Research Center Follow-Up

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SUMMARY ———

Metro made progress on the recommendations in the 2020 audit, **Research Center: Improve project management to set clear expectations and help assess tradeoffs.** The audit included eight recommendations to set clear expectations with clients, help prioritize work, and ensure resources aligned with expectations. Four of the recommendations were implemented and three were in process, and one was not implemented.

BRIAN EVANS

Metro Auditor

BACKGROUND

In 2020 our office released an audit titled *Research Center: Improve project management to set clear expectations and help assess tradeoffs*. The audit identified areas for improvement in project documentation, the clarity of the funding model, and project prioritization. The audit included eight recommendations to set clear expectations with clients, help prioritize work, and ensure resources aligned with expectations.

Metro's Data Resource Center (DRC) supports the Metro Council, internal departments, external clients, and the public by providing information, mapping, and technical services to support public policy and regulatory compliance. It includes three teams:

- The data stewardship team maintains the Regional Land Information System (RLIS), a collection of more than 200 Geographic Information System layers that support planning and analysis for the region.
- The applications team develops tools such as data exploration and visualization, complex interactive maps, or field data collection.
- The analytics team provides external and internal clients with a variety of services including mapping, dashboard development, survey deployment, and demographic analysis

The DRC is organizationally part of the Planning, Development, and Research Department (Planning). About 16 employees were dedicated to the three teams in fiscal year (FY) 2023-24. Expenditures that year totaled about $2.9 million. About 80% of the expenditure was for personnel services. DRC employees were part of a separate Research Center department from around FY 2009-10 to FY 2020-21.

RESULTS

The Data Resource Center (DRC) made progress implementing the 2020 audit recommendations. Four were fully implemented, three were in process, and one was not implemented. Improved project proposal templates included the project management factors identified in the 2020 recommendations: scope, timeline, budget, and risks. Project prioritization was thorough and successfully guided work while considering both agency and client needs. The funding model was simplified and communicated to stakeholders.

More consistent use of project proposals and project management systems would fully implement the in-process recommendations. Communication with clients should be standardized and documented in some form. The funding model, while clearer, may still present a risk of funding gaps if resources are not available to cover the loss of anticipated revenue from client projects.

Exhibit 1   Almost all the recommendations were implemented or in process.

2020 Audit Recommendations	Status
To set clear expectations for projects, the Research Center should:	
1. Use project proposals to document the scope, schedule, budget, and risks for each project.	**In process**
2. Formally document the status of projects by tracking the scope, schedule, and actual cost of each project.	**In process**
3. Ensure project proposals and project status information is available to project teams, clients, and management.	**In process**
To help prioritize its work, the Research Center should:	
4. Establish a process to reach agreement on the scope, schedule, and cost of maintenance and data updates for projects and programs.	**Implemented**
5. Establish and document a process for reviewing and approving proposed changes to ongoing projects and programs among project teams, clients, and management.	**Not Implemented**
6. Complete work to prioritize agency-wide data for FY 2020 -21, and update as things change.	**Implemented**
To ensure resources and expectations for the Research Center are aligned, Metro should:	
7. Document the funding model for the department and communicate it to department stakeholders.	**Implemented**
8. Determine the need for an ongoing governance structure to prioritize agency-wide data after FY 2020-21.	**Implemented**

Source: Metro Auditor's Office analysis of documents and interviews

Progress made on recommendations

Project proposal templates were updated, implementing recommendation number four. Updated templates have sections to document the scope, schedule, budget, maintenance considerations, and risks for each project.

Prioritization processes were strong and effectively implemented recommendations six and eight. We found the two processes used by the DRC considered both agency and stakeholder needs. The projects identified as high priority from these exercises were more likely to be completed, which suggests that these exercises were successfully used to guide work.

The DRC's funding model was easier to understand and clearly documented, implementing recommendation seven. The return to the Planning department simplified some of the complexity of the former model and the DRC documented the details of their funding model in an August 2024 presentation to Metro leadership.

