

State of Missouri

Office of Administration
Division of Purchasing

2024 George Cronin Awards for Procurement Excellence

GEORGE CRONIN
**Operational Improvement
Through Turnaround Time
Management**

TM

Executive Summary

We got off the hamster wheel and finally saw the common enemy. It's easy to get lost in the daily rush of drafting bids, issuing them to vendors, and evaluating responses. Often, there seems to be no time to take a step back and look at things strategically. Constantly dealing with details and line items can be exhausting and limits our capacity to improve. Creating a turnaround time management process provides crucial relief, enabling both leadership and staff to improve operations.

Missouri Purchasing fully embraced turnaround time management by implementing two relatively low-cost tools and developing a process to utilize those tools effectively. This approach not only redefined how bids are prioritized and managed, but also changed culture. The result is significant operational improvement and enhanced customer satisfaction.

Missouri Purchasing established the foundation for innovation in two ways, by developing granular turnaround time goals for each procurement phase and utilizing a color-coded system. These two pre-requisites, in combination, have enabled the creation of quick and helpful procurement turnaround time management tools using Smartsheet and Tableau. Smartsheet is a superpowered spreadsheet that captures Missouri Purchasing's bid worklog data and informs buyers of turnaround time goals. Tableau is a data visualization software that quickly displays our procurement operational metrics. Each week, division leadership and each of the buying teams hold team meetings to review the analysis produced by both tools. The tools also enable buyers to self-manage their procurement outcomes. Utilizing these innovations allows our office to stay informed about all procurements in progress, address emerging bottlenecks, and guide Missouri Purchasing through the week.

The successful adoption of turnaround time management in Missouri's procurement operations serves as a robust model for other organizations seeking to improve customer service and decrease turnaround time. Replicating these quick, effective, and inexpensive tools requires nominal software licensing fees and the consultation of a data analyst.

The slogan "Say NO to tableau reds" encapsulates the division's new operational improvement ethos, which fosters a competitive, yet positive, working environment. Due to this cultural shift, the number of overdue bids decreased by 62%, showcasing service improvement. Moreover, the initiative has diminished the average turnaround time for all bids. Specifically, the turnaround time for bid type RFP<\$250,000 has decreased by 31.4%, exemplifying our time savings and efficiency. This Cronin Award submission promises ongoing enhancements in service and efficiency, setting a standard for excellence for all procurement operations.

Innovation

Missouri Purchasing has always monitored procurement status and periodically compared actual turnaround time against our overall turnaround time goals. However, until the innovations described below, Missouri Purchasing has struggled to effectively generate actionable analysis to drive meaningful improvements in its procurements. By adopting the DMAIC (Define, Measure, Analyze, Improve, Control) innovation cycle, operational improvements have been quantitatively observed.

DEFINE: In response to "encouragement" from customers for quicker bids, Missouri Purchasing closely examined its bid awarding process of drafting, issuance, and evaluation. After developing a bid awarding process map, leadership acknowledged that Missouri Purchasing needed a way to systematically manage its procurement turnaround times at each phase and step of the bid awarding process. The hierarchical organization of bids into phases and further into detailed steps provides the necessary detail to perform root cause analysis and create a lasting impact on customer satisfaction. Leadership utilized the DICE framework before beginning the initiative and established specific goal dates for each procurement phase by analyzing historical data. Three bid types were categorized and given turnaround time goals representing their complexity: IFB, RFP<\$250,000, and RFP>\$250,000.

Missouri Purchasing identified two factors that negatively impact turnaround times: the lack of step sequencing guidance and the lack of estimated times of step completion. To address these issues, the steps within each phase were sequentially organized and estimated times were assigned to each step. Step sequencing guidance and estimated times of completion documents are shared with customer agencies at the start of the procurement process to enhance cooperation and set expectations for both purchasing staff and the agency and judge the percent completion within a phase. Missouri Purchasing's Turnaround Time Worksheet for RFP>\$250,000 (Fig. A) is included in the appendix.

Overall goals represent the entire bid journey from buyer assignment to award, while phase goals indicate performance only within that phase. To leverage our office's competitive, yet positive spirit, we use color-coding to readily indicate turnaround time performance: green for swift completion, yellow as a limit warning, and red for exceeding goal turnaround times. Creating both the overall color-codes and phase color-codes (Fig. 1) was pivotal for driving improved turnaround times.

