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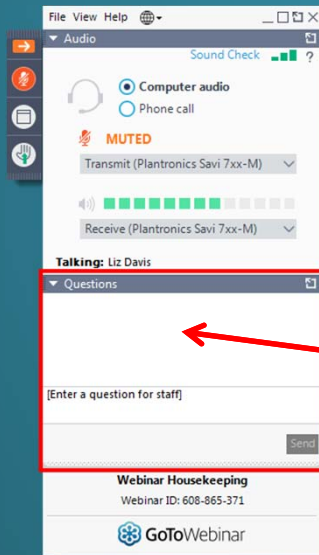
**Are Your Technology Investments
Delivering the Expected Returns?**

Monday, February 28, 2022
2:00 – 3:00 PM ET

The Water Environment Federation logo is located in the bottom right corner of the teal slide. It features the same stylized white 'W' icon and text as seen in the first image.

2

How to Participate Today



- **Audio Modes**
 - Listen using Mic & Speakers
 - Or, select “Use Telephone” and dial the conference (please remember long distance phone charges apply).
- **Submit your questions using the Questions pane.**
- **A recording will be available for replay shortly after this webcast.**

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WISE
Water Intrapreneurs
for Successful Enterprises

People. Process. Technology.

Welcome!

**Are Your Technology Investments Delivering
the Expected Returns?**

**Mike Sweeney
Toho Water**

Director of Innovation and Strategic Advancement

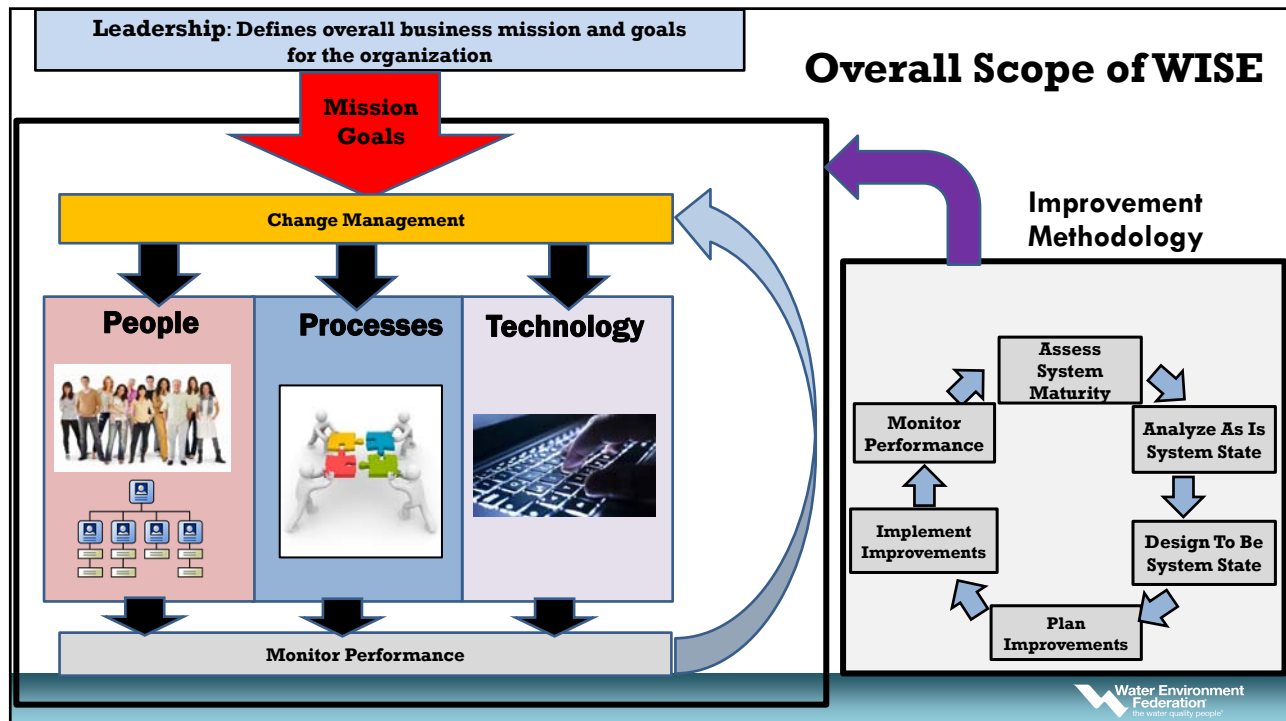
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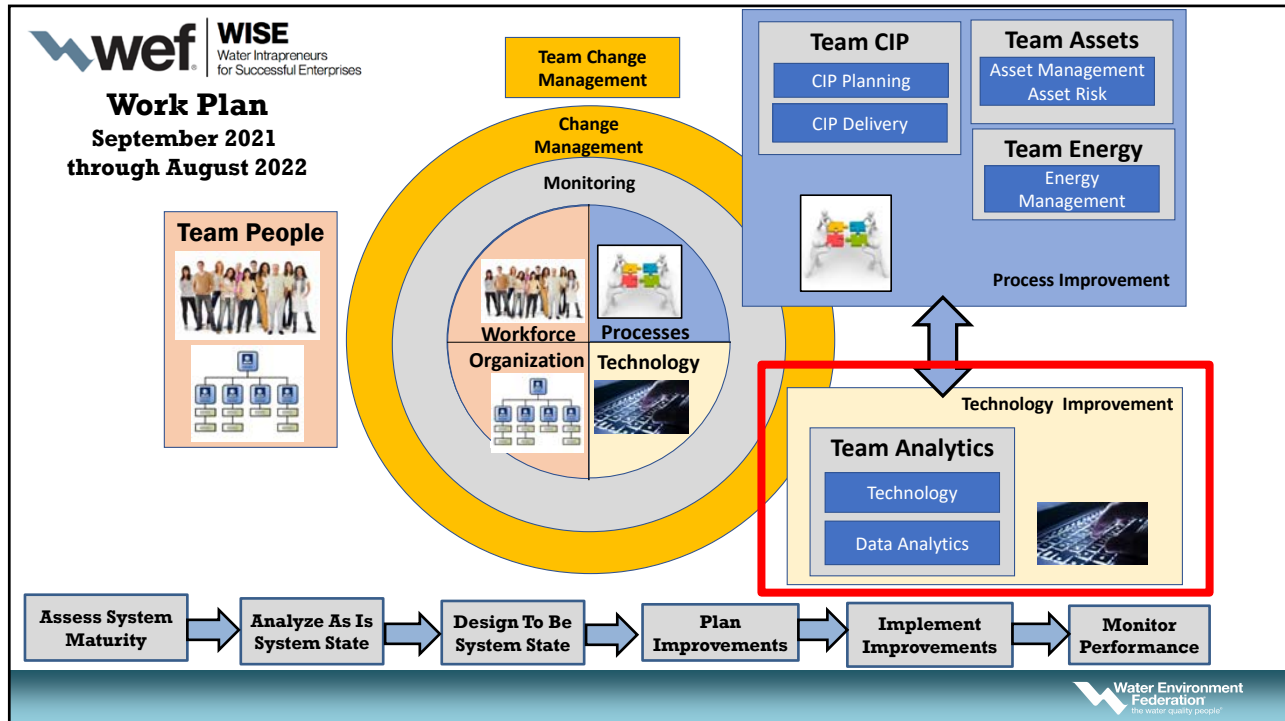
Scott Parker
Kansas City Water
Utility Officer – Asset Manager



