



Digital Worker

Assessment Tool Checklist and How-To Guide

2024

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Digital Worker: Assessment Tool Checklist and How-To Guide

Presented by:

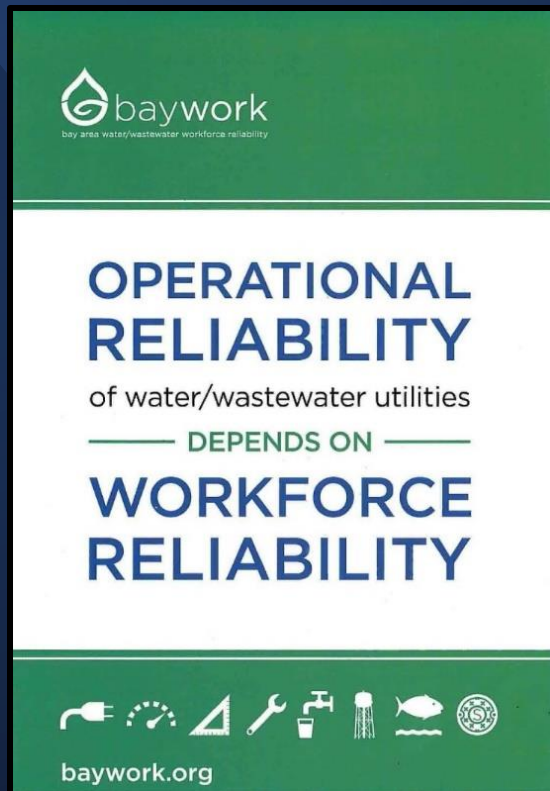
Catherine Curtis

BAYWORK Leader

San Francisco PUC Wastewater
Workforce and Training

BAYWORK – What is it?

A consortium of water/wastewater agencies and stakeholders with a shared commitment to workforce reliability.



Baywork.org



Bay area water/wastewater workforce reliability

Timeline of the BAYWORK Digital Work Initiative

Since 2019, BAYWORK has been engaged in investigative research to uncover the challenges faced by utilities and to find opportunities to ensure success in the selection and implementation of digital tools.

Essential Materials



The Digital Worker White Paper – 2021
BAYWORK



Live Event: The Digital Worker – Building Our Digital Future



The Digital Worker – A Three-Part Webinar Series



Digital Competency in the Water Industry Report 2021
BAYWORK, JVS

[digital-worker-resources/](#)

THE DIGITAL WORKER TIMELINE

Click on the links to go to the events and materials



2019

NOVEMBER

[Research on signatory use of digital tools – survey](#) – Michael Kushner



2020

JANUARY

Focus group meetings with large, medium, and small size signatories



2021

JANUARY

Webinar – [Our Journey from Paper to Digital and the Lessons Learned](#)



2022

MARCH

[EPA Presentation](#) – Catherine Curtis



2023

JANUARY

TEC — Submitted course content, editing guide, and attended PAC Meetings — Catherine Curtis



2024

JANUARY

Began working on the digital checklist How To Guide product – Catherine Curtis, Jordan Damerel, Zora Bindra, Elizabeth Toups

Digital Transformation

Utilities must clearly understand and define the need(s) they are trying to address with a new digital tool.

Digital vendors don't always understand the Water Utility Industry.

Some questions to consider...

- What current tools are available that may perform the same functions?
- What is the functionality needs for various users?
- Who will champion the initiative and implementation?
- How will the new tool impact work processes?
- Who will maintain the tool?



