Interactive & Dynamic Asset Management Plans

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Agenda

Overview

Project Objectives

Project Approach

Demonstration

Over 100 Asset Management Programs

Water – US 60+

- NYC DEP
- Hartford MDC
- Tarrant Regional Water District
- Cincinnati MSD
- Greater Cincinnati Water Works
- Columbus DPU, OH
- Toho Water, FL
- San Diego, CA
- PVSC, Newark, NJ
- LADWP, CA

Water – International 30+

- Severn Trent Water
- Yorkshire Water
- South West Water
- Northumbrian Water
- Hofor
- Icon Water
- City West Water
- Queensland Urban Utilities
- BIOFOS, EPCOR

Cross Sector 20+

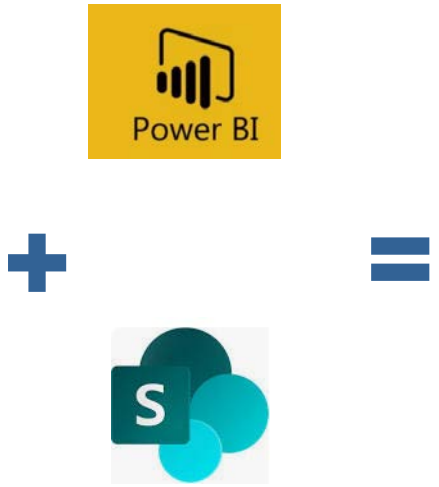
- BART
- Indianapolis Zoo
- Fiat Chrysler
- Georgia DOT
- Schiphol Airport
- London Underground
- Highways Agency
- Network Rail
- NHS, HSBC
- UK Dept. of Education

We Have Successfully Helped our Clients Turn Data into Knowledge

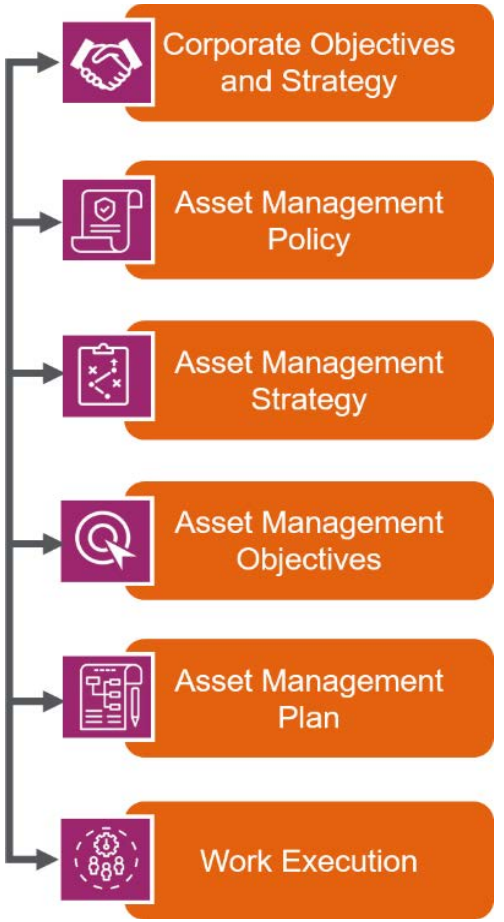
Challenge	Designed Solutions
Lots of data	Graphical, Informative Dashboards and Collaboration Websites
Are we making progress?	
What is important?	
Need for both enterprise and system level views	
What are the improvement initiatives?	

Enabling Tools Help Maintain AMPs Align with Organization's Strategy

- What are the current state of our assets?
- What is our required level of service?
- Which assets are critical to sustain performance?
- What is our infrastructure improvement plan?
- What will it cost to manage the assets?
- What business improvement opportunities should be pursued?