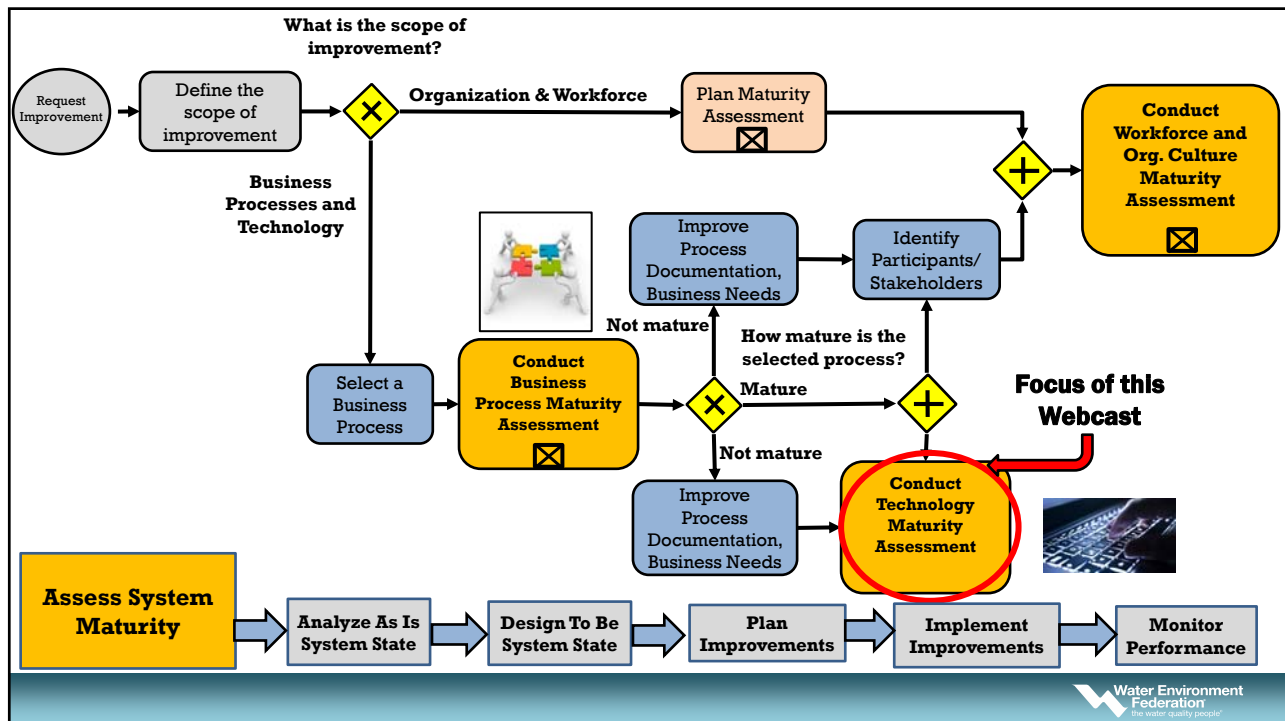
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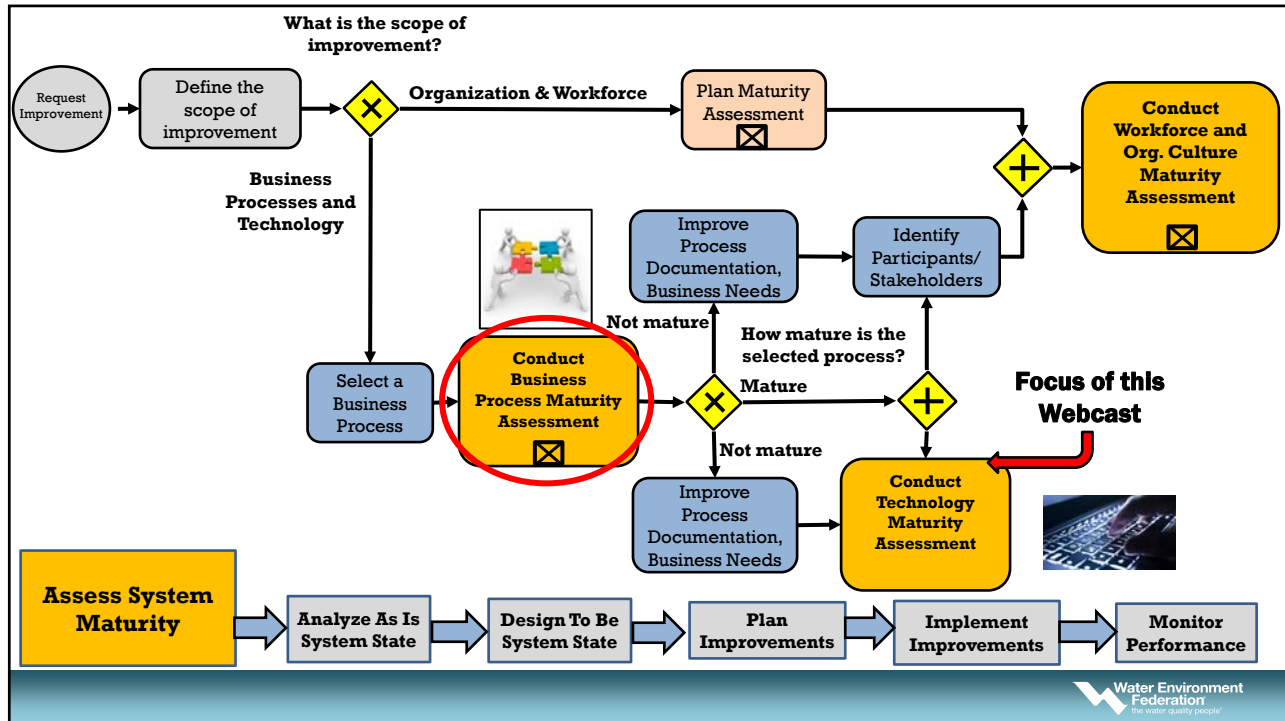
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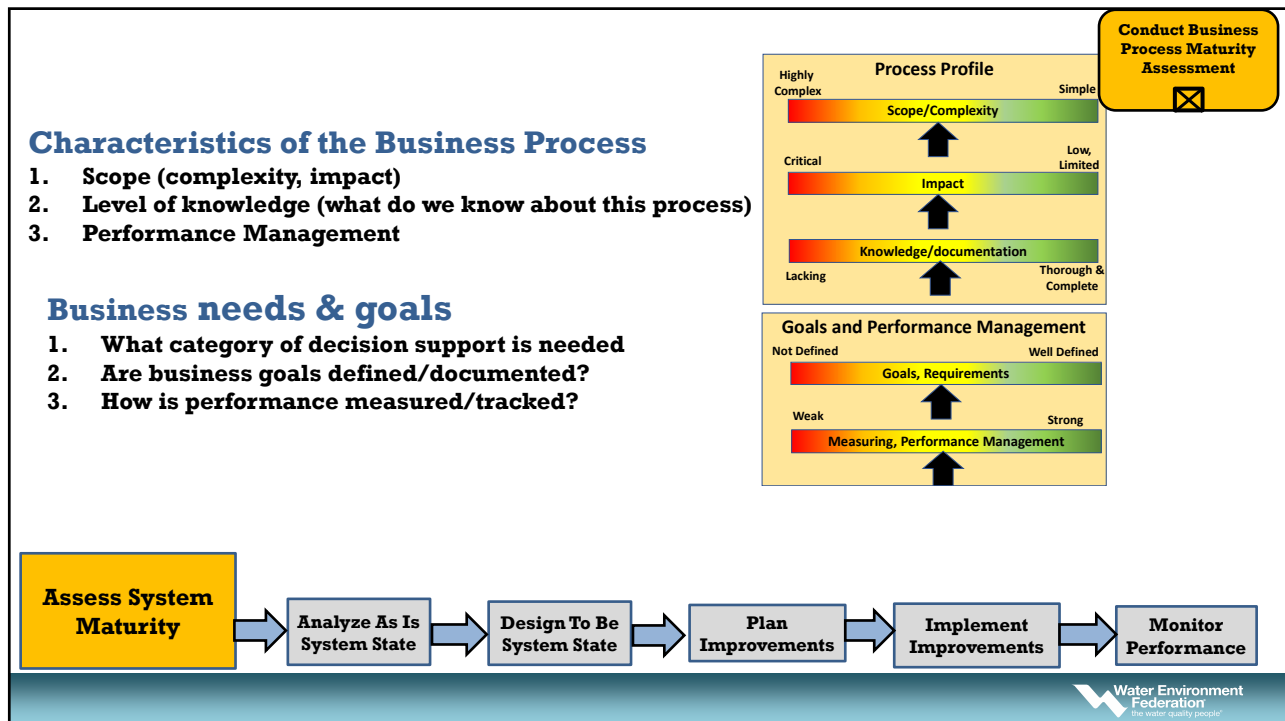
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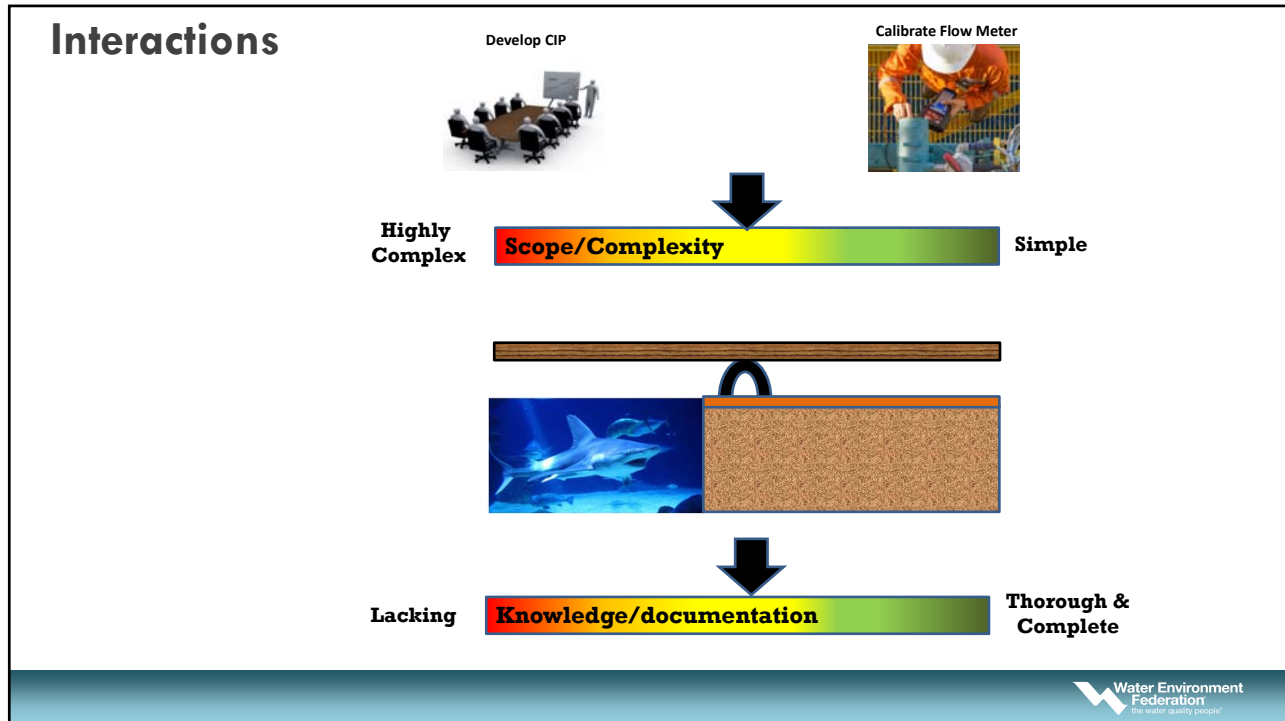