CMMS is used for



Digital Readiness Assessment

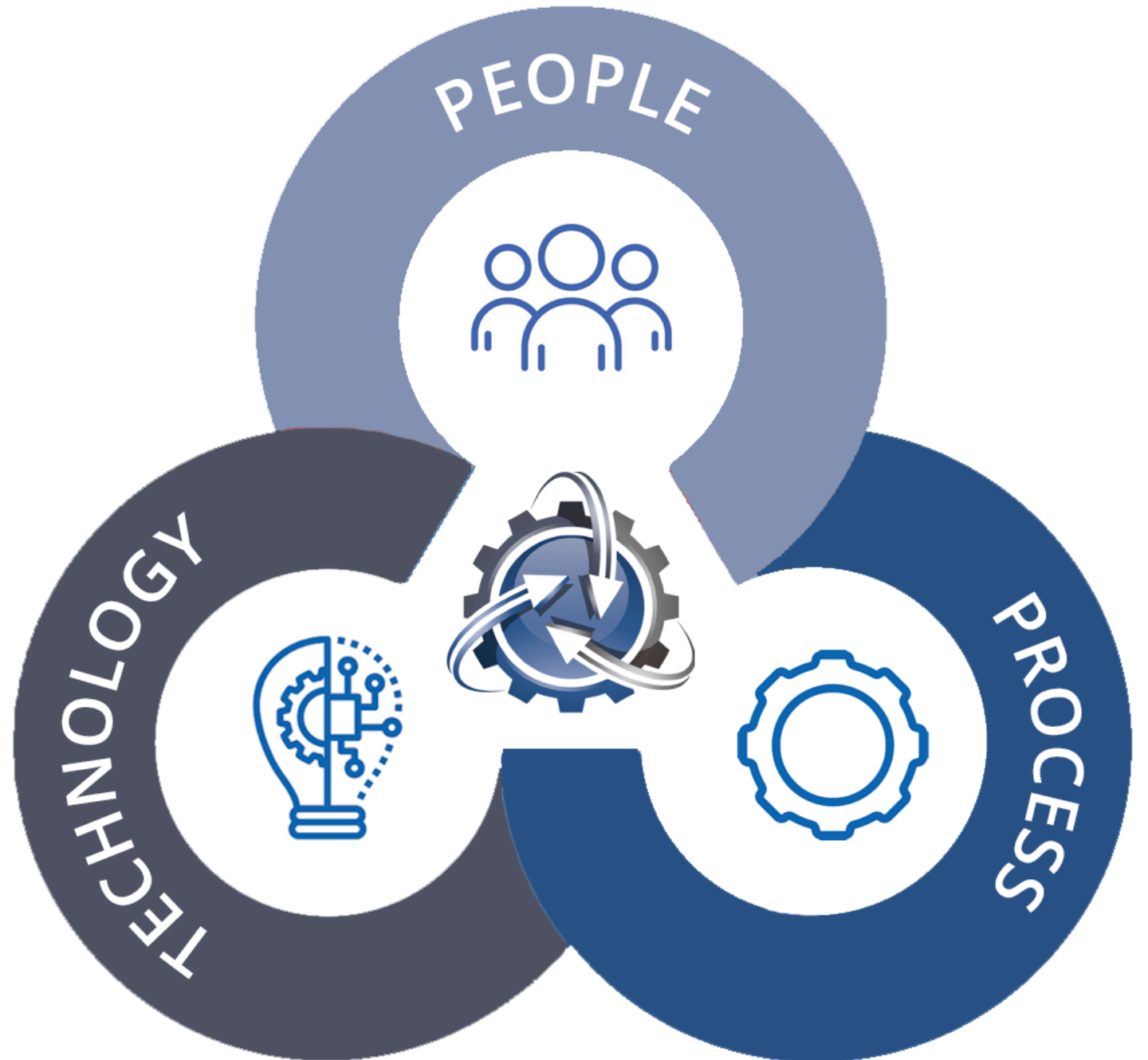
BAYWORK has prepared an assessment tool that will help individuals within water/wastewater utilities understand how ready their organization is to implement new digital tools.

APPENDIX A

Organizational Preparedness Assessment Tool.
Click anywhere below to open the Excel Assessment Tool.



Three Categories of Questions



People

People: related to staffing levels, organizational collaboration, specific skill sets, and training aspects of implementing a new digital tool.

Ensuring that a utility has a champion for implementation, a collaborative environment, and a willingness to train on efficient use of a new tool is critical for successful implementation.

Processes



Processes: related to the specific organization workflows that the new digital tool will attempt to solve,



and the organizational workflows used to implement the project.

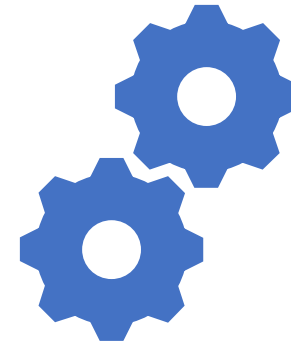


If a workflow is dysfunctional and not well designed, a digital tool is not likely to resolve the problem.