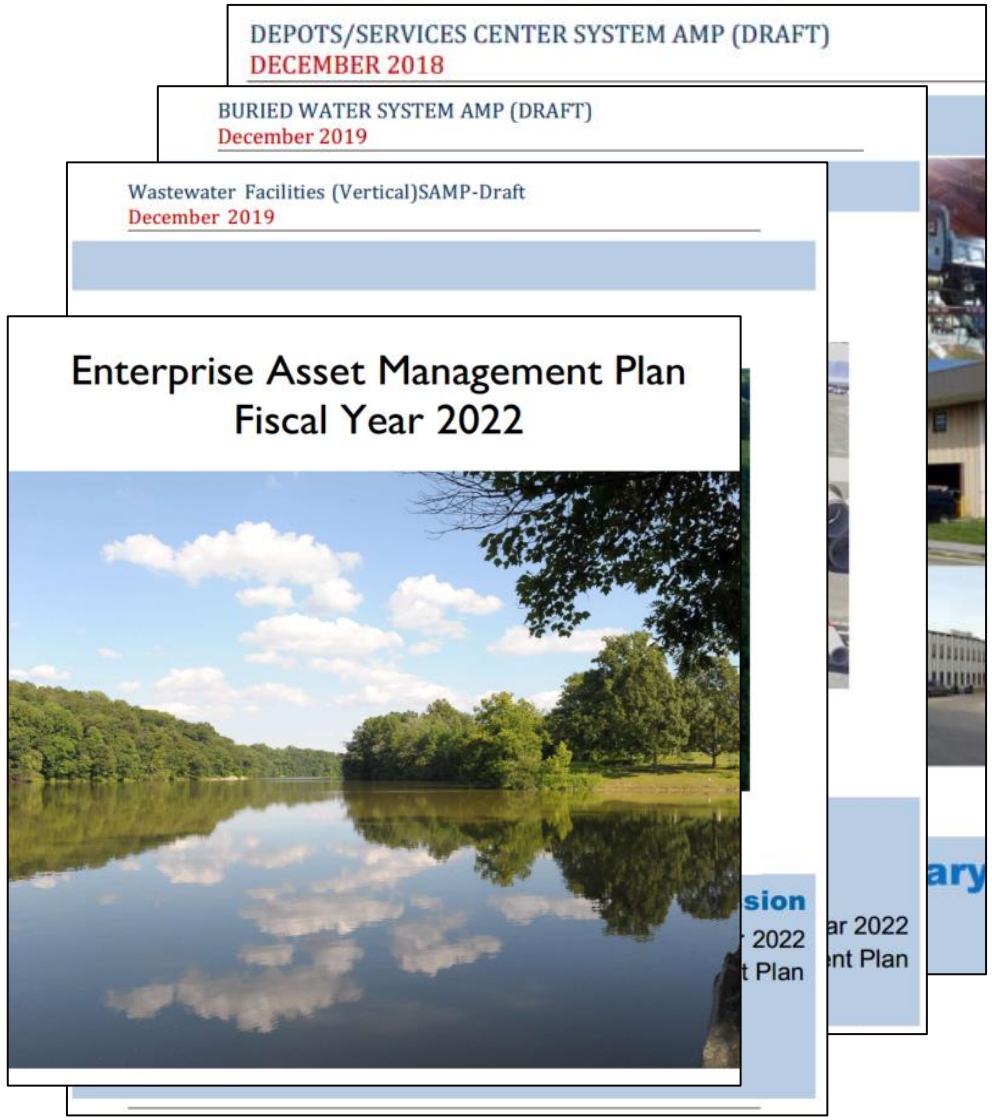


Better Aligned AMPs



Project Scope

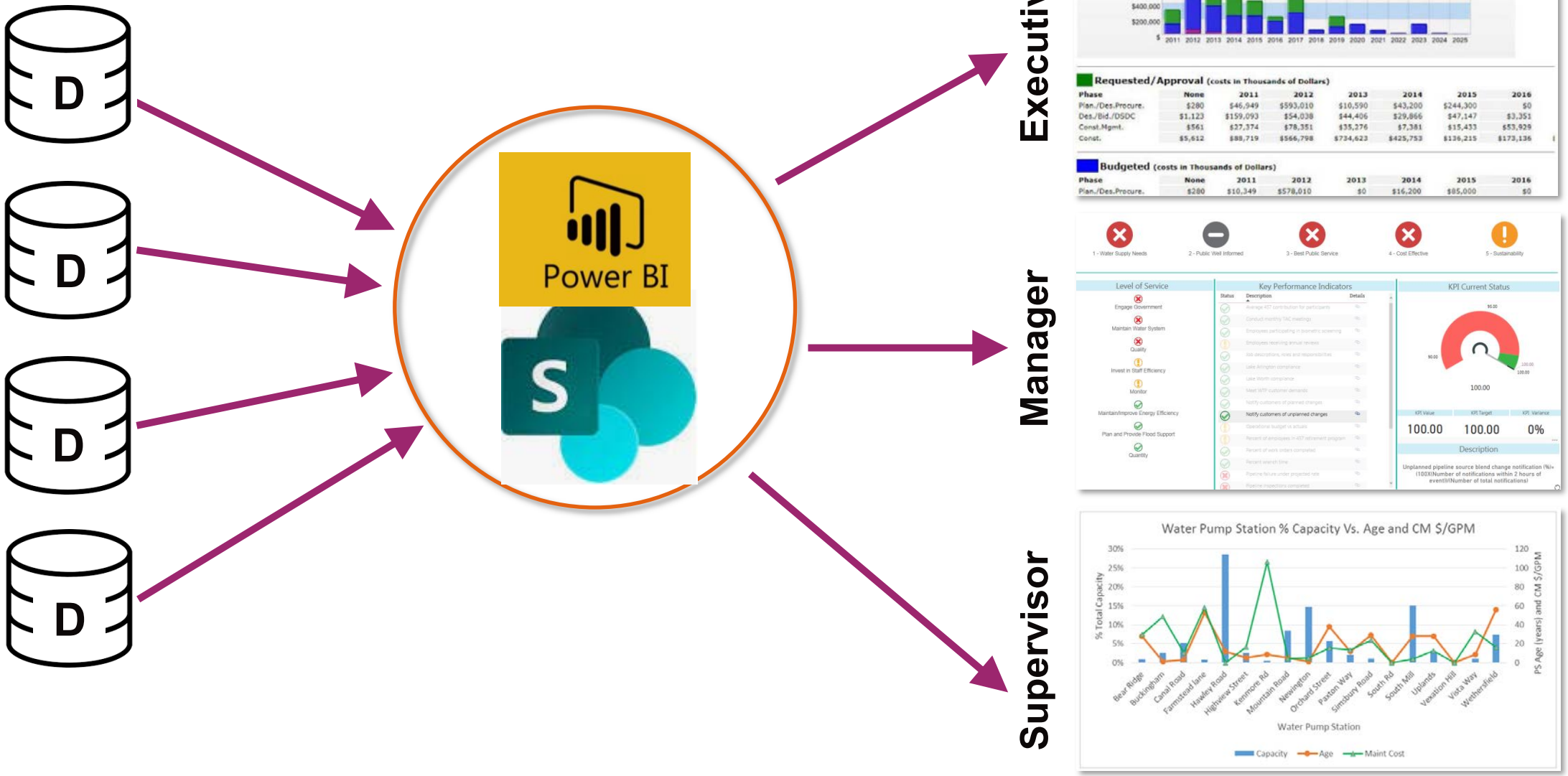
- Current AMPs are difficult to read and do not support multiple audiences (Executive, Operational, Implementation)
- Desire to modernize format:
  - Improve user-friendliness
  - More data visualization
  - Greater alignment with organization's strategy
  - Provide more insights & executive level understanding
  - Be reliably and effectively completed with in-house resources



