
MEMORANDUM

TO: STEPHEN KLEIN AND CATHERINE BENHAM, LEGISLATIVE JOINT FISCAL OFFICE
FROM: DANIEL SMITH, IT CONSULTANT FOR THE JOINT FISCAL OFFICE
SUBJECT: UNEMPLOYMENT INSURANCE MODERNIZATION – PATH FORWARD
DATE: JULY 8, 2021

On May 11, 2021 you asked me to prepare a document that describes the current state and potential path forward for Vermont’s Unemployment Insurance Modernization (UIM) effort. In response, this memo will discuss the recent history of the UI system, the goals and requirements for any replacement system, potential risks that could adversely affect the desired outcomes, the funding question that awaits a decision by the Joint Information Technology Oversight Committee (JITOC), and my recommendations.

1. Executive Summary of Recommendations:

After reviewing the nationwide state of UI modernization¹ and the Agency of Digital Services (ADS) approach to the task², I believe that JITOC is not yet in a position to approve funding for the UIM effort. In order to minimize project risks, I recommend that JITOC require the following items from VDOL/ADS before releasing funds for UI system modernization; for the most part, these items are included in ADS’s Enterprise Project Management Office (EPMO) standards for projects:

- a. The development and approval of a requirements document that defines the capabilities of a modernized UI system, including a description of the essential characteristics and functionality that will be required of the new system (required by the ADS EPMO in any project’s Exploration phase as part of the High Level Requirements document);
- b. The identification of a single person that will be in charge of the project and with the authority to direct project activities effectively, and the identification of project resources (required by the ADS EPMO in any project’s Initiation phase, as part of the Project Charter);
- c. The documentation of an investigation into alternatives for meeting those UI system requirements. This investigation should evaluate the viability and cost effectiveness of the various alternatives, and compare them to the known requirements for our own UI modernization (required by the ADS EPMO in a project’s Planning phase, as part of the Procurement Approach);

¹ <https://tcf.org/content/report/centering-workers-how-to-modernize-unemployment-insurance-technology/>

²

<https://legislature.vermont.gov/Documents/2022/WorkGroups/JITOC/Unemployment%20Insurance%20Systems/W~John%20Quinn~Unemployment%20Insurance%20Systems%20Modernization~6-16-2021.pdf>

- d. The creation and approval of all remaining required project management documentation for the Exploration and Initiation phases prior to the issuance of a Request for Proposal (RFP).

2. UI System History

The Vermont Department of Labor's (VDOL) current UI system is over twenty years old, and is long overdue for replacement. While it has been generally functional through the years, it is not supportable, scalable (meaning that it cannot handle unexpected surges in demand), or easily changed. This was demonstrated during the Covid-19 pandemic, when the system was overloaded by the high number of claims during the spring of 2020. The Department of Labor's previous Unemployment Insurance Modernization (UIM) project began in 2016, and was a multi-state consortium that would build on Idaho's iUS Unemployment Insurance (UI) system. Due to various issues (insufficient developer resources, consortium governance and communication issues, changing requirements, etc.) the project did not succeed and was terminated in January of 2020. Efforts to determine the new path forward were delayed from mid-2020 until the present as a result of the pandemic. However, the FY22 Vermont budget bill (H.439, signed by the Governor on June 8th, 2021) included funding for a restart of the UIM project in Section G.501, State Technology Modernization Investments:

(a)(10) \$4,500,000 to the Vermont Department of Labor, of which \$3,500,000 is allocated for phase one of the UI modernization to begin replacement of mainframe applications for unemployment insurance and \$1,000,000 is allocated for the Joblink replacement to coordinate activities between the Department and the Agency of Commerce and Community Development to better serve Vermonters. These funds shall be released only after approval of the Joint Information Technology Oversight Committee. The Committee is requested to review the breadth of scope, appropriateness of the proposed technology, experience record of the proposed vendor, reliability of the cost estimate, availability of dedicated department personnel for implementation and operation, and the proposed schedule and scope of future phases, where appropriate. The Committee evaluation shall consider information provided by the Agency of Digital Services and any outside technical review or resource.

As stated in the bill, the funding is conditional on JITOC's review and approval of the overall project plan.