Technology



Technology: related to the physical infrastructure, tools, hardware, software, and maintenance of systems that a new digital tool will rely on for success.



The technology backbone needs to be able to support a new digital tool for adoption to be successful.

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ORGANIZATIONAL PREPAREDNESS ASSESSMENT TOOL

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ORGANIZATIONAL PREPAREDNESS ASSESSMENT TOOL

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v. 1.1

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6/17/2024

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INSTRUCTIONS:

6

1. On the "Data Entry" tab of this spreadsheet, review the readiness levels described in each row.

7

2. At the far right (Column H), use the dropdown menu to select the readiness level that best applies to your agency.

8

3. Repeat for each row in the spreadsheet.

9

4. Each section (People, Processes, Technology) will calculate an average result.

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5. Review the "Results" tab for more detailed analysis of your results.

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INSTRUCTIONS

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Data Entry

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Results

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People Portion of the Assessment

	A	B	C	D	E	F	G	H
1		----- READINESS LEVEL -----						YOUR ORGANIZATION'S
2	QUESTION	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		RATING
3								
4	PEOPLE							
5	<i>Do staff have a common understanding of the problem that needs to be solved?</i>	One individual has suggested a problem.	A workgroup is aligned in defining a common problem.	A division/department is aligned in defining a common problem.	Several divisions/departments are aligned in defining a common problem.	Most of the organization, including executive management, is aligned in defining a common problem.		
6	<i>Is there a champion for the digital tool that will help orchestrate the effort?</i>	No champion.	An individual has expressed interest in a new tool.	An individual has agreed to lead digital tool implementation and adoption efforts.	An individual champion exists, and other individuals are willing to pilot the tool and support implementation.	A multi-disciplinary team, including IT and end-users, has been established to lead implementation and adoption efforts.		
7	<i>Does the organization foster a collaborative environment?</i>	No, or very limited, collaboration.	Individuals collaborate, generally within their own department.	Some cross-disciplinary collaboration for certain initiatives.	Moderate cross-disciplinary collaboration for initiatives.	Broad cross-disciplinary decision-making process, including different staff levels, roles, and departments within the organization.		
8	<i>Does the organization foster a learning culture that is open to feedback and ideas?</i>	Feedback is not encouraged.	Channels for learning from others are in place but are used inconsistently; sharing of feedback and ideas is limited.	Specific workgroup supervisors encourage learning from each other and providing feedback and ideas.	Some department/division managers foster a learning culture within their team.	The organization as a whole actively encourages a learning culture, providing honest feedback, and asking questions.		
9	<i>Is there a strong technical team to ensure technology is ready to support</i>	No, or very limited, IT support for implementing new tools.	Some initial research and compatibility support is available when identifying	Some basic hardware support when establishing new tools, but limited	Moderate support, from a hardware and software perspective.	Comprehensive IT support is available to assess needs for hardware/software and to provide long-term support for		