New SAMP Format Objectives

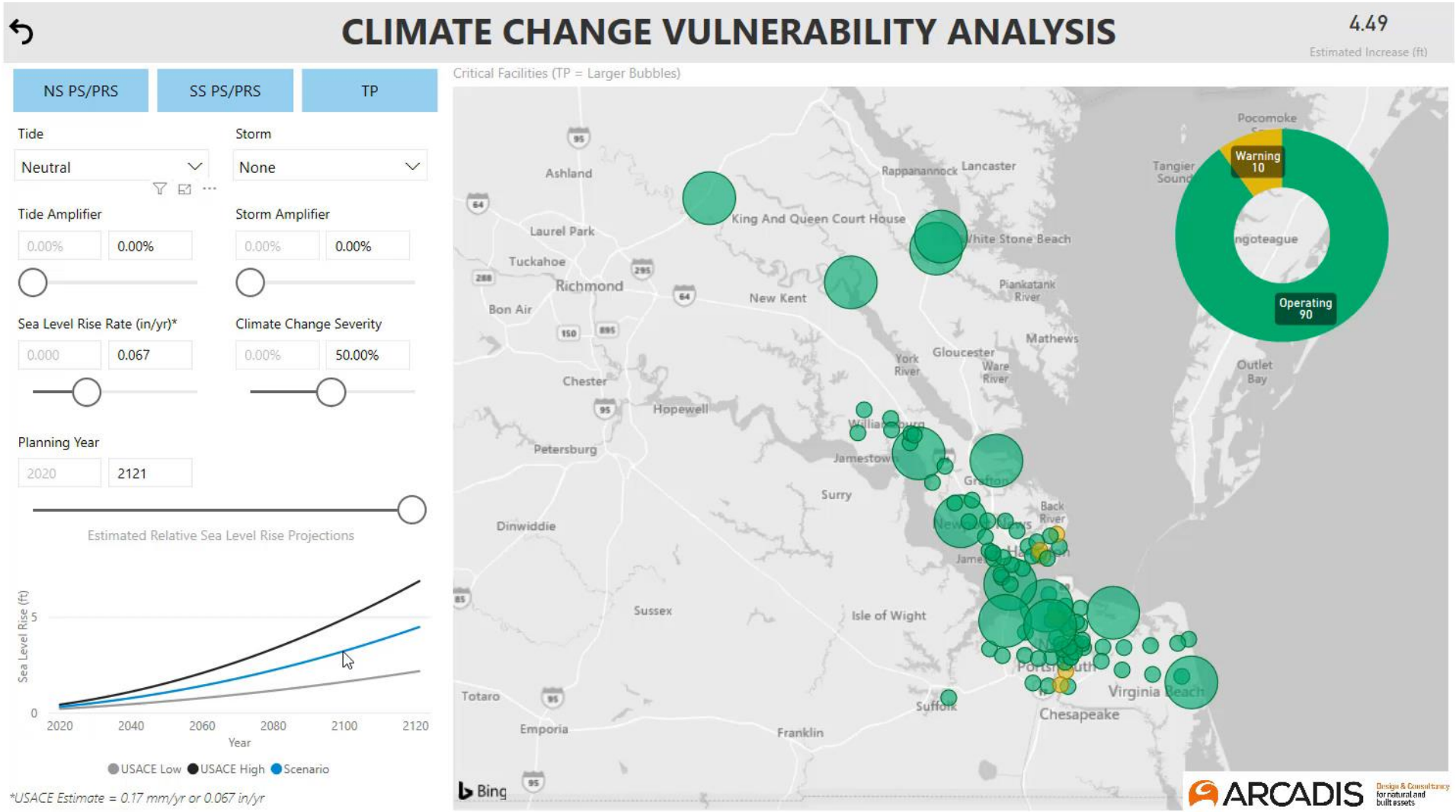
- Easy to use, interactive
- Includes dashboard visualizations with drill-down & filter capability to support decision-making
- Consolidate System AMPs
  - Vertical (W, WW, Dams & Reservoirs)
  - Buried (W, WW)
  - Support Systems (RGH, Lab, Depot/Service Centers)
- Flexible and better illustrate SAMP alignment with organization's strategy
- Utility-centric and utilizes existing AMP content
- Acts as a living collaboration hub for past and present AMP work
- Easily managed and updated by Utility staff

Online Data Visualization for Different Audiences



Business Visualization

As Things Change, What is At Risk?