Recommendations one through three were in process. The DRC improved the templates used to manage projects, but they were inconsistently used. The project proposal template was well designed, but not always completed for applicable projects. The DRC used project management software to manage some projects, but not all. It was in the process of developing a *portfolio view* of all projects to provide clients and managers the ability to view all ongoing project progress in one place.

The DRC's project tracker was an improvement that supported progress towards recommendations two and three. The project tracker provided a record of staff hours by project. As most of the DRC's expenses were personnel, the project tracker improved the DRC's ability to accurately track project cost. This level of detail enabled the DRC to both compare cost to budgeted amounts, and make sure that information was readily available to clients.

Recommendation five, which called for a process for reviewing and approving changes to ongoing projects, was not implemented. DRC teams were small and project teams were often only one person, so the need to formally approve changes may be reduced compared to the organizational structure in place in 2020. While there appeared to be strong communication with clients, it was mostly informal and ad hoc. To implement this recommendation, the DRC should document significant changes while making sure the process does not cause unnecessary additional work.

Use of project proposals was inconsistent

The DRC used project proposals to summarize project details, to plan work, and to set expectations with clients and DRC management. These forms were supposed to be completed for every new project expected to take over 40 hours. Project proposals for three of the six projects sampled were not complete, which was why recommendations one through three were in process.

The 2020 audit recommended improved use of project proposals. Project proposals were used by the DRC before the 2020 audit but lacked consistent definition of scope, costs, and risk. The latest version of the project proposal template covered all major project management elements, including scope, schedule, budget, risks, and maintenance.

Only one project proposal in our sample was fully complete (all major project management factors were documented) and had a client signature. Two project proposals were complete but were missing a signature from the client. Project proposals for the other three projects in the sample were either absent or incomplete. We did not find that management reviewed the completed proposals consistently which may have contributed to their variable use.

Exhibit 2   **Only three out of six sampled projects had a complete project proposal and only one had a client signature.**

Completed Signature
Completed Proposal

Incomplete or
absent proposal

Source: Metro Auditor's Office generated based on project testing results.

We did not find consistent methods for developing project proposals. Some project scopes were based on emails with clients but were not documented using the project proposal template. Staff were able to provide the emails when requested but that information may not be easily accessible to clients and management. Some project decisions were made in meetings with clients, but those decisions may not be documented.

Lack of documented project agreements can increase the risk of misunderstanding and unmet expectations from clients. It can also reduce management's ability to monitor workloads and project delivery among employees.

Lack of standardization resulted in incomplete project files

We found project documentation was saved in several locations, which increased the risk that documents could be difficult to locate or understand in the case of personnel changes. Documentation for sampled projects was saved in at least five different places, including three different network drives, an online project management software, and personal drives or email folders. In part, this may be due to lack of clear guidance from management.

We were provided a flow chart, which explained where files should be saved. Staff indicated this was recently created and may not have been in place for the entirety of the date range of the projects we reviewed. While the flow chart was an example of expectation setting from management, the directions about saving files appeared unclear and could be interpreted various ways.

For example, the guidance asked if anyone else needed to "see or work on this [file]". If the project manager answered *no,* it may indicate use of personal folders was appropriate. DRC staff often work on projects independently and consider their clients the project managers. This project structure could be interpreted in such a way that reinforces staff saving most project information in private folders. Inaccessible documentation could lead to miscommunication with clients or loss of documentation, a risk that may have been avoided due to individual staff initiative. If a staff member leaves Metro or is out on leave, important information could be lost or difficult to locate. This could delay project completion or hamper project quality.

Exhibit 3   **Clearer guidance on file organization can reduce inconsistency.**

DRC flow chart language	Potential language improvement	Purpose of improvement
Will anyone besides you need to work on it?	Can management, clients, and other DRC staff find important project information?	Ensure all project stakeholders have access to the same documents
Is the project active?	Define active	Increase consistent interpretation among staff
Is it for an ongoing program?	Refine definition of program	Increase consistent interpretation among staff
Should it be deleted?	Provide reference to record retention schedule and required documents	Ensure important documents are saved for the correct amount of time

Source: Metro Auditor's Office generated based on DRC flowchart.

