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Memorandum

January 23, 2022

TO: Joint Technology Committee Members

FROM: Luisa Altmann, Senior Research Analyst, 303-866-3518
Joint Technology Committee Staff

SUBJECT: JTC Staff Analysis of JBC-Referred FY 2022-23 Operating Budget Request
Governor's Office of Information Technology
R-02 Testing Solutions Support
R-03 Veterans Cybersecurity Apprenticeship Program
R-04 PEAK Call Center Staffing
R-05 Interagency Agreement Spending Authority and FTE
BA-01 Technology Accessibility Program
BA-02 CBMS – OIT Administration Allocation

Summary of Request

The Governor's Office of Information Technology (OIT) has submitted a total of seven operating budget request decision items for the Joint Budget Committee's (JBC) consideration for FY 2022-23. The JBC referred all of these requests to the Joint Technology Committee (JTC) for review. The JBC asked the JTC to include the OIT R-01 request in its prioritization process, so a separate JTC Staff analysis has been prepared on that request. Therefore, this memorandum provides summaries of the R-02 through R-05 requests, along with the January 3, 2022, budget amendments BA-01 and BA-02.

R-02 Testing Solutions Support

Request summary. OIT is requesting \$435,300 in reappropriated funds and 3.8 FTE in FY 2022-23, and \$442,634 reappropriated funds and 4.0 FTE in FY 2023-24 and ongoing to increase the number of testers and to train existing OIT testers.

Justification. The current OIT testing solutions team is comprised of 23 FTE and supports 1,100 applications across 17 state agencies as an on-demand service at a ratio of one tester for every 23 developers. According to OIT, the new testers will allow OIT to better test critical statewide applications before they go live and begin the process of getting the state closer to the industry standard recommended ratio of one tester for every three developers. With this funding, OIT will

also work to evaluate the technical and soft skills of the existing testing staff in order to assess and address skills gaps.

R-03 Veterans Cybersecurity Apprenticeship Program

Request summary. OIT is requesting \$356,153 in reappropriated funds and 3.0 FTE in FY 2022-23, \$295,124 reappropriated funds and 3.0 FTE for FY 2023-24, and \$282,773 reappropriated funds and 3.0 FTE in FY 2024-25 and ongoing to increase the staff in the Veterans Transition Program within the OIT Office of Information Security.

The Veterans Transition Program was created in 2017 as a paid nine-month internship for veterans with IT or cybersecurity expertise. The program currently has funding for six internship positions. The additional 3.0 FTE being requested will include two additional veteran intern positions and one program manager. The program currently does not have a manager and OIT hopes that by hiring a dedicated manager, they will be able to formalize a consistent training program and provide timely performance feedback to interns.

Justification. According to OIT, veteran interns participating in the Veteran Transition Program work with OIT security analysts to monitor and investigate over 8 million security events daily. Increasing the number of interns in the program will help OIT reach their goal of initiating a response to all alerts from the Multi-State Information Sharing & Analysis Center (MS-ISAC) within one business day.

The program also works to create economic opportunities for veterans and help build the state's cybersecurity workforce. The office had over 70 qualified applicants in the most recent posting for the placement of 6 positions for the next internship class.

R-04 PEAK Call Center Staffing

Program information. The Program Eligibility and Application Kit (PEAK) website allows Coloradans to determine eligibility and apply for a variety of state assistance programs, including Health First Colorado (Colorado's Medicaid program), food assistance, and more. The PEAK Technical Call Center was created in FY 2016-17 and is currently staffed with nine contract call agents and one contract supervisor. The call center staff handles calls from PEAK users on a variety of PEAK system navigation and functionality questions.

Request summary. OIT, in coordination with the Colorado Department of Human Services and the Colorado Department of Health Care Policy and Financing, is requesting to transition the 10 contract staff at the PEAK Technical Call Center into 10 state FTE. This is a net-zero request item.

Justification. The office believes that by transitioning these call center staff to state FTE, the staff will become more invested in the success of the program and have increased expertise due to reduced turnover and increased access to state-provided training. The office believes that this will lead to increased satisfaction for PEAK users and call center staff.

R-05 Interagency Agreement Spending Authority and FTE

Program information. OIT currently bills state agencies for OIT services through three different methodologies: common policy, interagency agreements (IAs), and Telecom. Agencies currently complete IAs with OIT when purchasing certain products or services that are on an enterprise agreement, such as Salesforce, Amazon Web Services, Google Cloud Platform, and others. These agreements outline the scope of work to be provided by OIT and the dollar amount the agency is committing to pay. The OIT Interagency Accounting team is responsible for setting up the cash appropriation and billing the agreements through the Colorado Operations Resource Engine (CORE), the state's accounting system.