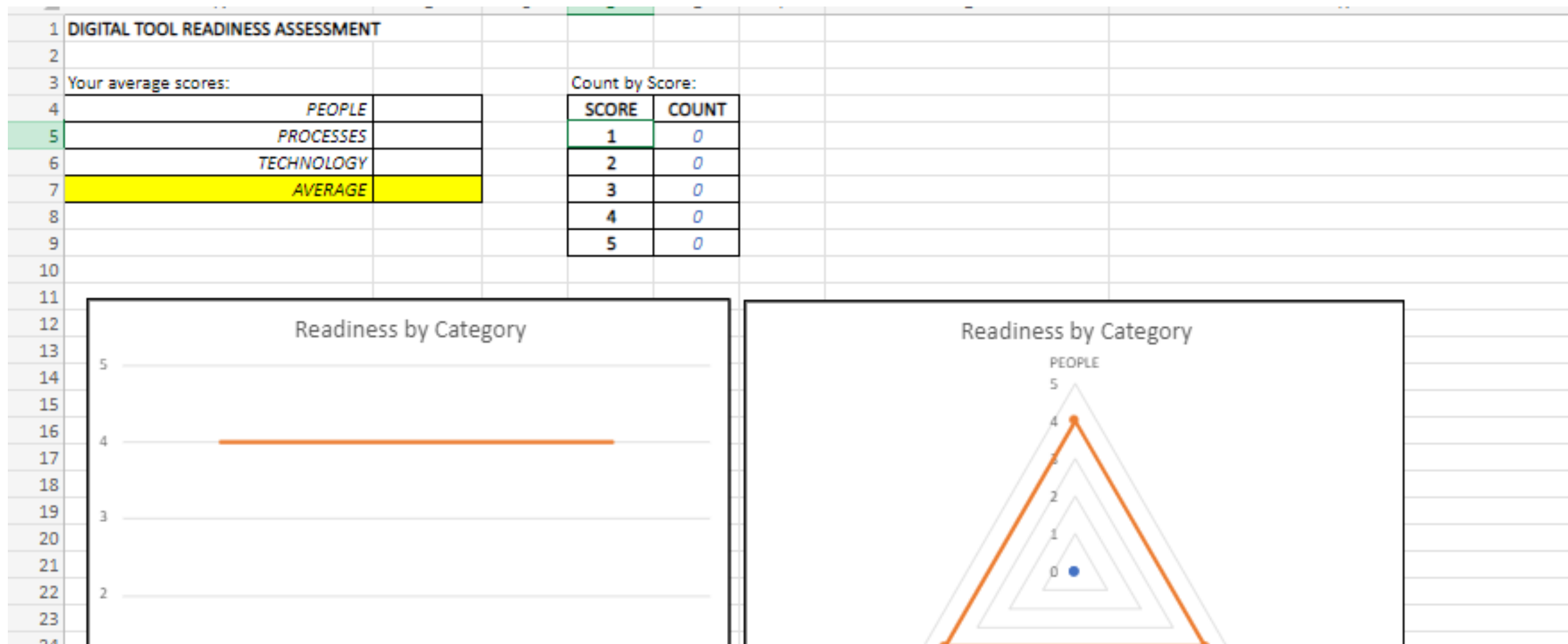
Processes Portion of the Assessment

14	PROCESSES						
15	Does the organization maintain an inventory of digital tools that are available, and their capabilities?	No organized digital tool inventory.	Basic list of tools, but features and functionality are not well understood.	Each department or workgroup has a handle on their digital tools, but information is not broadly known across the organization.	Limited set of tools are used widely across the organization, but information may not be readily available and many workgroups continue to utilize their own tools.	Centralized, comprehensive repository of digital tools and capabilities.	
16	Does the organization regularly perform a "gap assessment" to understand shortfalls of current digital tools?	No organized digital tool inventory.	Inventory captures a "snapshot" in time with no regular updates.	Each department or workgroup occasionally identifies shortcomings in current tools and researches potential ways to close the gap.	Each department or workgroup occasionally identifies shortcomings in current tools and researches potential ways to close the gap; IT staff are available to help support and guide gap assessment.	An organization-wide gap assessment is performed regularly, and attempts are made to close gaps with other digital tools across the organization.	
17	Is there a formal process in place to facilitate collecting feedback from staff on the implementation of a new digital tool?	No, feedback not sought.	Feedback is collected by some teams; limited follow-up mechanisms are in place.	Informal process whereby input is passively received by leaders but not encouraged.	Formal process for submitting input is available and widely known; but not necessarily encouraged.	Formal process for submitting input is available and widely known; management encourages staff to do so. Input is followed up and addressed.	
18	Are job descriptions able to be flexibly updated to reflect new tools and technologies that are available to perform jobs more efficiently?	No, job descriptions are rarely updated.	Job descriptions are updated selectively; most job descriptions do not reflect broad implementation of new tools.	New knowledge/skills/abilities can be added to job descriptions, but it takes a long time.	Most job descriptions are updated; some newly implemented changes may not be reflected.	Job descriptions are able to be routinely reviewed and updated to stay current with new tools and technology.	
	Does your organization utilize			Onboarding reviews business-essential	Onboarding reviews some job-specific	Yes, onboarding checklist covers all	