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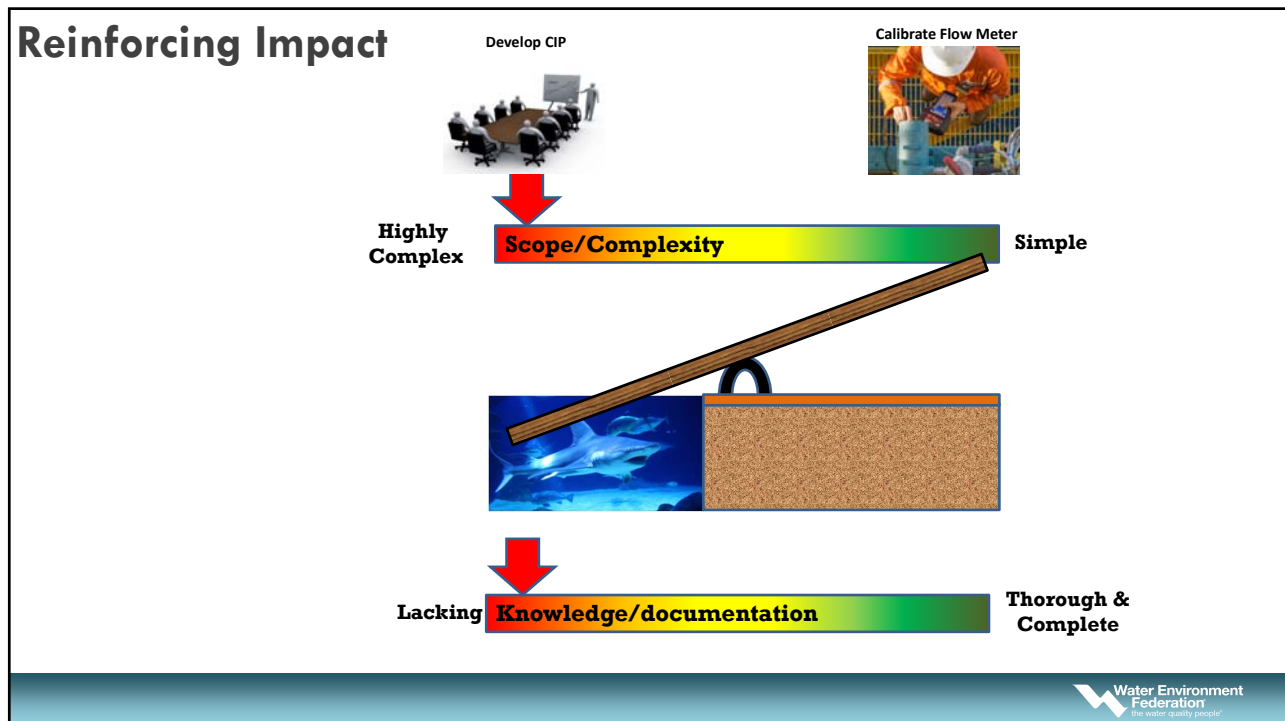
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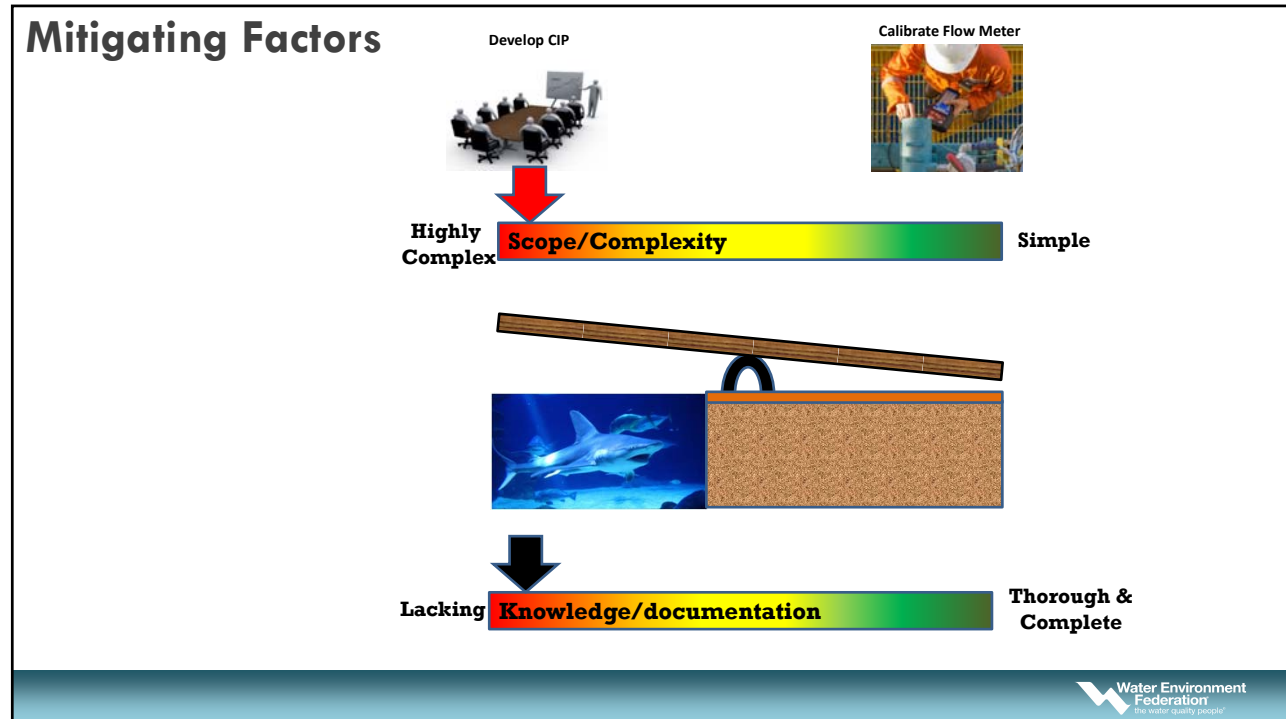
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Issue