PHASE	FLAG	ALLOTTED TIME/PHASE - FLAG COLOR START DATE		
		IFB	RFP < \$250K	RFP > \$250K
Drafting	●	1	1	1
	●	10	17	40
	●	15	24	54
Issuance	●	1	1	1
	●	10	17	32
	●	15	21	42
Evaluation/Award	●	1	1	1
	●	10	30	50
	●	15	40	64
TOTAL DAYS		45	85	160

Fig. 1

MEASURE: Missouri Purchasing recognized that before beginning meaningful analysis, the following actual metrics must be measured: 1) assign to buyer date, 2) completion date of each phase, 3) final award date. Utilizing formulas that add "turnaround goal days" to the "assign to buyer date", we can calculate the following goal dates: 4) goal date for each phase, and 5) overall goal date. By maintaining these actual and goal date measures in a worklog, we can efficiently analyze our progress and ensure a robust dataset to effectively compare against a historical average. In practice, Missouri Purchasing measures turnaround times for overall days and phases, but not for steps. However, creating step turnaround time goals has assisted with task sequencing and timely task completion that had previously bottlenecked bid progress.

ANALYZE: After defining and measuring our data, we needed to efficiently communicate the important aggregated trends. For the data to be actionable, staff and managers need to be able to easily interpret the data results. Within Missouri Purchasing, Directors previously read through 40+ pages of Excel-based bid tracking data. By the time they finished the review, they were unable to act on the discoveries because the data had already changed. This "analysis" was not helpful. By reducing cognitive load through dashboards, directors are given the capacity to make operational improvements. This ensures they can quickly assess performance against goals and orient themselves towards the next obstacle. Missouri Purchasing enlisted the state's Operational Excellence team to construct bid operational dashboards in Tableau. Our dashboards quickly showcase color-coded status trends and turnaround time metrics that provide situational awareness for directors and teams. Screengrabs of our analysis dashboards (Fig. B - Fig. K) are included in the appendix.

IMPROVE: Each row in our Smartsheet bid worklog corresponds to a specific bid which the assigned buyer updates at least weekly. Innovations such as, turnaround time metrics and overall color status, are placed inside the worklog and therefore, inside the buyer's routine. Buyers are now engaged with their bid's turnaround time on a timely and accurate level.

By employing cell background conditional formatting within our bid worklog (Fig.2), we can highlight essential data to the buyer. Additionally, through cell background conditional formatting, we can automatically display the overall color of the bid. Conditional formatting has increased staff awareness and sensitivity to their turnaround times. Additionally, within

Bid Number	Turnaround Time Goal	Current Turnaround Time	Days Until Red
IFBC30034902000825	45	100	-55
RFPS30034902301799	85	70	15
RFPS30034902001762	85	29	56

Fig. 2

the bid worklog, by placing goal dates side by side with actual dates, buyers receive an easy to digest status update on their pace without the need for managerial prompting. For example, the bid's progress in the bid worklog extract (Fig. 3) can be quickly interpreted, as being one month and two days ahead of the phase goal for issuance. This enables buyers to self-manage and improve their turnaround times.

Goal Issue Date	Issue Date
11/20/22	10/18/22

Fig. 3

Missouri Purchasing utilizes Smartsheet's additional features. For example, an email with goal dates is automatically sent to buyers when a bid is assigned to them. These emails assist the buyers with scheduling themselves through the procurement process. Smartsheet features like reports, email reminders, smart filters, automated date collection, forms, and permission settings all help Missouri Purchasing improve its operations.

CONTROL: Missouri Purchasing maintains control over our innovations through weekly meetings, monitoring our turnaround times at both leadership and team levels. In these meetings, directors and teams engage with the Smartsheet bid worklog and Tableau dashboard to discuss color status updates on every bid through automatically generated reports. In both Smartsheet and Tableau, color is used as a quick and easy attribute to determine how much attention each bid should receive. In director meetings, Directors keep tabs on aggregate operational metrics such as the number and percentage of reds per week and the average turnaround time. Directors identify bottlenecked bids and allocate additional attention towards delayed bids. In team meetings, buyers and managers investigate bid progress, discuss questions, and locate solutions. In both meetings, color coding assists Missouri Purchasing in drawing attention to delayed bids and driving those bids to a speedy award. Missouri Purchasing successfully manages turnaround time and you can too!

By successfully integrating turnaround time goals into buyers' lives and reporting on the number procurements with an overall color of red, the phrase "Say NO to Tableau reds" organically took root. This phrase embodies the resulting culture of competitive positivity. Spurring buyers to make a real difference and driving procurements to completion.

Transferability

The innovations behind turnaround time management can be transferred to fit your needs. If your office battles with turnaround times and dissatisfied customers, implementing turnaround time management processes and tools can orient and organize your operations. The methods of turnaround time management are applicable to many governmental structures and can be configured towards your procurement office. Importantly, an e-procurement system isn't necessary to realize the benefits! If data experience is not already located in house, it may be necessary to borrow a data analyst or consultant to construct and maintain the tools developed from following this template.