Though the clients we spoke with were satisfied with the DRC's work, informal communication increased the risk of document mismanagement. This practice could cause confusion in the case of Metro or client staff changes. In one project we reviewed, DRC staff said they would have lost important documentation if they had not asked their departing non-DRC co-worker to forward documentation that was only saved in a private email folder. While DRC staffing was consistent for that project, the client's employees had high turnover. Without a consistent and adequate system for organizing and saving important documents, knowledge of the project may be lost.

The DRC used an online project management software to document and organize some projects in our sample. The software has the potential to organize and store key project information like client contacts, project status, and timelines. Using the system consistently for all projects could reduce the fragmentation we found in our sample and increase access to project information for clients and managers.

Information kept in the project management software included some project management details recommended by the 2020 audit, such as status, scope, schedule, and priority. A new feature allowed this information to be visible to clients who had an account with the software provider. Staff encouraged some clients to consider using the software. There did not appear to be standards or guidance about which clients should use the software or what project information should be consistently viewable. Without consistent shared expectations, online project management dashboards may not be as useful as they could be.

Using different project management could add duplicative work for DRC staff who are juggling multiple projects. Specifying what system or folder will be used for each type of project could reduce the chances that project managers will have to duplicate work or track documents across different systems.

Processes to manage project changes are needed

In our sample, there was inconsistency in how staff were tracking project changes and communicating them to clients. This could result in inaccurate expectations among staff, clients, and management, and make it more difficult to accurately schedule and budget for projects. For these reasons, we concluded that recommendation five was not implemented.

Clear documentation of changes is a foundation of good project management and client relations. Improved practices to manage project changes would accurately track and record time requirements of staff, new schedules, and project budget.

The methods used to document changes in our sampled projects included:

- Formal and informal emails to update project management information
- Edits to the original project proposals
- Online project management software comments
- PowerPoint presentations describing changes
- Managers' quarterly communications to update on project status

Although the clients we talked to were satisfied with communication about changes to their projects, a more consistent approach would help ensure project managers, clients, and DRC management all received the necessary information. One way to keep stakeholders up-to-date is the consistent use of existing project proposal templates to ensure documentation the scope of projects. Another is to formalize a process to update the scope if significant changes occur.

It will be important to set a reasonable standard for what changes need to be formally documented and communicated to clients and other stakeholders, and what changes do not. DRC staff often worked alone on projects that regularly changed in small ways. Setting an appropriate standard requires balancing documentation protocols with considerations of efficiency and staff buy-in.

DRC managers may benefit from a time-efficient way to stay up to date on all projects. For example, one manager had at least ten direct reports, each with their own set of projects. Without a consistent update process or centralized file management system, it would be difficult to keep track of every project.

The DRC could benefit from a process that involves three elements:
- a documented project scope of work with milestones that includes approval by the client
- a standard for communicating and documenting significant changes to all management, clients, and other DRC staff, and
- a designated location for key project files and key changes so that all management, clients, and other DRC staff have access to the same information.

More conservative budgeting could help manage risk

The 2020 audit found that the complexity of the funding model limited Metro's ability to evaluate different options to pay for the DRC's work. Various changes, including consolidating the DRC in the Planning department, improved clarity of the funding model. However, the current model creates financial risks. If enough clients decide to cancel projects with the DRC, it could affect the department's ability to fund operations.

An August 2024 presentation by the Planning department demonstrated improved clarity of the DRC's funding model compared to past approaches.

Five streams of funding were identified by Planning in the presentation. Moving DRC work back to the Planning department simplified the allocation of some funds. Staff indicated that part of the confusion was a result of allocating these funds across multiple departments. The funding model for the Regional Land Information System (RLIS) also changed During the budget process, the departments that use RLIS are charged a portion of RLIS costs, similar to a central service. Together, these changes simplify the complexity cited in the prior audit.