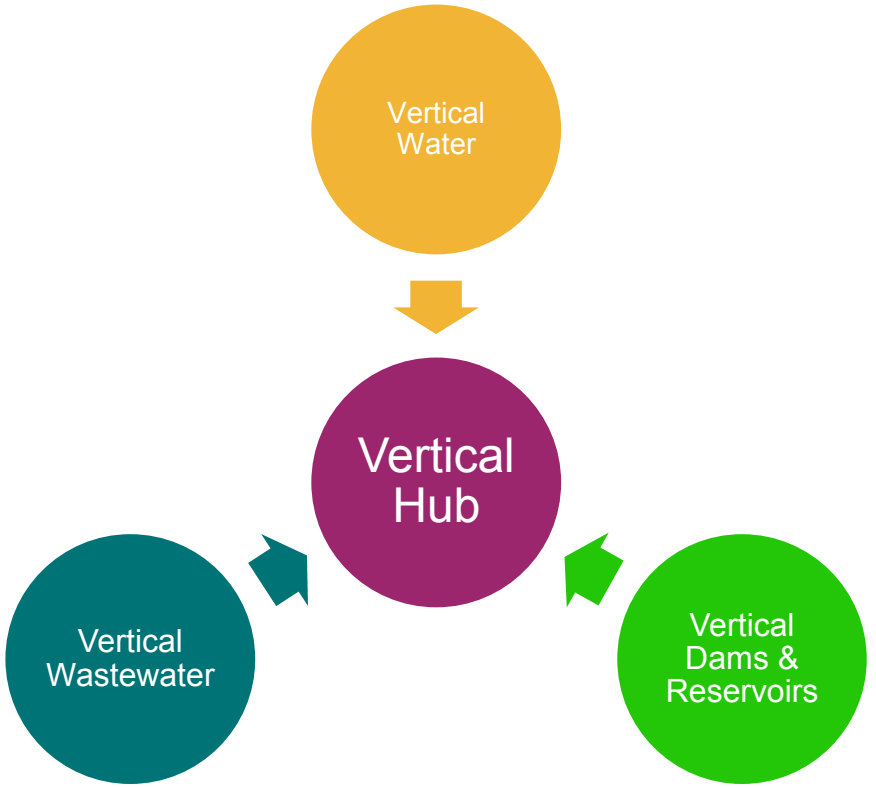


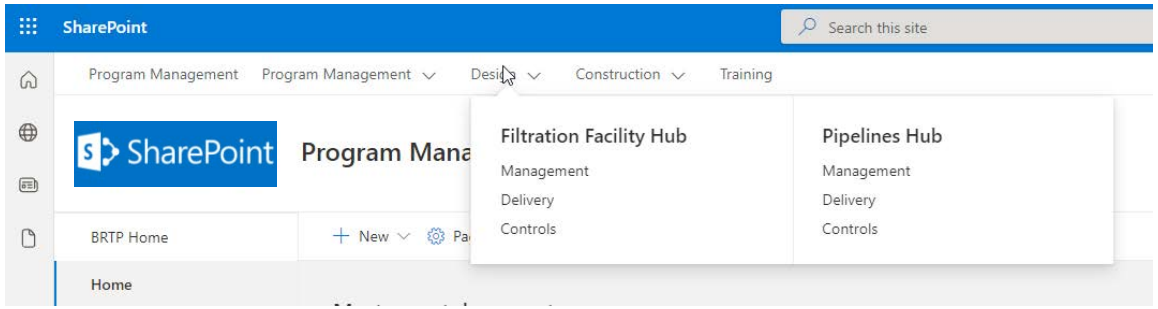
Vision for Online AMPs

- Easy to use, interactive
- Living collaboration hub for past and present AMP work
- Data visualization to provide insights and support decision-making
- Drill-down and filter capability
- Easily managed and updated by Utility staff
- Utility-centric and utilizes existing templates
- Flexible to fit Utility needs