FROM KC WATER DATA SYSTEMS PLAN--2020

It is largely impossible to implement best practices in asset management without assurance that the data that goes into producing the information that you need to effectively run your business has intentional design, standards, governance, quality control, upkeep and connectivity.

*We actually need data governance and design standards.

*Need business case for any new software/hardware purchases

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Problem statements

- **Work order and asset management systems developed in a discombobulated, uncoordinated way**
- Several core systems are not modern and in need of updating, particularly (CMMS, CIS, AMI, SCADA –Water).
- An acceleration of new systems that we are being asked to support (BIM, Zonescan, Opti, Smart Sensor Network)
- **Inconsistencies in data and more work for our staff to accommodate those requirements. This leads to different outcomes when we try to use the data to support decisions.**
- A lot of interfaces are not clean, which causes issues when updates or patches are necessary. We also need more staff as the systems get more complicated.
- **A lot of tools were uniquely built to accommodate one person/process, which has led to a lot of customization in the tools that have been built.**



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approach

KC WATER DATA MANAGEMENT SYSTEMS MUST:

- **Consider the agreed upon business needs and objectives of the utility FIRST and be built with its data systems and infrastructure to inform business intelligence in a way that leads to better decision making or reporting.**
- Be flexible (emergent) enough to adjust to our work terminology and practice.
- Be simple in the entry of data and have built-in assurance of quality control into the systems of record, whatever they may be.
- Must consider current organizational capacity and staffing so that they can be adequately supported and maintained.
- Have robust capability to allow for the entry of data in or as close to the place where the work is actually being performed by our staff and/or contractors working on behalf of the department. This includes technology that can be utilized remotely on various platforms and utilizing various tools of data capture (GPS and survey units, etc).
- Ultimately inform the enterprise and its work and be connected and relational to one another where possible.
- **The efficacy of any system will be judged against these criteria, and those who can demonstrably exhibit the capabilities outlined here increase the likelihood that they will be purchased and implemented within the organization.**



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approach

	A	B	F
1	System Code	System Description	Alt Text
2	P1300	Star	
3	P2000	Aspen	
4	P3000	AutoCAD	SMART SEWER
5	P4000	Revit	SMART SEWER
6	P5000	QCP MIS DB	SMART SEWER
7	P6000	Call Agent	
8	P7000	Clear	
9	P8000	Code 1 Pipeline Onsite	
10	P9000	Monitor	
11	P10000	GIS	SMART SEWER
12	P11000	Maps_KCWater.info	
13	P12000	AccessNet	
14	P13000	Flowlink Software	
15	P14000	Genetic	
16	P15000	Banner	
17	P16000	Hansen 11	SMART SEWER
18	P17000	Hansen 11 StoreRoom	SMART SEWER
19	P18000	Hansen 11 Bar Code	
20	P19000	InfoLink	
21	P20000	Scholar/Planner/JAP	SMART SEWER
22	P21000	Mobil SR/O	
23	P22000	MTU SR Creation	
24	P23000	Hansen 11 Mobile View	
25	P24000	Overbooked M/S	
26	P25000	CSD Scheduler	
27	P26000	Meter Exchange View	
28	P27000	SharePoint Reports - CSD	
29	P28000	SharePoint Reports - MFS	
30	P29000	SharePoint Reports - WasteWater Plant	
31	P30000	SharePoint Reports - Banner Finance	
32	P31000	WSDPipeline Reports	
33	P32000	WSPipe	

Data

Information

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approach

Value

Value

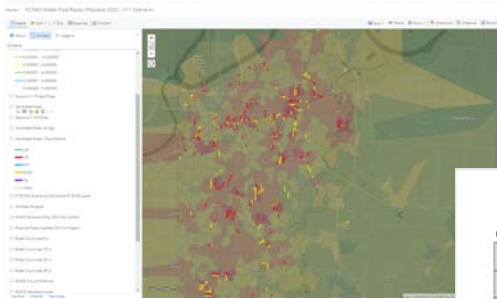
Value

Information → **Evaluation**

KANSAS CITY WATER BUSINESS CASE EVALUATION SHORT FORM Project Title <u>Tokay WebTest</u>	Backflow Test Tool
CIS UPGRADE	SOFTWARE BUSINESS CASE MILESTONE TECHNOLOGY STACK UPGRADE
SOFTWARE BUSINESS CASE <u>QUALTRICS ASSESSMENT</u>	Survey Software
ETL Tools	SOFTWARE BUSINESS CASE PURCHASE OF EME UPGRADE
SOFTWARE BUSINESS CASE PURCHASE OF INFOASSET PLANNER	Analysis Tools

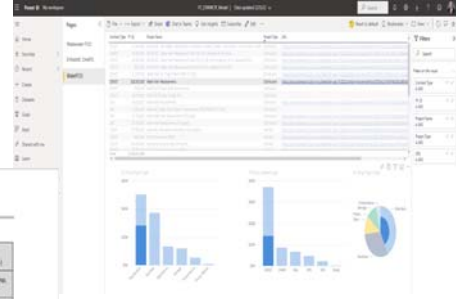
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results



Technology solutions helped us understand current value so that...

We are better able to create future value.



WWR Projects (Design and Construction through FY27)

Project Summary Information

Office	Project Sponsor	Accountable	Programs (see appropriate)	Initiated (see appropriate)
File	Cherry Creek	Engineering Services Head	Waterways Group Project Team	Project Management Management Team
Name(s)	Waterbus	Jeff Hahn	Shirley Jahn	Scott Paine (see Project)

Original Project Starting Fiscal Year	2012/2022
Original Business Case Date (if necessary)	11/2020
Latest Updated Business Case (if necessary)	
Estimated Start Date	5/1/2022
Estimated Completion Date	1/1/2028

Budget Information

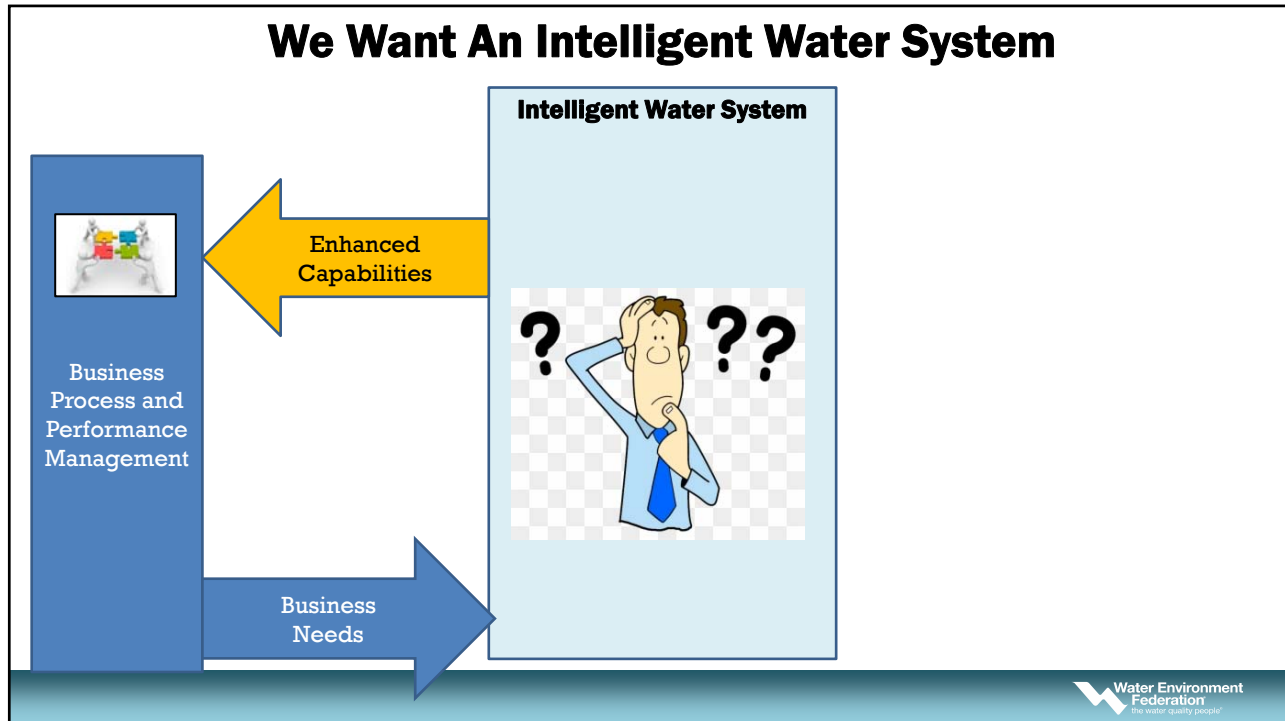
Category/Component/Other	\$10M (average)	\$10M (OLB)	\$9M (OLB)	\$4M (OLB)
FY2023	\$3.1M	\$3.1M	\$3.1M	\$3.1M
FY2024	\$3.1M	\$3.1M	\$3.1M	\$3.1M
FY2025	\$3.1M	\$3.1M	\$3.1M	\$3.1M
FY2026	\$3.1M	\$3.1M	\$3.1M	\$3.1M
FY2027	\$3.1M	\$3.1M	\$3.1M	\$3.1M
FY2028 beyond	\$2.7M	\$2.7M	\$2.7M	\$2.7M