Exhibit 4   Funding for DRC activities were clearly defined.

| Fund type	Use
Grant funding	Mostly large grants that tend to be focused on specific topic areas, such as Safe Routes to School
General funds	Projects core to Metro that do not have other sources of funding within the DRC, such as work on the Urban Growth Boundary or special projects
Direct services	Projects for clients in Metro, such as WPES or Parks and Nature
External projects	Projects for clients outside of Metro
RLIS	Maintenance costs for RLIS

Source: Metro Auditor's Office summary of information presented by the DRC to auditors.

We found revenue generated from direct services presented risk to the department's financial sustainability. Direct services were projects that the DRC completed for other Metro departments. As part of the budgeting process, the DRC worked with other departments to develop a list of projects and allocated staff hours to them. Though the DRC's budget for the year assumed this income, departments were not obligated to pursue the projects.

Some of these projects ended up not being pursued for various reasons, resulting in less revenue than expected. This created a need to find work and funding to cover the resulting gap, which was sometimes challenging. This had an impact on the DRC's ability to cover expenses and may require additional use of general funds to make up the difference.

Direct services may have an outsized impact on the DRC's ability to cover expenses. In FY 2023-24, the DRC's expenses were larger than their revenues. One figure provided by the DRC stated that direct services revenues were about $767,000 less than budgeted. This was about 62% of their reported budget shortfall. Staff attributed some of this shortfall to lower-than-expected overhead, but the relative size of the shortfall for direct services suggests more risk.

Exhibit 5   In FY 2023-24 direct services had the largest gap between budgeted revenue and actual revenue in the DRC.
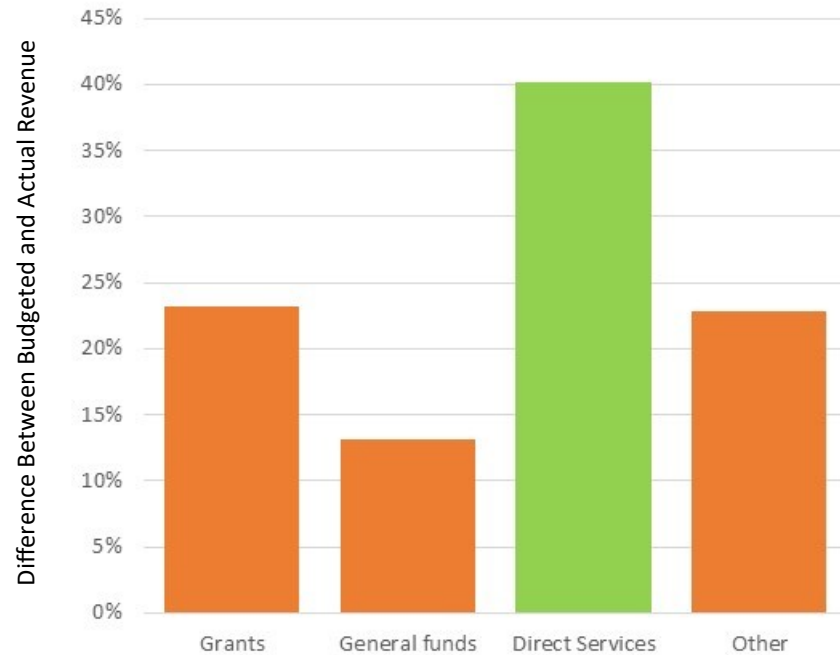
Source: Metro Auditor's Office generated based on DRC financials presented to auditors and DRC salary information as of 10/31/2024.

Staff stated that the gap between expected and actual direct service revenue had been overcome using other resources in the past. This may be more difficult in the future because of a tighter budget outlook. The budget guidance for FY 2025-26 directed some departments to prepare reduction packages to reduce general fund spending. The budget outlook suggests the availability of general funds to cover revenue shortfalls in DRC may be limited in upcoming years.

The DRC budget was mostly for personnel, so revenue shortfalls could have a direct impact on staffing levels. Our analysis indicated that a 7% reduction in direct services revenue was equivalent to the average cost of a single FTE in the DRC. If the rate of FY 2023-24 direct service shortfall continued in the future, and no other revenue was available, the DRC may need to reduce two or more FTE to balance its budget.