Vision for Consolidating SAMPs – Narratives

- Central Hub and Spoke Design
  - Combines data & content across multiple sites.
  - Trims available information by permissions.
- Advantages
  - Content Rollup and Search
  - Improved Security Model
  - Additional Navigation Capabilities





Vision for Consolidating SAMPs – Data/Charts

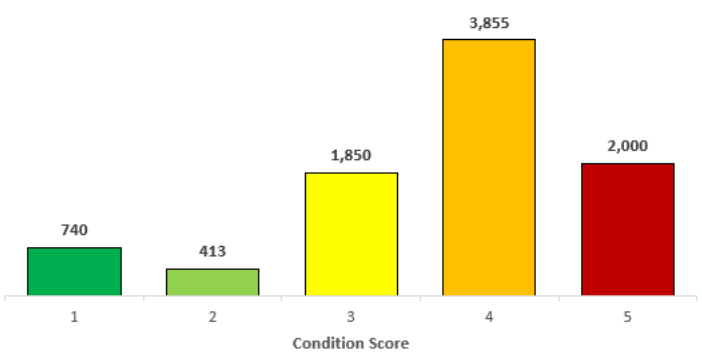
- Use common data source for tables & graphs with consistent format
- Use shared dashboard and use filters to show desired network
- All dashboards update when data source refreshed

☑ *Water*

Table 1: WF Systems Assets and Replacement Cost by System

System	Number of Assets	Replacement Cost ($000's)
Water Treatment Plants	6,117	$700,107
Water Pumping Stations	1,491	$36,168
Water Storage	936	$121,369
Specialty Valve Vaults	454	$5,802
Total	**8,998**	**$863,446**

Figure 3: WF Systems Number of Assets by Condition Score

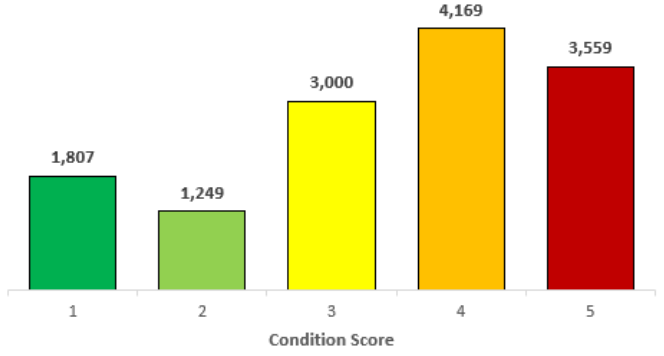


☑ *Wastewater*

Table 1: WWF Systems Assets and Replacement Cost by System

System	Number of Assets	Replacement Cost ($000's)
Water Resource Recovery Facilities	10,449	$624,807
Wastewater Pumping Stations	3,798	$163,046
Wastewater Storage	211	$33,047
Total	**14,508**	**$820,900**