Previously Funded Project (when applicable)

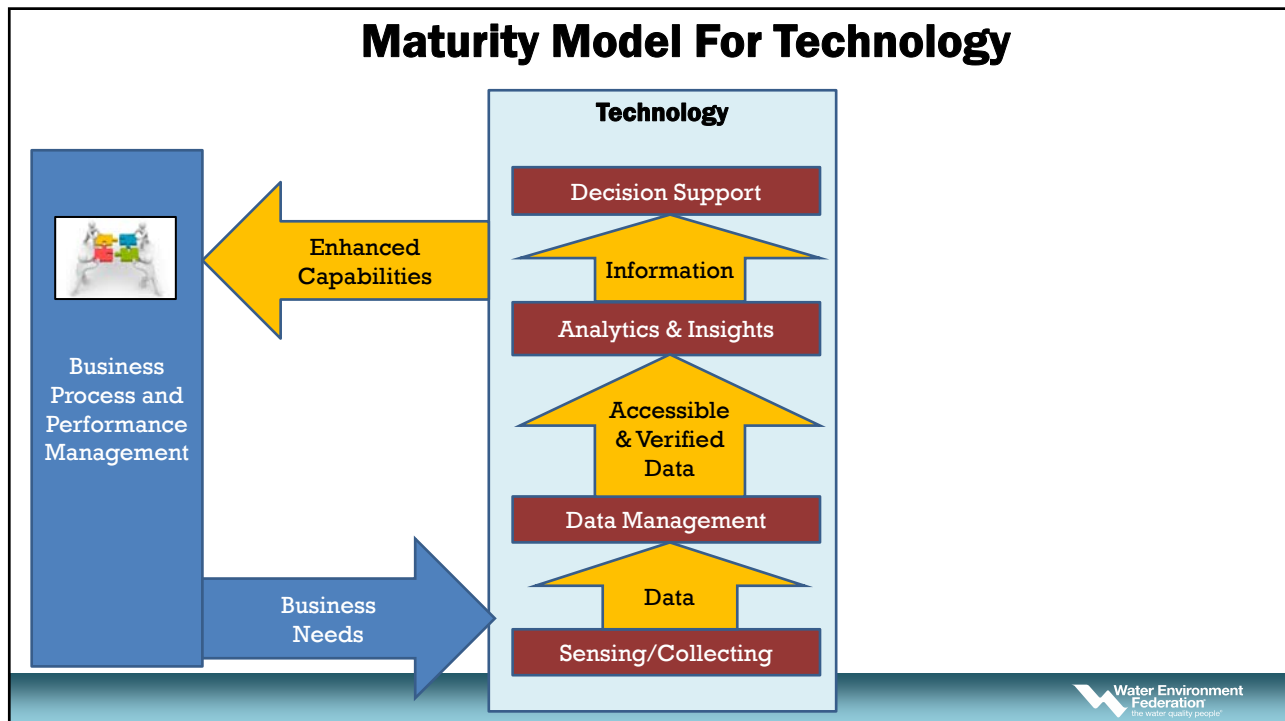


Yvonne Carney
WSSC Water
Director, Strategic Performance

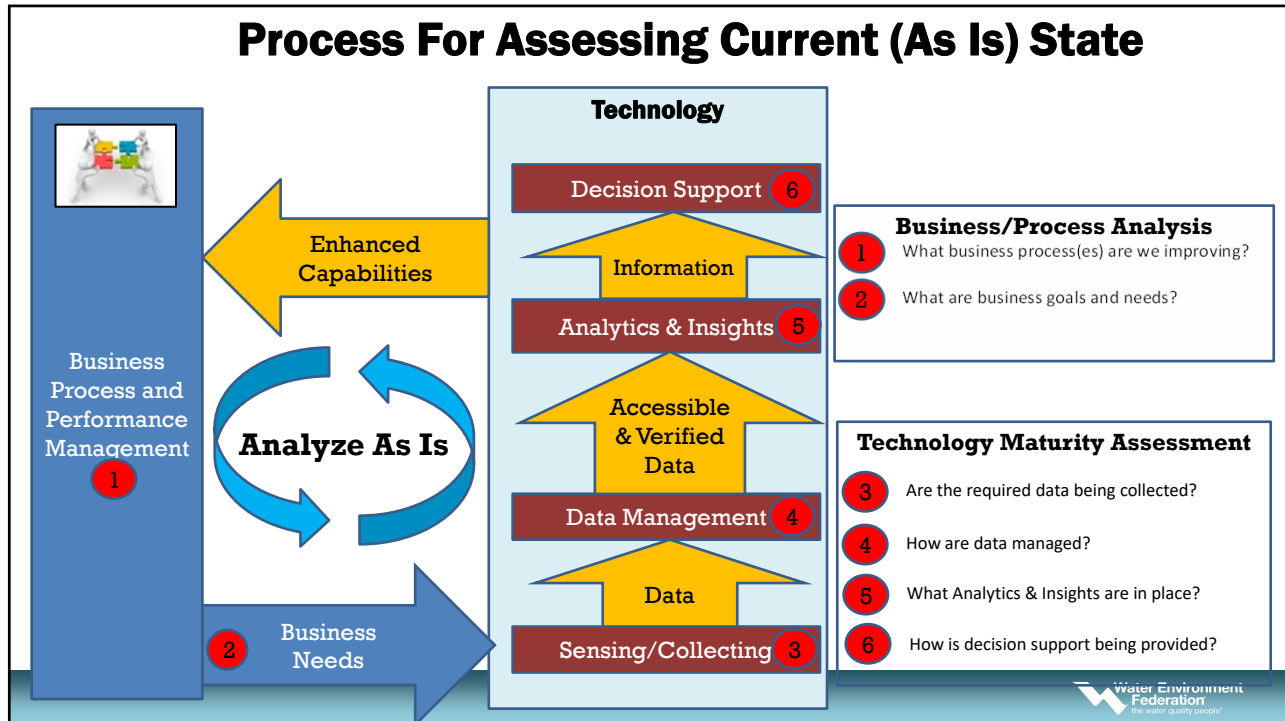




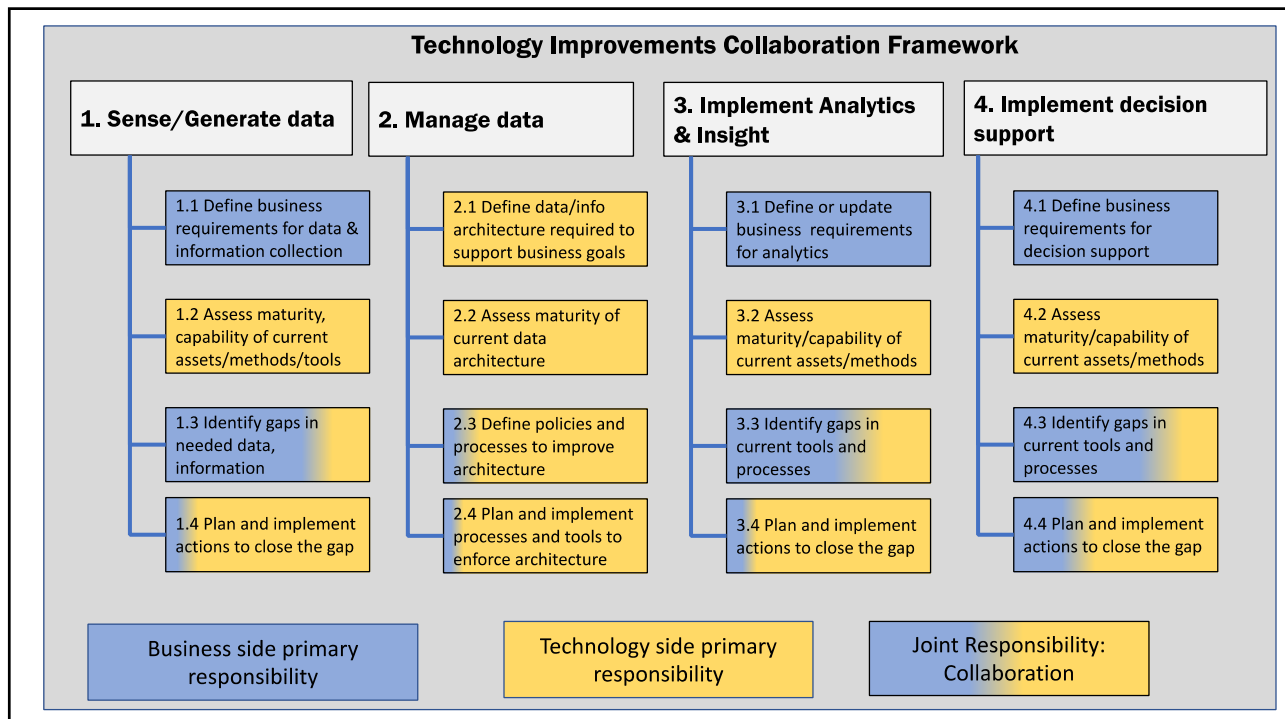