This analysis suggests more conservative estimates of direct service revenue are needed during budget development. If the DRC continues with this funding model, a larger pipeline of potential projects may be necessary to reduce financial risk. Careful budgeting can help ensure the DRC's work is funded appropriately.

Scope & methodology

The purpose of the audit was to determine the status of recommendations from the 2020 audit. There were three objectives:

1. Determine if project documentation is complete and up to date
2. Determine if communication with clients meets project management best practices
3. Determine if the project prioritization processes sufficiently plan for maintenance and staffing levels

The audit scope included projects and programs from FY 2022-23 and FY 2023-24. Our audit focused on the three of the four organizational units that are currently referred to as the Data Resource Center (DRC). We did not include the DRC's modeling team, to align with the 2020 audit scope and sample criteria. To complete objectives one and two we used a judgmental sample of DRC projects and programs. As such, the sample results cannot be generalized to the entire portfolio of DRC projects. The criteria we used to select the sample was:

- Project duration: projects or programs with greater than 60 hours of total work recorded.
- Documentation availability: projects or programs with documentation available on the DRC project management software or in network files.
- Diversity of clients: projects or programs from both internal Metro departments and external agencies or companies.
- Recency: projects or programs started during or after 2022, to allow for time to implement 2020 recommendations.

To carry out the first objective, we reviewed documentation supplied by management, saved in the network file share system, and online project management software related to priority, scope, schedule, budget, risks, maintenance expectations, and documented changes to project expectations. We also interviewed DRC staff leads for projects in our sample of DRC projects.

For the second objective, we interviewed some of the non-DRC department clients for the sampled projects. The goal was to understand how well communication was working and learn about their experience working with the DRC.

To complete the third objective, we reviewed ongoing maintenance of existing systems and programs (such as updating models with new data sets or updating software) and prioritization of ongoing projects. To complete this objective, we reviewed projects outside the sample used for objectives one and two. We also analyzed the DRC funding model, revenue and expenditures, and staffing levels.

This audit was included in the FY 2024-25 audit schedule. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Memo

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Date: May 2, 2025

To: Brian Evans, Metro Auditor

From: Marissa Madrigal, Chief Operating Officer

Subject: Management Response to Research Center Follow-Up Audit

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Auditor Evans –

Thank you for the comprehensive Research Center Follow-Up Audit and recommendations. The 2020 audit, *Research Center: Improve project management to set clear expectations and help assess tradeoffs* included a series of recommendations that have guided many activities and set the stage for significant process improvements in Metro's Data Resource Center (DRC).

As noted in the Follow-Up Audit report, the DRC was part of a separate Research Center department until FY 2020-21. At that time, the DRC moved into the Planning, Development and Research Department (PDR). Consequently, this management response reflects the perspective of Metro, PDR and DRC leadership within the context of the current organizational structure.

Objectives of 2020 audit

Management supports the stated objectives of the 2020 audit (listed in the Scope and Methodology section on page 10 of this follow-up audit):

- Determine if project documentation is complete and up to date
- Determine if communication with clients meets project management best practices
- Determine if the project prioritization processes sufficiently plan for maintenance and staffing levels.

These objectives – and the findings that follow from them – describe an accountability and evaluation framework for the recommendations contained in the original 2020 project management audit. Management sees the improvements that have resulted from the original audit as valuable and appropriate. Management also acknowledges there are still several actions that can be taken to strengthen systems and further improve transparency. Those actions are described in subsequent sections of this response.

Progress on 2020 audit recommendations

As noted in the Exhibit 1 table *("Almost all the recommendations were implemented or in process")*, most of the 2020 audit recommendations have been implemented or are in progress. Management agrees with the status identified by the audit for each item.

Further, management appreciates the auditor's recognition of significant progress in multiple arenas. These include project proposals, the DRC's new project tracker, improved scoping, and documentation of the funding model. Management also wants to underscore that DRC clients are satisfied with the communication and deliverables they receive, as noted in the audit.