Procurement leadership is more likely to implement innovations if access to data is quick, helpful, and inexpensive. To be quick and helpful, we recommend Smartsheet for data collection and automation, and Tableau or Power BI for data visualization and reporting. However, other software may satisfy your office's needs. Smartsheet is a low-to-no code cloud based superpowered spreadsheet that is easy to implement. Tableau and Power BI are both data visualization software that offer dashboard creation and internet viewing. Utilizing quick and helpful turnaround time management tools is critical in transferring Missouri Purchasing's innovations to your procurement office.

Smartsheet and Tableau incur nominal licensing fees. To sufficiently operate a purchasing office of 3 teams and 40 employees, annual expenditure on licenses might be estimated at \$5,000. These licenses include 4 Smartsheet creator licenses with pro support, 2 Tableau creator licenses, and 10 Tableau viewer licenses. With quick, helpful, and relatively inexpensive tools, your office can also experience operational improvement through turnaround time management.

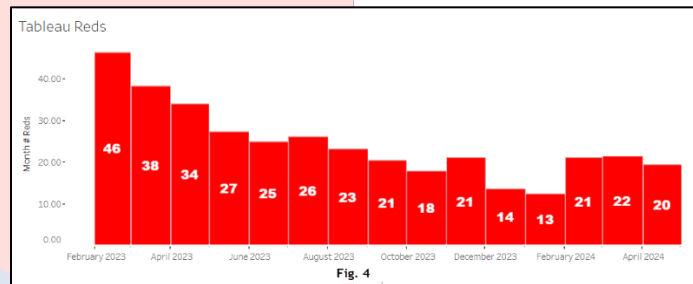
Service Improvement

Missouri Purchasing's vision statement is "Excellent Procurement Service Every Time". Delivering excellent procurement service almost always necessitates speedy awards. Therefore, purchasing offices can achieve procurement excellence through a reduction in turnaround times.

A tableau red can be interpreted as a dissatisfied customer. Customer agencies are waiting for us to complete our tasks, and if we can't serve them fast enough, our service quality will suffer. As Missouri Purchasing implemented turnaround time management, the count of dissatisfied customers has decreased from February 2023: 52 reds to April 2024: 20 reds. A remarkable decrease of 62%!

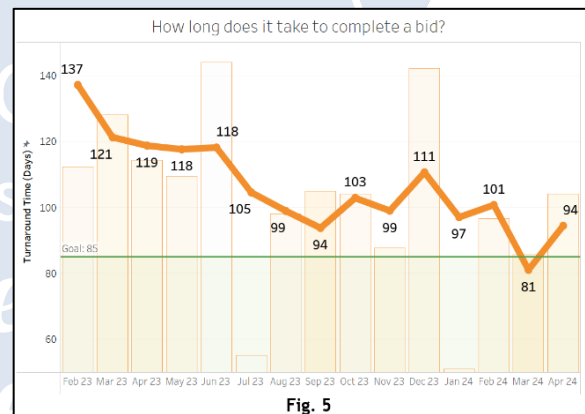
Additionally, turnaround time goals inform both employees and customer agencies of expectations within the process. Therefore, the implementation of overall goals, phase goals, and step goals lead to enhanced coordination and a decrease in frustration.

Savings & Efficiency



Through the utilization of turnaround time procedures and tools, Missouri Purchasing records and displays time savings. Through the adoption of the innovations showcased above, a substantial savings and efficiency is observed quantitatively in turnaround time.

By managing turnaround time, we have been able to save time without sacrificing work quality. The following graph can be produced by measuring our turnaround time for bid type RFP<\$250,000. The Y-axis shows turnaround time in days, and the X-axis shows month of award. The bar's background color indicates the count of bids awarded each month, and the orange line represents the three-month moving average. The bar values are produced by grouping together all bids that were awarded in each month and creating an average of their turnaround time. The orange line was produced by grouping bids in the three months before the month on the X-axis and calculating the average turnaround time. The green reference line is our overall turnaround time goal for this bid type. Within the last year, the three-month rolling average in turnaround time saw a 31.4% decrease. In February 2023 the average turnaround time was 137 days while in April 2024 the average turnaround time was 94 days. Similar trends are also observed for other bid types.



Conclusion

In conclusion, Missouri Purchasing has exemplified a successful management of turnaround times. The foundation for innovation was established in two ways. First, developing granular turnaround time goals for each procurement phase, and second, utilizing a color-coded system. Turnaround time analysis was conducted by measuring critical operational metrics. Missouri Purchasing created a turnaround time management process and showcased transferability through accessible software like Smartsheet and Tableau. The significant reductions in turnaround time and the cultural shift towards competitive positivity have showcased procurement excellence.