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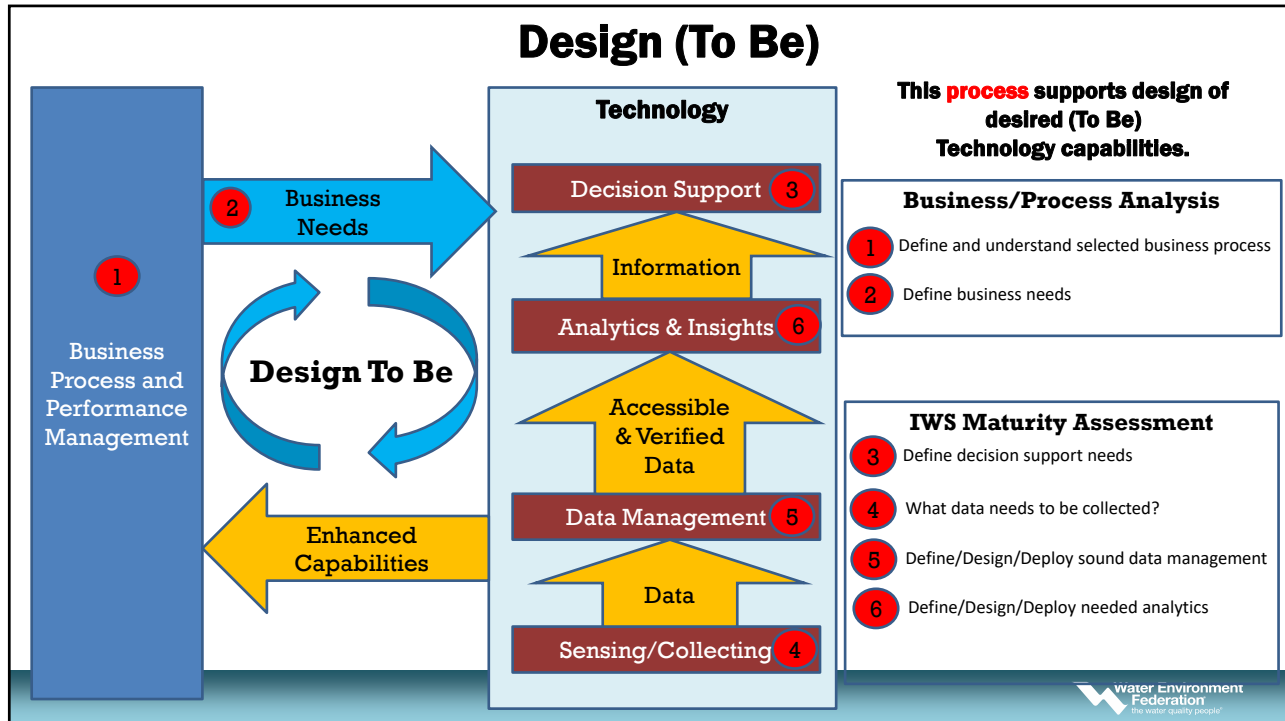
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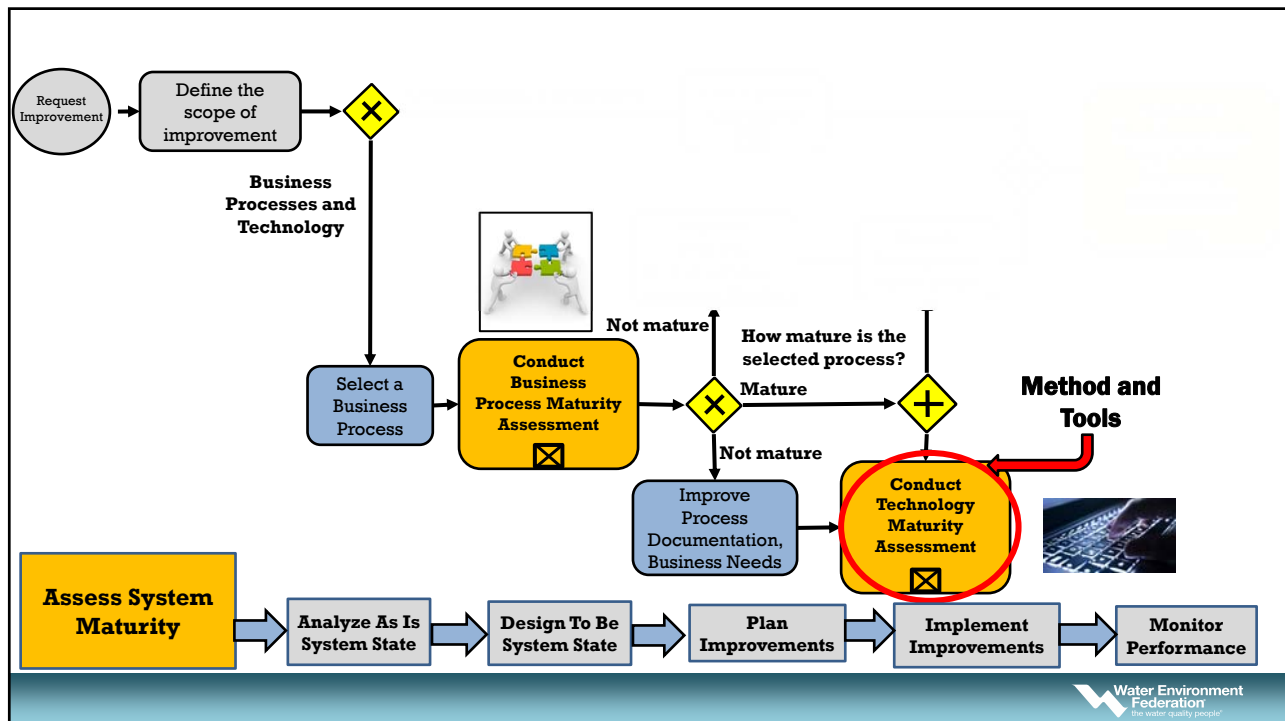
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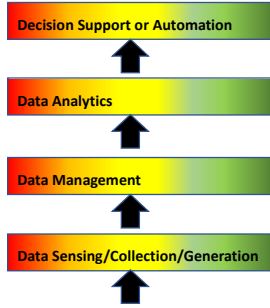