Technology Portion of the Assessment

23	TECHNOLOGY						
24	<i>Is there infrastructure in place to support a new digital tool? (e.g., cloud, virtualizations, servers, integrations, networks, cybersecurity, etc.)</i>	Unknown whether hardware systems exist to support a new tool.	Hardware systems exist but are outdated, overburdened, slow, under-capacity, etc.	Hardware systems are available to support new digital tools, but are not comprehensively and/or proactively managed for reliability and multi-department integration.	Hardware is in place for most tools.	Strong, centralized, proactive hardware support to ensure ongoing reliability and multi-department integration of new digital tools.	
25	<i>Does your organization utilize a Learning Management System (LMS) to widely distribute new training materials?</i>	No LMS utilized.	LMS is available but most do not utilize it. Training is spotty.	An LMS system is utilized to provide trainings, but trainings are not consistently tracked through the LMS.	LMS is widely available and includes training on some digital tools.	LMS is widely available and includes training on all digital tools.	
26	<i>Are cybersecurity tools in place to identify potential cyber attack attempts and prevent vulnerabilities?</i>	No, or very limited, cybersecurity tools in place.	Some basic training for staff to identify phishing is available.	Some periodic assessment of server logs, etc., for potential malicious access and other vulnerabilities.	Some level of active cybersecurity evaluation to identify malicious activity.	Routine monitoring by a Security Operations Center (SOC) or similar to rapidly identify and limit malicious activity.	
27	<i>Does the IT department have an Information Technology Master Plan which identifies all major technologies, projects, and alignment?</i>	No IT Master Plan prepared.	Assessment of technologies happens infrequently and is not consistent.	Some assessment of hardware/software replacement needs, potentially on a spreadsheet that is updated regularly.	Comprehensive IT Master Plan prepared, but resources still limited.	Comprehensive IT Master Plan prepared, and endorsed by management to provide adequate resources.	

Results Portion of the Assessment



Tips and Strategies for People



Define the problem



Collaborate across organization



Collaborate with IT



Develop Implementation Strategy and Learning Culture



Establish Training



Form a Power User Group

Tips and Strategies for Process



Create a digital tools inventory



Perform a gap assessment



Develop a feedback process



Develop job descriptions for digital workers



Implement cybersecurity practices



Create and inventory policy and procedures

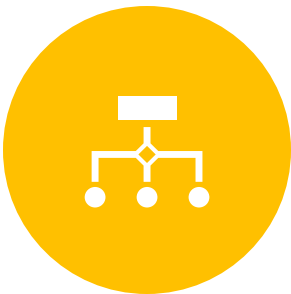
Tips and Strategies for Technologies



Develop an inventory of all major technologies, projects, and alignment.



Assess hardware/software.



Implement and utilize Learning Management System (LMS).



Train IT staff on cybersecurity.

Vetting

We would like to acknowledge the invaluable contributions of IT staff and end users from Fairfield Suisun Sanitary District, San Francisco Public Utilities Commission, Contra Costa Water District, and other agencies who provided feedback and insights during the vetting process of the Digital Worker Assessment Tool. Their expertise and collaboration were essential in shaping the tool into a more effective resource.



Change Management Implementation Factors

Lessons Learned

Identification of existing workflows and systems that will be impacted by a new system - including impacts on workgroups other than those that will be using the tool is an important consideration.

The cost of modifying job classifications, job descriptions and requirements, salaries, and recruitment practices, to support recruitment and retention of skilled digital workers also must be factored into the equation.

Training is essential and leadership must oversee this piece. The leadership required to provide sound and consistent guidance to the project is critical.

Conclusion – What utilities need



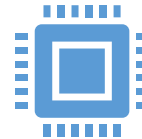
a clear definition of the problem that needs to be solved, and how a digital tool will address it.



a thorough investigation of alternative approaches and tools for solving the problem



consider employee impacts, ranging from potential elimination of jobs to the need to learn new workflows and skills



new tools as well as both initial and long-term support for user training (e.g., ongoing training, and continuous availability of training materials and mentoring.)



evaluate the cybersecurity risks of the tool and make sure it is compatible with our current in-house IT systems.

Baywork.org



Bay area water/wastewater workforce reliability

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