The success experienced by Missouri Purchasing serves as an inspiring blueprint for procurement offices aiming to enhance their operations. The strategies discussed in this paper have strong potential for similar achievements across diverse environments and operational scales with a minimal investment of resources. As we move forward, it is clear that integrating turnaround time management remains not only beneficial, but essential for procurement offices who seek to maintain high standards of efficiency and service in an increasingly demanding marketplace. Through the purposeful implementation of turnaround time management tools, all procurement organizations can deliver excellent procurement service every time.

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Appendix Table:

- A. Turnaround Time Steps Sheet (RFP > \$250K)
- B. Tableau Bid Phase Status Overview Dashboard
- C. Tableau Buyer Workload Dashboard
- D. Tableau-Bid Completion Total
- E. Tableau-Bid Completion Draft Phase
- F. Tableau-Bid Completion Evaluation Phase
- G. Tableau-Overall Goal Table (used for weekly meetings)
- H. Tableau Reds Report
- I. Tableau Total IFB/RFP Report
- J. Tableau Total Procurements Report
- K. Tableau Red Procurements by Phase

Fig. A

	Step #	Steps in Competitive Procurement Process RFP >\$250k	Estimated Day
REQUEST RECEIVED			
DRAFTING PROCESS	1	Agency submits request, solicitation checklist to OA-Purchasing. Section Manager reviews the request documents for completeness, assigns to the buyer, and logs in the SharePoint Bid Worklog	Day 0
	2	Buyer makes initial contact with agency (intro, next steps)	Day 1
	3	Buyer prepares RFP file memo. Buyer drafts RFP, submits draft for management review. After management review, buyer submits to agency for review, ideally suggesting 5 days for agency feedback to buyer.	Day 30
	4	After agency feedback, buyer obtains any needed final approval from OA-Purchasing's management team prior to issuing.	Day 54
RFP ISSUED			
ISSUANCE PROCESS	5	Buyer issues solicitation (about 4-6 weeks on the street)	Day 54
	6	While solicitation is on the street, buyer contacts evaluators to (1) ensure evaluator training is completed, (2) obtain confidentially forms, (3) schedule and conduct pre-evaluation meeting (no later than two days prior to closing), (4) (ideally within one week of closing) schedule all anticipated evaluation meetings, and (5) make sure evaluators can access RFP SharePoint site.	Day 96
SOLICITATION CLOSES/EVALUATION BEGINS			
EVALUATION PROCESS	7	Within 24 hours after closing, proposals sent to evaluators, preferably via SharePoint. Evaluators generally have one week to prep for Technical Proposal review.	Day 97
	8	Buyer conducts Cost, Preference, Terms, and other reviews prior to 1st Evaluation meeting <ul style="list-style-type: none"> • Cost Evaluation (including verification that MissouriBUYS prices match pricing in vendor's pricing) • M/WBE, SDVE, B/S review and draft memos • Last Addendum Signed and Returned or Accepted in MissouriBUYS • E-Verify • No Tax Due Status (RSMo 34.040.7) • SOS <ul style="list-style-type: none"> • Federal Funds • Off-Shore (Executive Order 04-09) • Buy American • Terms and Conditions Exceptions • Reciprocal • Labor Standards • Proprietary/Confidential Information • Purchasing Suspension • Buyer has peer review cost evaluation 	Day 104
	9	Evaluation meeting(s) <ul style="list-style-type: none"> • discuss compliance issues (meets all "must" and "shall") • draft narrative that identifies the adjectival rating assigned by the evaluators including the evaluators' justification 	Day 120
	10	Draft and Issue Best and Final Offers (BAFOs), if necessary	Day 129
	11	Additional Evaluation Meeting, as necessary to draft/revise/finalize narrative based on BAFO responses	Day 139
	12	Evaluation narrative reviewed by OA-Purchasing for impartiality, fairness, factual content, etc.	Day 149
	AWARD		
AWARD PROCESS	13	After OA-Purchasing managerial approvals, finalize the evaluation <ul style="list-style-type: none"> • obtains the evaluators' signatures on the evaluation report and inserts remaining applicable points onto evaluation form and totals points and prepares the necessary recommendation memo for the agency • submits evaluation and recommendation to state agency for final review and approval to proceed • agency responds with approval/disapproval for award • finalizes the solicitation for award • submits the folder for final approval by Purchasing management • awards the contract 	Day 159
	14	Awards the Solicitation-notifies non-awarded vendor(s) and awarded vendor(s), MissouriBUYS, letters for any awarded participation points	Day 160