Figure 3: WWF Systems Number of Assets by LVL 2 Condition Score

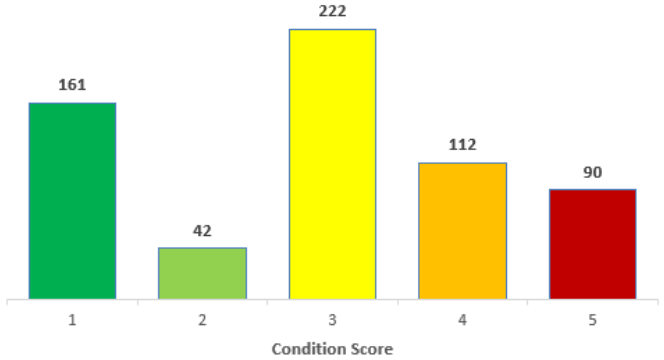


☑ *Dams & Reservoirs*

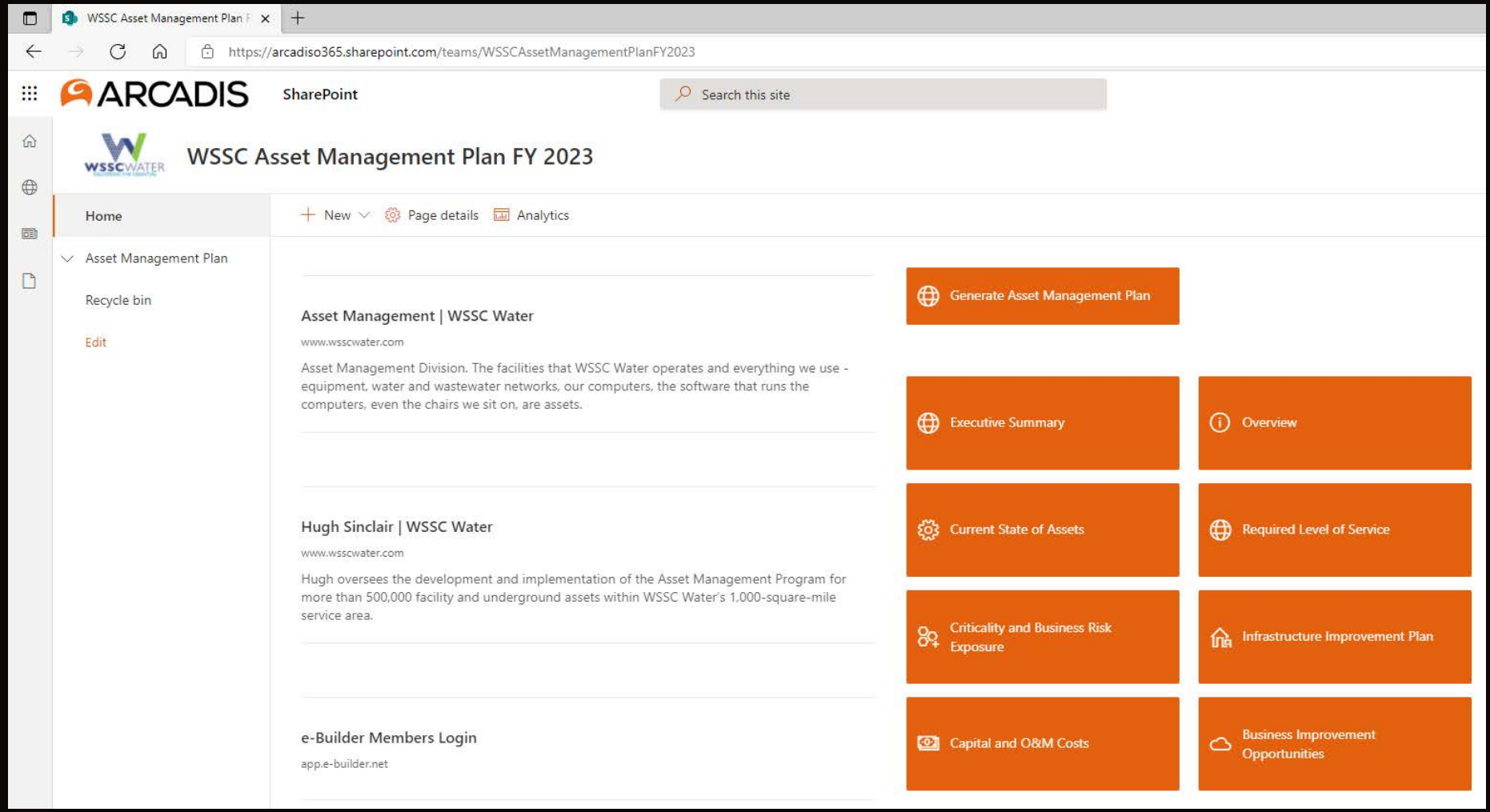
Table 1: D&R System Assets and Replacement Cost by Sub-System

Sub-System	Number of Assets	Replacement Cost ($000's)
Brighton Dam	353	$36,201
Duckett Dam	225	$98,278
Little Seneca Dam	68	$2,994
Total	**646**	**$137,474**

Figure 3: D&R System Number of Assets by Condition Score



Demonstration



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