For the items still in progress, management has identified actions to move these items to "Implemented" status. System improvements are described below for specific recommendations.

Recommendation (1) *Use project proposals to document the scope, schedule, budget and risks for each project*

Management appreciates the description of the latest version of the project proposal template, which covers scope, schedule, budget, risks and maintenance. Complete, signed project proposals are important, and management agrees this is an area for continued improvement. The following manager actions will help ensure project proposal completeness moving forward:

- Clarify the importance of completing project proposals. This will be discussed - and direction will be provided for staff - at the DRC retreat in June 2025.
- Establish that proposal completeness is a job expectation for existing and new staff. (Completion date: September 30, 2025)
- Establish and apply a process for management to monitor project folders monthly for completeness (Establish by September 30, 2025)

Recommendations (2) *Formally document the status of projects by tracking the scope, schedule and actual cost of each project;* **and (3)** *Ensure project proposals and project status information is available to project teams, clients, and management*

In recent years the DRC has continued to sharpen our focus on project documentation. Management recognizes there is still room for improvement in this arena. To avoid saving information in private folders and to encourage accessible documentation, management will:

- Update DRC flow chart language according to the recommendations in Exhibit 3; "*Clearer guidance on file organization can reduce inconsistency*" (Completion date: September 30, 2025)
- Create a set of document storage protocols and train staff on them. Protocols will address where to save project information – including what type of information is appropriate for which location (Completion date: November 30, 2025)
- Support agency-wide data governance guidance that emphasizes the importance of saving project documents in central locations, not private folders (Completion date depends on larger agency-wide data governance schedule)
- Ensure that client-facing views present consistent information in Monday.com and establish expectation that information will be discussed with clients quarterly (Completion date: October 31, 2025)

Recommendation (5) *Establish and document a process for reviewing and approving proposed changes to ongoing projects and programs among project teams, clients, and management*

Management understands that change management and documentation are essential to project tracking and good communication with clients – and agrees that a more formalized scope change process is needed for major timeline or budget changes. Management also appreciates the auditor's recognition that projects can change frequently in small ways, and that documentation protocols should be balanced with efficiency considerations.

To address the need for tracking scope changes in an efficient manner, the DRC will update the project management proposal form to support tracking major budget or timeline changes. This single location will streamline access to project change information. Further, management will reiterate the importance of communicating scope changes of all sizes with clients and copying management on those communications. (Completion date: November 30, 2025)

Budgeting conservatively to help manage risk

The audit describes improved clarity in the DRC funding model compared to past approaches. This is related in part to consolidating the DRC in the Planning, Development and Research department. While management agrees that project funding generated from direct services can present a certain level of budget risk, steps have already been taken to reduce that risk. These include:

- Careful tracking of the ongoing relationship between budgeted revenues and actual expenditures, both in ongoing budget management during the fiscal year, and to inform development of the subsequent year's budget (Quarterly meetings with the PDR Director and Finance Manager will be held to review DRC budget to actual performance. The next occurrence will take place in Q4 of FY 2024-25)
- Conservative estimates of available General Fund revenues to avoid assumptions about filling direct service revenue gaps (Annual budgeting begins in Q2 of the preceding fiscal year)
- Elimination of the approved Research Program Director position for the FY 2025-26 budget (Complete. This was included in the COO proposed budget for FY 2024-25)

Finally, management agrees with the auditor's suggestion for more conservative estimates of direct service revenue during budget development. PDR has already begun the process of aligning expenditures with diminishing resources, both within the DRC and across the entire department. Estimates for projects from other Metro departments have been decreased by 0.6 FTE. PDR and DRC management will continue working to develop a steady pipeline of potential projects to reduce financial risk.

Conclusion

Paired with the 2020 project management audit, this audit identifies important areas of process improvement, which are consistent with the DRC ethics of accuracy and transparency. Thank you for the opportunity for management to respond to this audit and share information about progress on these topics and our approach to addressing remaining challenges.