Request summary. OIT is requesting to shift from budgeting and billing agencies for OIT Enterprise products and services through IAs and cash appropriations to reappropriating funds to OIT. This is a net-zero request item. As part of this request, OIT is seeking to shift 28 FTE that are currently consistently funded through cash appropriated IAs into reappropriated OIT FTE. OIT is also seeking to reappropriate eight enterprise services: Salesforce, DocuSign, Conga, Smartnet, Hyland, SolarWinds, Amazon Web Services, and Google Cloud Platform.

Justification. OIT states that this request is intended to improve Long Bill transparency and help OIT work toward unified billing. According to OIT, in FY 2020-21, 525 IA transactions were completed and these agreements take up a significant amount of OIT staff time to set up the budget and bill for the services each month. OIT also has difficulty in recruiting and retaining IA staff due to the term-limited contract positions. The current process is also burdensome, complex, and time consuming for agencies. By reappropriating the eight enterprise services, OIT will be able to create uniform billing for agencies and increase transparency by including these costs in agencies' operating budgets and OIT's reappropriated line items in the Long Bill.

BA-01 Technology Accessibility Program

Request summary. OIT is requesting \$1,818,648 General Fund and 4.8 FTE for FY 2022-23 and \$1,833,593 General Fund and 5.0 FTE for FY 2023-24 and ongoing to address the state's technology accessibility needs and support OIT's Technology Accessibility Program. In addition to the new accessibility software engineer positions being requested, which are intended to assist state agencies with technology accessibility planning, engineering, and consulting, the request also includes funding for:

- enterprise licenses for state employees to use programs like JAWS screen reader and Inspect to test and inspect state websites and systems during creation and development;
- an enterprise Adobe Pro license to enable all state employees to create accessible PDF documents; and
- hiring a third party vendor for a period of one year to provide manual testing services to agencies of websites and applications.

Background. Beginning in FY 2017-18, OIT has been appropriated \$100,000 and 1.0 FTE for a Technology Accessibility Coordinator to work with employees and citizens to ensure that state

technology can be used by people with disabilities. House Bill 21-1110, Colorado Laws for Persons with Disabilities, provides OIT with ongoing funding for one additional accessibility staff person as well as ongoing funding to cover costs for website accessibility assessment software. OIT estimates that the state has more than 700 websites and more than 1,000 applications.

Justification. According to OIT, as OIT and agencies have begun evaluating the accessibility of current state websites and developing a plan to update these websites to ensure compliance with the law, the estimated resource requirements for needed changes has grown compared to the original estimates.

BA-02 CBMS – OIT Administration Allocation

Request summary. OIT is requesting a net-zero shift from various agencies' common policy budgets to the Colorado Benefits Management System (CBMS) to incorporate CBMS as an OIT customer and consumer of OIT's administrative support. This will allow for a more accurate reflection of the scope of services the CBMS program receives from OIT. This change will result in an increase in costs for OIT administrative services for the two agencies that support CBMS (the Colorado Department of Health Care Policy and Financing and the Colorado Department of Human Services) and a reduction in all other agencies' costs for OIT administrative services that do not support CBMS. OIT estimates that change will also result in a General Fund savings of approximately \$800,000 since CBMS receives a larger share of federal funds.

Options for Committee Action

The JTC has three options for committee action when it provides a technical review of an operating budget request to the JBC. The JTC can:

- recommend the request to the JBC for funding with no concerns;
- recommend the request to the JBC for funding with concerns; or
- not recommend the request for funding with concerns.

Question Responses Provided by the Department

R-02 Testing Solutions Support

1. **The R-03 request from the Colorado Department of Human Services discusses proposed improvements to the maintenance of the TRAILS system, including building capacity in automated testing with a team of five automated testers. Please describe OIT's work with agencies on testing and whether CDHS would still need these department-level testers dedicated to the TRAILS system if this OIT request is approved?**

CDHS will still need these department-level testers dedicated to the TRAILS system if this OIT request is approved. CDHS's need is for dedicated testing staff to support TRAILS. The R-02 Testing Solutions ask is for demand outside of a major program. R-03 focuses on freeing up needed resources in the Trails Operations line by removing expenses related to county computer infrastructure. The activities funded (e.g. testers) will depend on the available resources freed up.