Fig. B



Fig. C

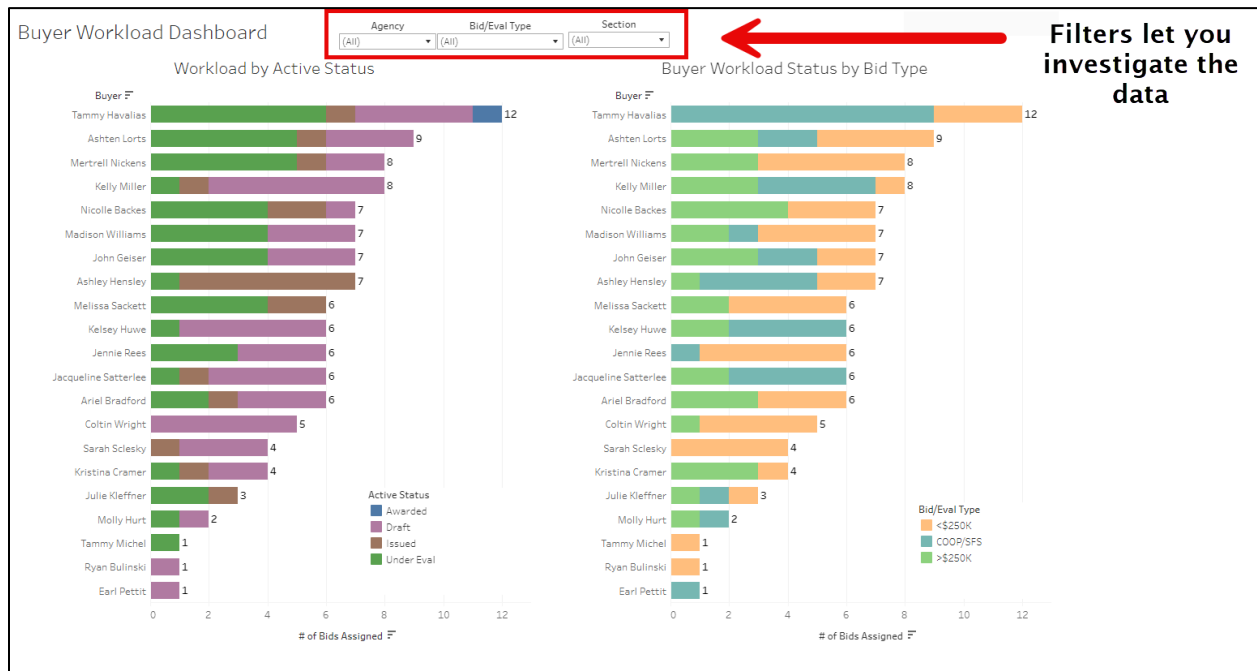


Fig. D