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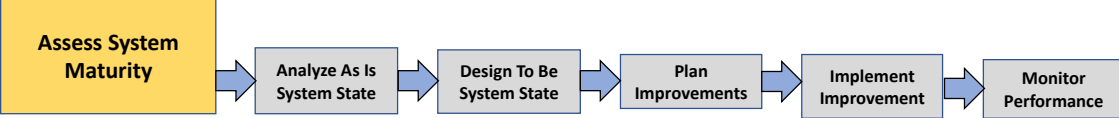



Conduct Technology Maturity Assessment As Is


Maturity Model



Data sources required to adequately support the activities and decisions in the selected business process.	Systems that are authoritative source of the data and provide functionality to adequately support the activities and decisions in the selected business process.	TDA L1 Q1 Who is responsible for sensing/generation of these data?
Operational data - real time and historical	SCADA, DCS, AMR, Historian	
Instrumentation data	System that contains instrumentation inventory	
Maintenance data (e.g. work orders)	CMMS	
Asset data: equipment, fleet	CMMS, Fleet Management	
Engineering data (e.g. drawings, specifications)	CADD, Engineering Content Management System	
Engineering models data	Models for process, hydraulics, hydrology, etc.	
Warehouse data (e.g. inventory, spare parts)		0
		0
		0
		0
		0



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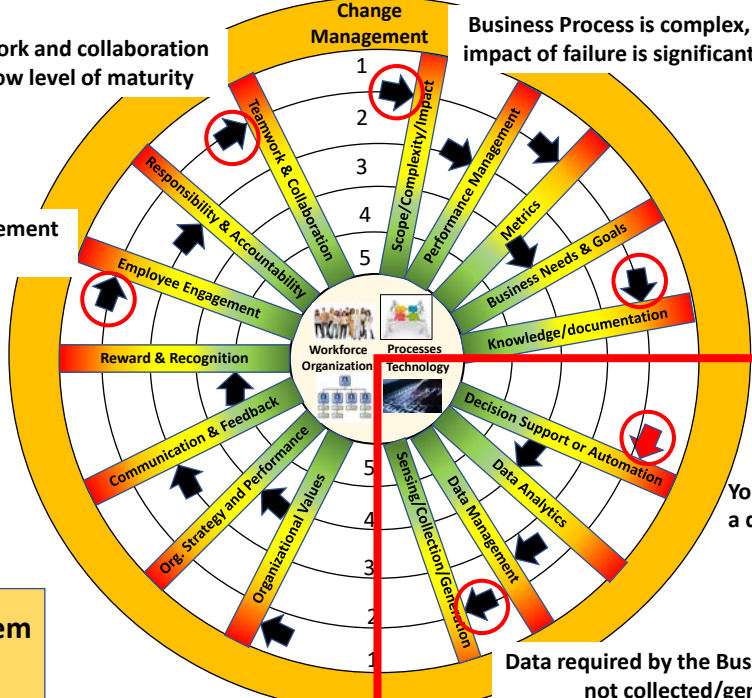


Business process is complex, impact of failure is significant

Business process is not well documented

You were asked to develop a decision support system.

Data required by the Business Process is not collected/generated



Assess System Maturity

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Ting Lu
Clean Water Services
Business Practice Leader, Digital Solutions

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DATA AND ANALYTICS TEAM, CWS USE CASES

Ting Lu
Business Practice Leader - Digital Solutions



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OUTLINE

- WISE Technology and Data Analytics Survey
- CWS's case studies
- Lesson learned

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WISE TECHNOLOGY AND DATA ANALYTICS TEAM SURVEY

Please describe how data is used to make decisions and prioritize IT projects

Mentimeter



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WISE TECHNOLOGY AND DATA ANALYTICS TEAM SURVEY

Describe your process for reviewing and prioritizing technology (IT) projects



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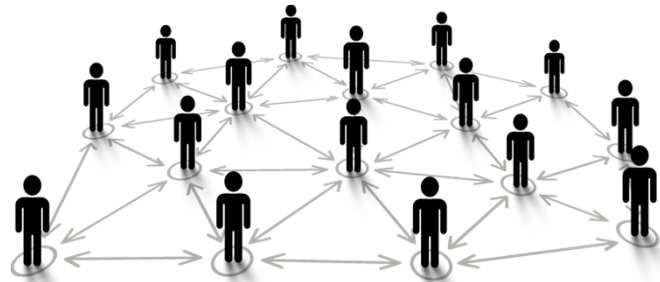
OUTLINE

- WISE Technology and Data Analytics Survey
- CWS's Case Studies
 - DATA, PEOPLE, PROCESS, AND TECHNOLOGY
- Lesson Learned

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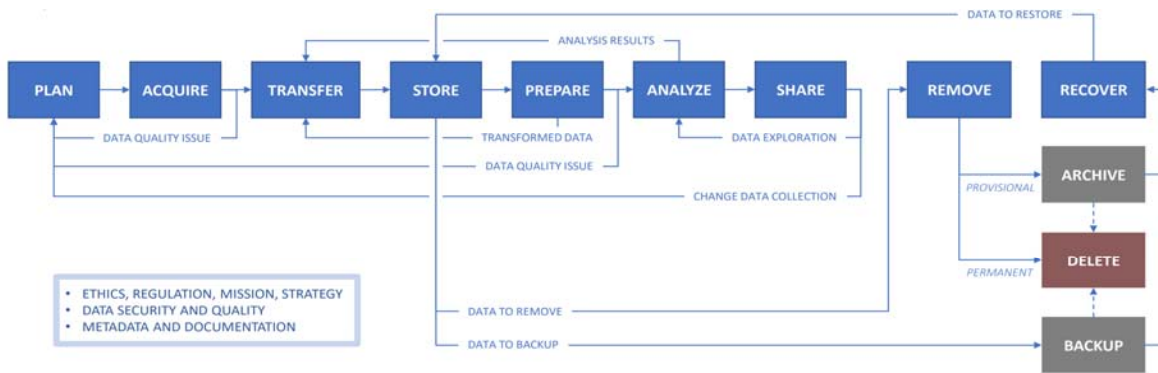
DATA MANAGEMENT HUB

- Bring awareness of data as an asset and uncovers dark data
- Create best practices for data management
- Develop a community of data management experts and users
- Foster data-driven culture to support informed decision makings



Cultivate a Data-driven culture

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Clean Water Services Data Lifecycle Model

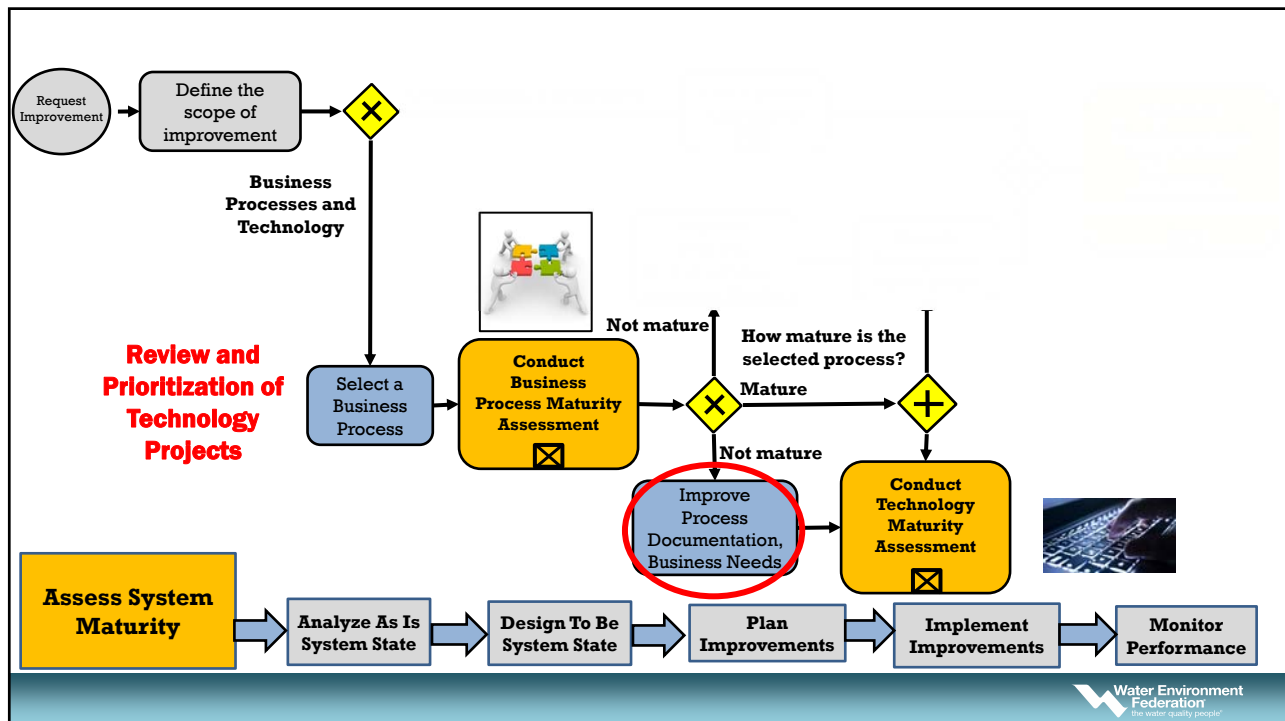
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DATA ANALYSIS TRAINING

