

Overview of Findings from Digital Preparedness Exercise

BAYWORK's Digital Worker Workshop May 12, 2022

One significant finding of the BAYWORK White Paper on the Digital Worker (published in 2021) was that when utilities initiate digital projects, there is a tendency to bring more focus to the selection of the tool than the organizational resources (e.g., digital knowledge, ability to analyze existing workflows and processes, IT and Human Resource support, training capacity, and cultural support for innovation and change) required to implement the tool. As a result, utilities can select tools that don't match their capacity, or fail to devote sufficient resources (funding, staffing support, time, and leadership commitment to the task) to effectively implement the tool they have selected. Given the frequency and negative impact of utilities' failure to assess their digital preparedness prior to selection of tools, one of the recommendations in the Possible Next Steps portion of the White Paper was to develop a Digital Preparedness Self-Assessment that could help utilities prepare themselves for digital projects.

BAYWORK's Digital Worker workshop in May of 2022 included an exercise in which respondents evaluated the potential significance of different factors related to the following:

- Selection of Digital Tools;
- Organizational Culture;
- Coordination with Existing Workflows and Systems;
- Human Resource Issues; and
- Information Technology Support.

Each attendees had the opportunity to identify 10 questions that they thought would be particularly helpful to utilities in helping them analyze their level of digital preparedness. The Analysis of Digital Preparedness Priorities reflects the results of this exercise.

Organizational preparedness to select the most appropriate digital tools for their organization was the highest-ranking concerns of workshop attendees, scoring 115 votes. Particular concerns that their voting highlighted were the following:

The organization's capacity to collaboratively define the problem that needs to be solved, and why a new software or hardware tool is required to address it (29.5 votes);

The working relationships among operations staff, to support their ability to build a shared definition of the problem that needs to be solved (29 votes);

The working relationship between IT staff and operations staff (24 votes); and

The internal capacity to define performance indicators that could be used to measure the effectiveness of a digital tool in solving a problem (22.5 votes).

The topic area receiving the second highest number of votes (113) was Human Resource Issues. Workshop attendees highlighted questions about the following capabilities:

The capacity of the utility to develop and add new job categories when new skills are needed (29 votes);

The performance of the utility in building digital skills requirements into the knowledge and skill requirements for all jobs that require them (19 votes);

The willingness of the utility to modify knowledge and skills requirements for jobs in a timely way when changes are needed (14 votes); and

Support provided by Human Resource staff to managers in expecting staff to learn new skills that may not have been part of the job description at the time they were first hired for the job (14 votes).

Respondents also expressed some concern about the support provided by Human Resource staff in negotiating agreements with unions and other labor groups as needed to support the ability of managers to require staff to learn to use digital tools in their work (13 votes).

Organizational Culture issues were also defined as significant (with 101 votes). The issues identified as significant by the highest number of workshops attendees were the following:

Whether the utility's organizational culture was characterized by a commitment to continuous learning and improvement (33 votes);

Whether the utility encouraged employee questions and concerns by making it comfortable for employees to discuss their questions and concerns about what they don't know and may find it difficult to learn (30 votes); and

Whether the utility's culture was characterized by a commitment to accountability at the organizational, workgroup, and individual level (23 votes).

Information Technology Support received 67 votes, with the highest-scoring issues being the following:

Whether the Information Technology staff that supports the utility has the technical competence to understand and support the range of software and hardware tools that are already their responsibility to maintain (28 votes) and

Whether the Information Technology staff supporting the utility have a process in place for evaluating cyber-security risks associated with software tools under consideration (20 votes).

The final subject area, Coordination with Existing Workflows and Systems received only 49 votes overall, but both issues raised in that topic area received over 25 votes:

Whether the utility is characterized by collaborative working relationships that would help staff work together to mitigate possible upstream and downstream impacts that might be triggered by implementation of a new digital tool (29 votes); and

Whether the utility has the ability to map and document workflows in a way that will help identify possible impacts on workgroups/workflows upstream and downstream of the workgroups and workflows associated with a new system under consideration (26 votes).

These findings reflect one step toward the goal identified in the Possible Next Steps component of the White Paper: to develop a self-assessment tool that could be used by utilities to evaluate their digital readiness. These findings do not show us either the format or the wording that would be used in such a digital readiness tool. However, the findings do validate the White Paper finding that selection of digital tools, organizational culture, coordination with existing workflows and system, Human Resource issues, and Information Technology support are all real concerns of water utility staff, and consequential factors in the ability of utilities to make effective use of digital tools. As an additional step in the direction of developing a useful Digital Preparedness Tool for water and wastewater utilities, the BAYWORK Planning Committee for the upcoming BAYWORK webinar on The Digital Worker: Lessons Learned by Utilities will include an exercise will allow webinar attendees to provide additional input on this topic.