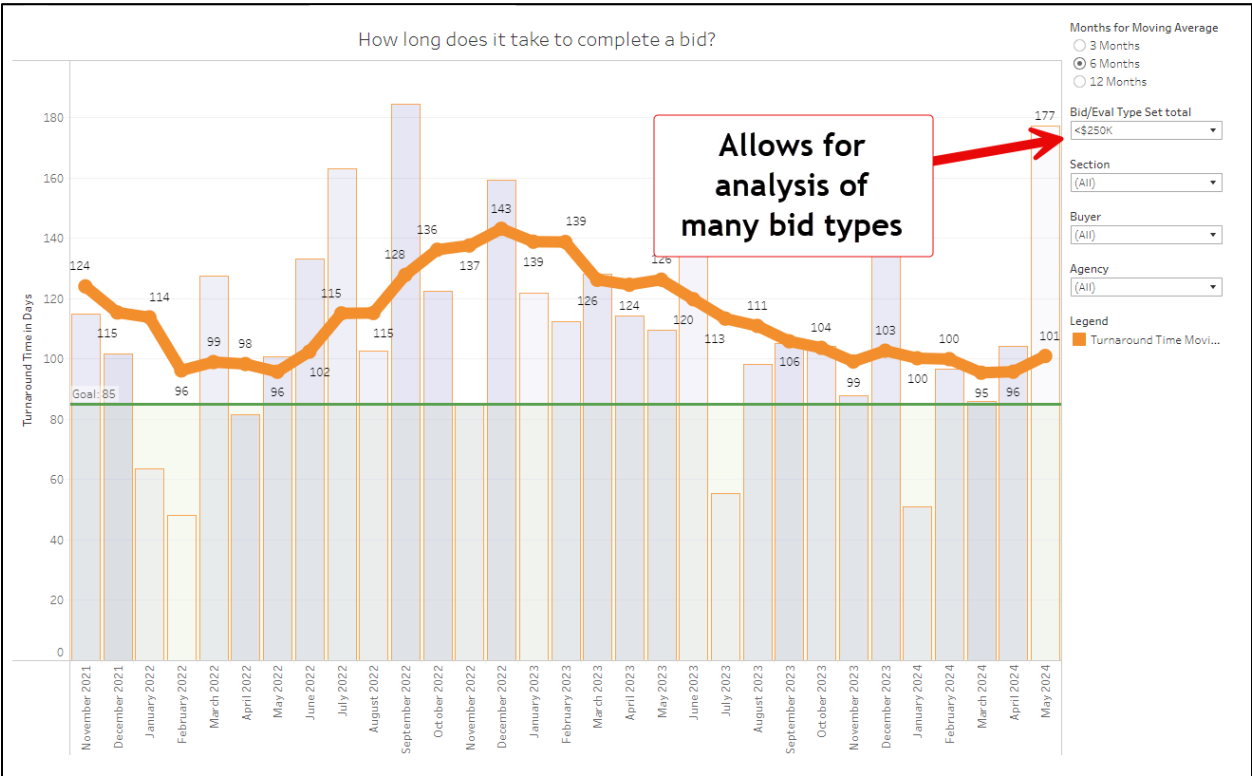
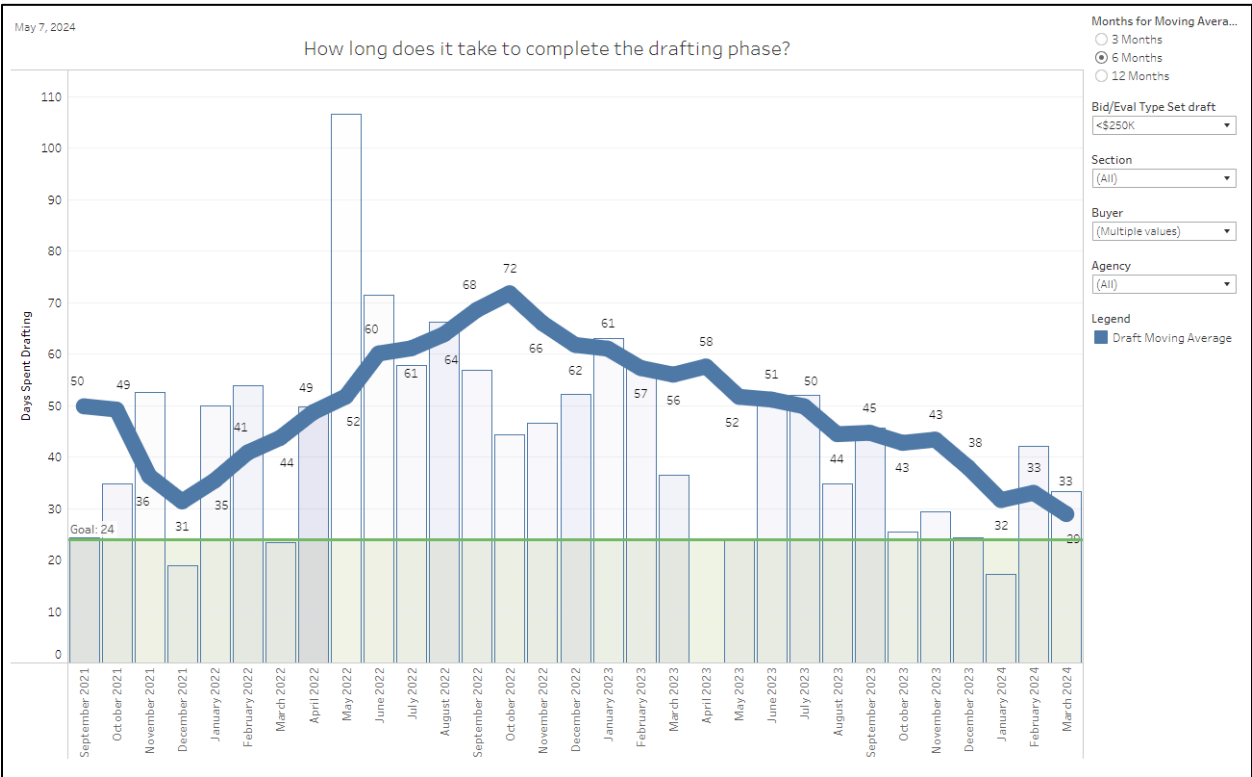