3. UI Modernization Goals and Requirements

To be considered successful, any future UI system must meet certain criteria. Specific requirements should be defined in the project documentation, however there are general requirements that can be stated up front. In no particular order, these are:

- The system must be user friendly. This requirement is common to every system with a user interface, however it is frequently given less attention than it deserves. Any public facing system, especially one that is of such importance as a UI system, must be easy to understand and use. This can be accomplished through a user-centered design philosophy along with extensive testing involving actual users.
- The system must be scalable. As demonstrated in the spring of 2020, a system that cannot handle large increases in demand without overloading is unacceptable. Although UI systems may rely on human resources for proper operation and scalability issues may also arise there, the IT portion of the system should never be the point of failure.
- The system must be flexible and supportable. This requirement includes both the ability to modify or expand functionality relatively easily, and to support the system without excessive cost or effort.
- The system must be secure. As with any public facing system, personal information must be protected from external threats and internal mishandling. System functionality should not involve the use of non-secure applications (spreadsheets, etc.) in order to work effectively.

While the use of an Agile development process can in some ways improve the chances of progress success, this should not substitute for the documentation of UI system requirements before beginning the project. Agile's strength is the ability to respond to changing requirements, and can be very valuable in systems that are strongly user-centered. However, in many large systems (such as UI), the core requirements are unlikely to change throughout the development process, and must be documented up front.

4. Risks and Issues (“What could possibly go wrong?”)

The percentage of large IT projects that fail isn't really known, and estimates vary widely from 14% to 70%. The causes of project failure are fairly well established, however, and have been described in numerous JFO IT project reviews over the years. In the case of the UI project, the risks that concern me most are these:

- a. Proceeding on a solution path without first documenting the system requirements;
- b. Committing to a solution without fully investigating and documenting all alternatives (joining a consortium, buying another state's solution, etc.);
- c. Failing to define and empower a single individual that is responsible for guiding and executing the project. This individual is not the project manager, but rather someone who reports to the project sponsor and directs the efforts of the project staff;

- d. Failing to adhere to accepted project management practices as defined by ADS' Enterprise Project Management Office (EPMO);
- e. Developing the system in piecemeal fashion without an overarching project plan;
- f. Completing the simpler, more visible parts of the solution (user interface, reports, etc.) before addressing (or at least investigating) the more difficult components such as the system core. Potential roadblocks should be identified up front, and addressed through the use of an Agile "spike" or equivalent process;
- g. Assuming that there will be sufficient ADS resources to not only support this project, but all the other new projects that are envisioned to run concurrently (BFIS, VTrans, etc.). From a recent ADS status report for a relatively small project that is underway now: "the availability of ADS resources is inconsistent and significantly under the planned amount. This impacts the schedule and prohibits the development of a reliable schedule."
- h. Migrating to the new system before adequate real world user and load testing has been accomplished;

5. Path Forward Recommendations

The development of a modernized UI system is going to be harder than we may think; as an example, just the relatively simple project of migrating the current mainframe UI system to a virtual operating system hosted by Blue Hill Systems is in "red" status and six months behind schedule. In order to minimize project risks, I recommend that JITOC require the following items from VDOL/ADS before releasing funds for UI system modernization:

- a. The development and approval of a requirements document that defines the capabilities of a modernized UI system. This does not need to descend to the lowest levels (screen layouts, etc.), however it should describe the essential characteristics and functionality that will be required of the new system;
- b. The documentation of an investigation into alternatives for meeting those UI system requirements. This should address questions like: Should Vermont join an existing consortium such as ReEmployUSA (Connecticut, Oklahoma, Mississippi, Maine and Rhode Island)? Should Vermont leverage another state's new UI system (such as Pennsylvania's recently deployed UI system)? Should Vermont purchase a commercial off the shelf (COTS) system like Deloitte's uFACTS™ solution? Should Vermont develop its own solution? This investigation should evaluate the viability and cost effectiveness of the various alternatives, and compare them to the known requirements for our own UI modernization;
- c. The identification of a single person that will be in charge of the project, and with the authority to direct project activities effectively;
- d. The selection of, and adherence to, a defined System Development Life Cycle methodology for this project;

- e. The creation and approval of all EPMO required project management documentation for the Exploration and Initiation phases. This should include the identification of required ADS resources and a plan for their allocation throughout the project.

These recommendations were discussed with ADS leadership on June 24th, and they were generally in agreement. They are in the process of developing the needed documentation, however until that documentation is complete project funding should not be released, and an RFP should not be issued.