2. **Even if this request is approved, OIT will still be staffed at a lower tester to developer ratio that the industry standard of one tester to three developers cited in the budget request. Does OIT believe that the addition of four testers is sufficient to make the changes necessary?**

This request is the initiation of a significant transformation of the testing capability within OIT. The cited ratio, while accurate, could see some adjustment based upon a heavy and focused effort on mechanizing test automation. This ask will NOT address the systemic lack of testing across our services delivery framework; however it will provide sufficient staffing that will allow us to build a model that can scale across the enterprise. We want to take a data-driven, iterative approach to sizing the team appropriately with the right skills to develop Testing Solutions' capabilities for load and performance testing.

3. **The R-02 budget request document explains that the OIT Testing Solutions staff tests SecureColorado initiatives.**

Is the Testing Solutions staff part of the OIT Information Security Office?

No – organizationally, Testing Solutions is part of the Chief Technology Office (CTO) – Applications group, but these staff work in partnership with the Office of Information Security as well as other OIT teams to help ensure applications meet security requirements.

Are they part of a red, blue, or purple team?

From a DevSecOps perspective, this staff would provide support from both a red and blue team perspective. From the Red Team perspective, their skill set would help provide support with exploiting vulnerabilities; from a Blue Team perspective, the team would be invaluable in providing support with infrastructure protection. A key goal of this team is to help agencies better understand the capabilities and load capacities of their critical applications. This will provide agencies with critical information they need when evaluating future technology needs.

- 4. The budget request describes an incident that occurred due to limited performance testing. It also mentions LoadRunner and automated testing. Does the department have adequate performance testing and automated testing tools for the demand and new Testing Solutions full-time employees (FTE)?**

Yes, the team has stood up LoadRunner and is currently utilizing it. LoadRunner is a best-of-breed tool used by government and private sector entities for load and performance testing. The team also has access to tools provided by other vendors, such as SauceLabs, for API performance testing. We lack staff with the appropriate skills and training to use these tools to their fullest potential, which is where this request for additional staff comes in.

R-03 Veterans Cybersecurity Apprenticeship Program

- 1. The Colorado Department of Public Safety's R-11 FY 2022-23 budget request is for 3.0 FTE to create a statewide Cybersecurity Technical Assistance Group to "assist local jurisdictions and state agencies in mitigating, protecting against, planning for, responding to, and recovering from cybersecurity incidents." Please describe OIT's work with DPS to develop this request and the plan for these two departments to work together on cybersecurity efforts moving forward.**

OIT, DPS, and the National Cybersecurity Center (NCC), as well as other involved stakeholders, have begun the process of comparing other state models for providing "whole of state" cybersecurity services to members of a public-private Colorado cybersecurity consortium. This request was part of a joint goal around creating cyber awareness and outreach services. Per statute, the 3.0 FTE would reside within OIT and operate jointly across OIT and DPS on statewide efforts. This "whole of state" group has goals of establishing consistent security baselines in both hardware and software, mutual aid incident response, threat information sharing, etc., and comparing and contrasting these models to see which could work best for the state of Colorado. This would include the make-up of this team of service providers in the form of staffing and funding from each consuming member, defining technical requirements to achieve security baselines, long term strategic planning, and ownership and decision making authority. Consistent with the state's technology statute, cyber security resources will reside in OIT and matrix to this important team. We believe that it's likely Colorado will end up creating a hybridized model that fits Colorado's Home Rule make-up.

- 2. Please provide a few examples of success stories for veterans who have successfully completed the VTP.**

The Veterans Transition Program (VTP) in the security office has shown to be a successful pipeline for IT security professionals. OIT implemented this nine-month apprentice program in December 2017 and has since hosted 26 apprentices, including the six current participants. The first VTP participant is now a Cybersecurity Manager with OIT and OIT has hired an additional six past participants, four of whom now work in cybersecurity. Of the remaining VTP participants, 12 have continued in the cybersecurity field with other organizations.

R-04 PEAK Call Center Staffing

1. What percentage of state call center staff are contract vs. state FTE? Does OIT have data on the turnover rates for call center staff vs. state FTE?

The CDHS and HCPF agency call centers that support medical and food assistance through PEAK and CBMS are staffing with FTE and contractors. The dedicated SNAP call center team is a small team comprised of two FTE and two contractors. Over the past two years there has been no turnover with the FTE, but there have been five contractors for the two positions. One is leaving at the end of January and one starting in their place, so there will be six contractors total for the two positions.

Currently, the HCPF Medicaid call center has 29 total agents, which is both FTE and contracted temps. At any given time, they average between four to eight contracted temporary staff. For FTE turnover, in 2021 they experienced a 42% turnover rate, and in 2020 an 8% turnover rate.