Fig. E



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Fig. F

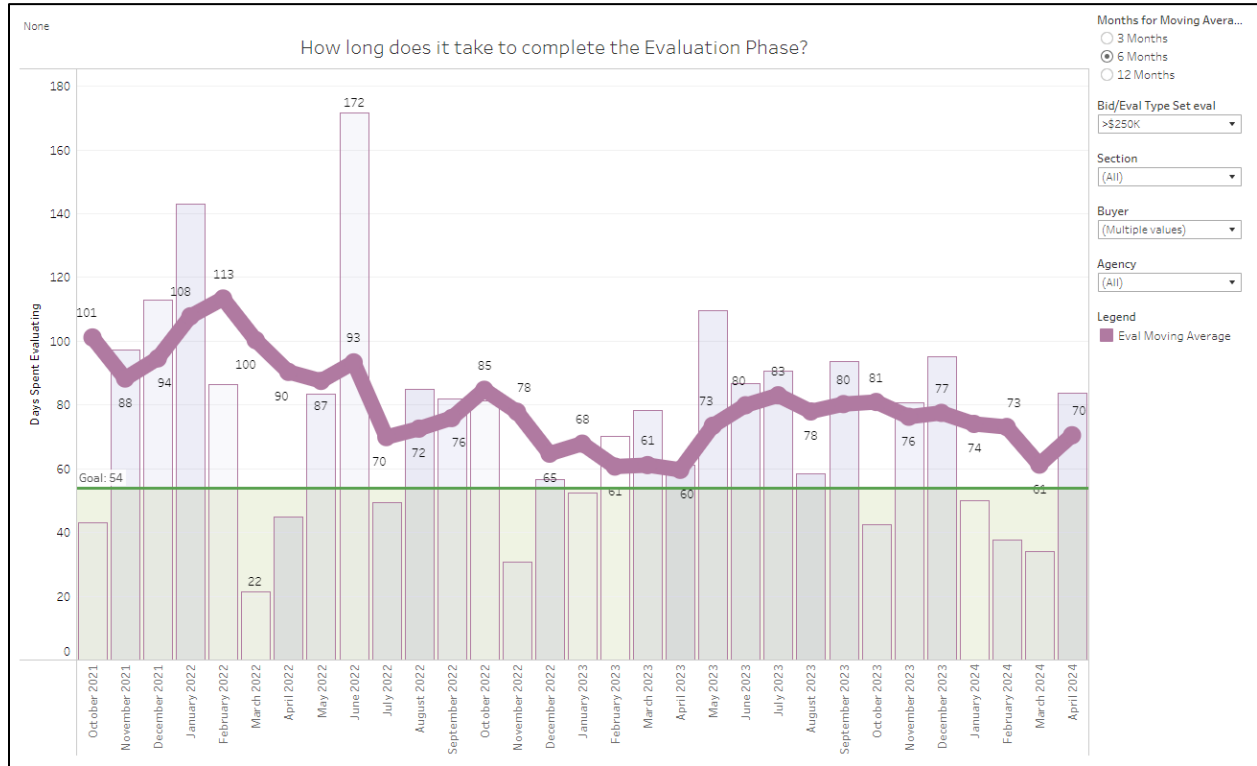


Fig. G

Overall Goal Table:

Total Days to Complete	Current Status	Bid Description	Section	Buyer	Solicitation Type	Day of Assigned to Buyer	Active Status
344	Active	Intensive In-Home and Intensive Family Reun.	Services	Kristina Cramer	>\$250K	May 29, 2023	Under Eval
302	Active	Market Regulation Actuarial Services (DCI)	Services	Ariel Bradford	<\$250K	July 10, 2023	Under Eval
279	Active	Actuarial Review of Captive Insurance (DCI)	Services	Mertrell Nickens	<\$250K	August 2, 2023	Under Eval
232	Active	Check-in supervision program for pre and pos.	IT	Molly Hurt	>\$250K	September 18, 2023	Under Eval
207	Active	Voluntary Life Insurance	Services	Nicolle Backes	<\$250K	October 13, 2023	Under Eval
196	Active	NASPO Computer Equipment, Peripherals & R.	IT	Kelsey Huwe	COOP/SFS	October 24, 2023	Under Eval
183	Active	Underground Storage Tank Investigation, Re.	Services	Melissa Sackett	<\$250K	November 6, 2023	Under Eval
181	Active	MALDI Biotyper Sirius CA System SFS	Commodities	Tammy Havalias	COOP/SFS	November 8, 2023	Under Eval
169	Active	Interstate Process Server Services (DSS)	Services	Ariel Bradford	<\$250K	November 20, 2023	Under Eval
159	Active	Missouri Parenting Partnership Program (M.	Services	Nicolle Backes	>\$250K	November 20, 2023	Issued
159	Active	Accelerating Self-Monitoring Blood Pressure	Services	Ashten Lorts	<\$250K	November 30, 2023	Under Eval
159	Active	Missouri Apprenticeship Connect Portal	IT	Jacqueline Satterlee	COOP/SFS	November 30, 2023	Draft
148	Active	Workers Comp Nurse Case Mgmt (OA/GS)	Services	Ashten Lorts	>\$250K	December 11, 2023	Under Eval
131	Active	Offender Communication Services	IT	Jacqueline Satterlee	>\$250K	December 28, 2023	Issued
123	Active	Computer Gaming System and Related Servic.	IT	Kelly Miller	>\$250K	January 5, 2024	Draft
120	Active	SW Environmental Assessments	Services	Melissa Sackett	>\$250K	January 8, 2024	Under Eval
120	Active	SW Photogrammetric Mapping Services	Services	Madison Williams	>\$250K	January 8, 2024	Under Eval
120	Active	SW Recycling Services - Jefferson City & Cole	Services	Melissa Sackett	<\$250K	January 8, 2024	Issued
119	Active	Statewide Professional Grade Tools & Diagno.	Commodities	Ashley Hensley	COOP/SFS	January 9, 2024	Issued
119	Active	Statewide Public Safety/Law Enforcement Vi.	Commodities	John Geiser	COOP/SFS	January 9, 2024	Under Eval
111	Active	Support and Maintenance of STACS DB and S.	IT	Jacqueline Satterlee	COOP/SFS	January 17, 2024	Under Eval
107	Active	SW Language Interpretation Translation Ser.	Services	Mertrell Nickens	<\$250K	January 21, 2024	Under Eval
106	Active	Senior Community Service Employment Prog.	Services	Ariel Bradford	>\$250K	January 22, 2024	Draft
106	Active	Window Washing Services for Jefferson City	Services	Madison Williams	<\$250K	January 22, 2024	Under Eval
105	Active	Statewide Law Enforcement/Public Safety/G.	Commodities	John Geiser	>\$250K	January 23, 2024	Under Eval
104	Active	Laboratory Glassware Washers and Dryers	Commodities	Tammy Havalias	<\$250K	January 24, 2024	Under Eval

