
- **EAM Process reviews**





# Questions & Discussion

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