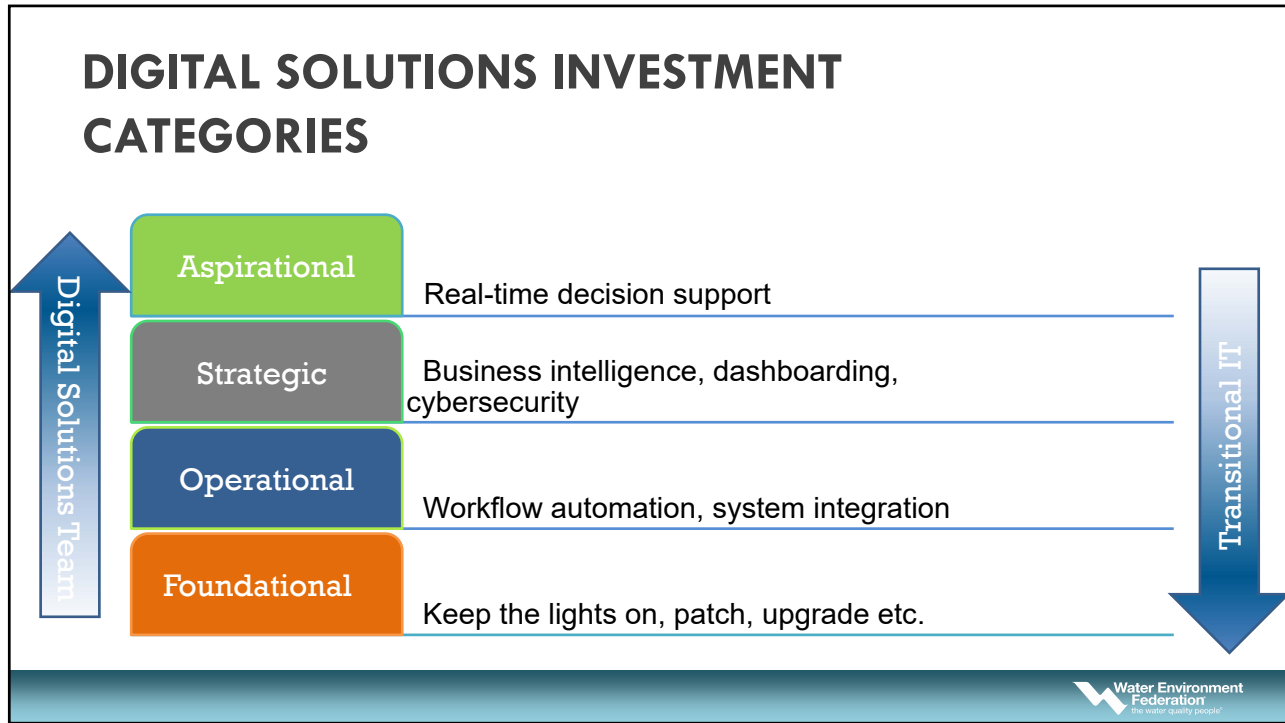
- Power BI training
 - Empower users across CWS to develop dashboards for decision support
- Business Analysis training
 - Bridge the gap between IT and Business requirement
- Pilot new technologies to learn together
 - Developing an intelligent water solution is a learning journey



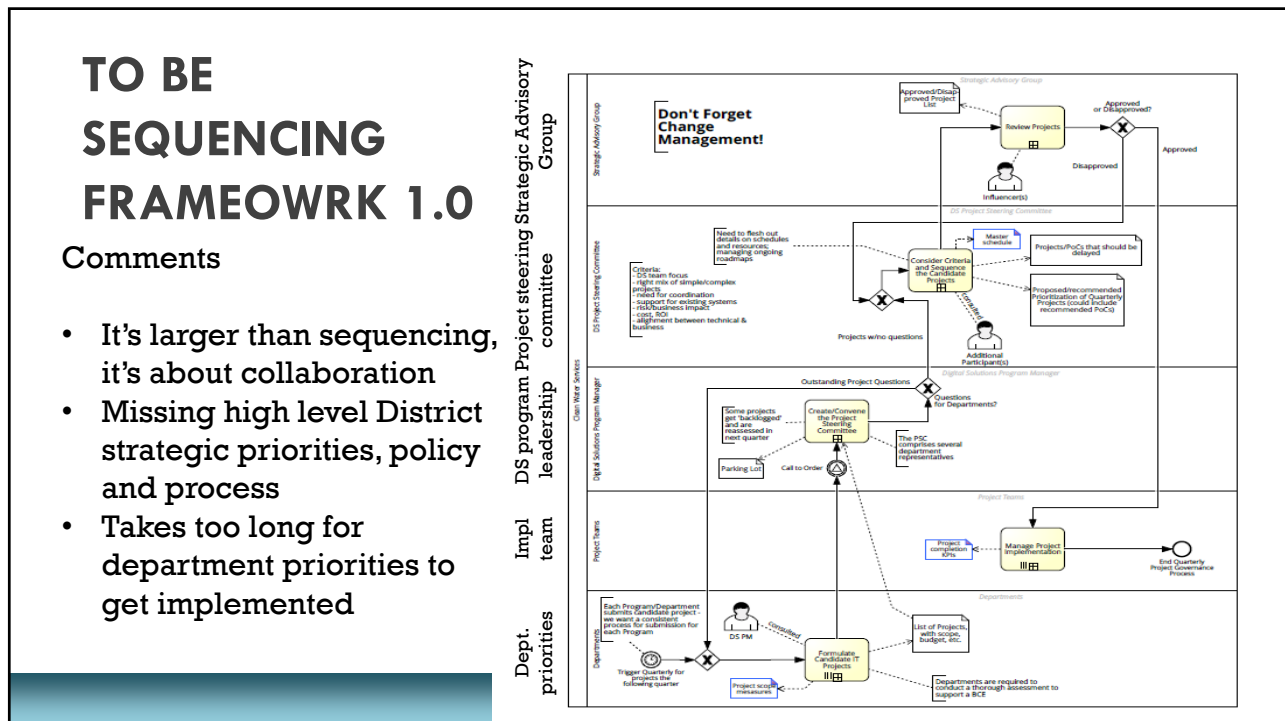
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LESSON LEARNED

- Traditional centralized hierarchical IT model doesn't not meet today's business needs.
- Continue refine Digital Solutions collaboration model 3.0 to
 - Strategically invest in large initiatives at the District level
 - better partner with department and meet business needs with team autonomy.
- Engage leadership is essential
- Be adaptive to meet evolving needs, don't forget change management!



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Upcoming WISE Webcasts

- Don't Forget About People!
 - Wed, March 9, 2022 – 2:00-3:00 PM ET
- Change Management: Necessary Ingredients for Success
 - Wed, April 13, 2022 – 2:00-3:00 PM ET

<http://www.wef.org/wise>

<http://www.wef.org/wise-webcasts>



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