2. Are 10 call center positions still needed given the introduction of the Chatbot and the associated reduction in call volume?

Yes, 10 total positions are still needed, and although 10 FTE is our recommendation, we can consider a model of 9 FTE and 1 contractor to allow for flexibility should the workload drop or level off in the future. The support workload for processing new applications and renewals continues to grow for SNAP, Medicaid and Colorado Works and with the continued Public Health Emergency, the number of clients receiving benefits continues to grow. The table below shows current program activity.

Month	New Applications Received	Renewals Received
July 21	37,879	99,041
August 21	45,139	100,170
September 21	45,054	102,039
October 21	47,843	108,754
November 21	48,672	111,409

Over 50 % of the work is submitted through PEAK. While improvements to PEAK login functionality and the creation of a client dashboard as well as other usability enhancements have reduced call volumes in specific areas, the total request volume for technical assistance through ticket, email and live chat along with live calls is increasing. On average, over 63% of questions are currently resolved by chatbot, but the overall volume of questions requiring a live agent is growing after the initial decrease due to chatbot enhancements. In addition, the types of questions that can not be answered by a chatbot tend to be more complex requiring additional time to resolve. The table below highlights how the chatbot enhancements implemented in April of 2021 reduced calls, but the overall need for live agent support has been trending upward since May of 2021. Additionally, the use of PEAK is continually expanding to support new programs, such as the new Universal Pre-K program expected to roll out in 2022. PEAKPro, used by community and

assistor organizations to enroll clients, currently has approximately 250 named users but is expected to grow by 1200 to 1550 new users in support of the HCPF Care/Case Mgt LTSS initiative.

	Calls	Chatbot	Live Chats	Email	Total	Total w/o Chatbot
January 2021	9834	22,022	1785	399	34,040	12,018
February 2021	8565	18,128	1430	299	28,422	10,294
March 2021	8774	15,371	1258	351	25,754	10,383
April 2021	4337	16,061	1308	274	21,980	5,919
May 2021	4321	11,711	837	278	17,147	5,436
June 2021	5398	13,144	986	293	19,821	6,677
July 2021	5425	14,714	1112	293	21,544	6,830
August 2021	5972	15,946	1240	359	23,517	7,571
September 2021	5996	17,422	1405	329	25,152	7,730
October 2021	5655	23,885	1614	307	31,461	7,576
November 2021	5751	28,634	1909	353	36,647	8,013
December 2021*	5556	26,128	1807	307	33,798	7,670

*December is often slower due to holidays and the end of open enrollment.

R-05 Interagency Agreement Spending Authority and FTE

1. Please provide an update on the status of billing changes recommended by the 2018 BerryDunn assessment, any common policy improvements made since then, and any positive feedback from agencies on the changes.

Berry Dunn’s Recommendation was to improve technology billing: reduce the units of measure for common policy billing; minimize changes to service codes; implement new financial reporting; and provide each agency a financial report of its portion of assets.

OIT has made significant progress in improving our technology billing through the Realtime Billing IT Transformation project. OIT launched Real-time Billing on July 1, 2022, with the first real-time bill being sent out on August 31st. This project spanned two and a half years and required extensive cross-collaboration with agency customers and the Governor’s Office. A shadow-billing year in FY 2020-21 allowed agencies, as well as OIT, to practice and prepare internally for the transition.

The main customer conduit to Real-time Billing is the website. This was built in collaboration with agencies to assure the information provided is helpful, easy to understand, and comprehensive. OIT has received positive feedback from customers on the information provided. OIT continues to improve the website, add details and information to help customers assess consumption, and make business decisions. Due to the sensitive nature of most of the information provided on the website, access to the dashboards and detailed information is restricted to customers, and is not visible to the public. The website can be access as this address:

<https://sites.google.com/state.co.us/oit-real-time-billing-site/home>. The Tutorials and Guidance section has video tutorials that can give you a window into the dashboards and how customers interact with the information. Project information can be found on OIT's website as well: <https://reimagineit.state.co.us/program-threads-projects/rtb>.

In December 2021, OIT held voluntary agency check-ins with 12 agency customers to assess how the first few months of billing have been going and identify any gaps or areas of improvement. The overwhelming response from customers is that they have established internal processes that are working well in reviewing and processing payment. Customers also state that OIT is managing and resolving customer questions and billing disputes in a timely manner - an option that was not available to customers under the previous budget-billing methodology. OIT continues to meet with customers quarterly through the RtB Working Group and provide monthly updates on improvements to the website and data available to customers.