Active Status: (Multiple values)

Bid/Eval Type Set total: (All)

Section: (All)

Buyer: (All)

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Fig. H

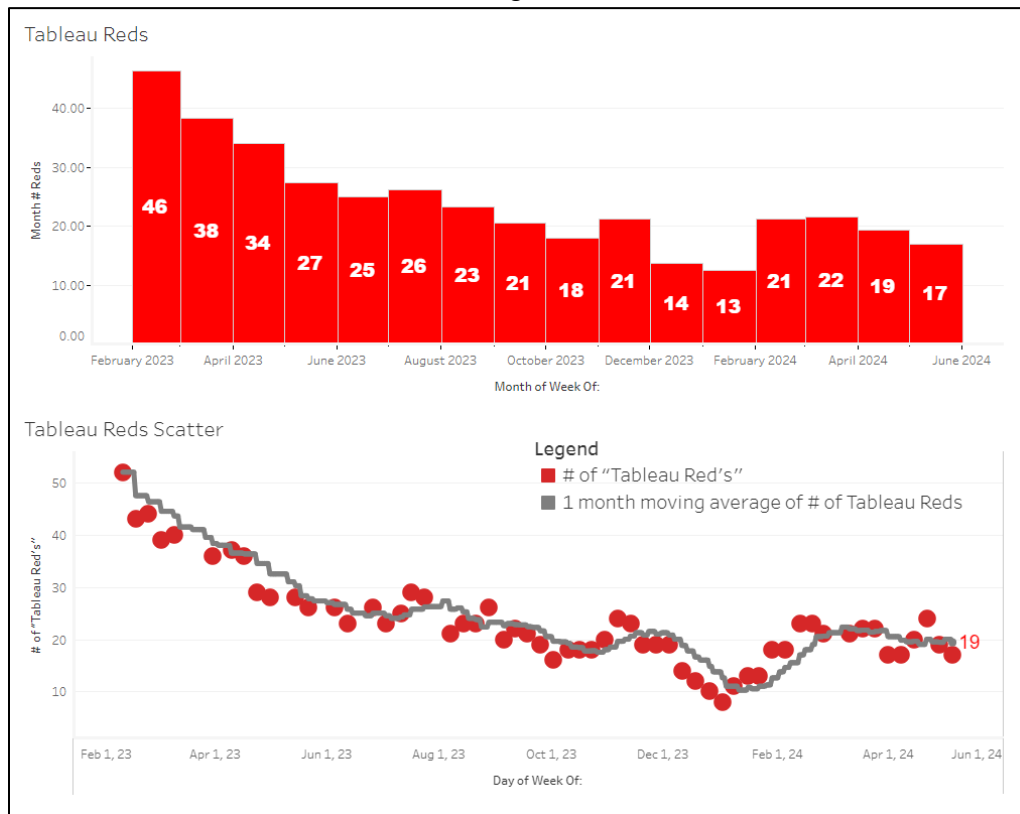


Fig. I

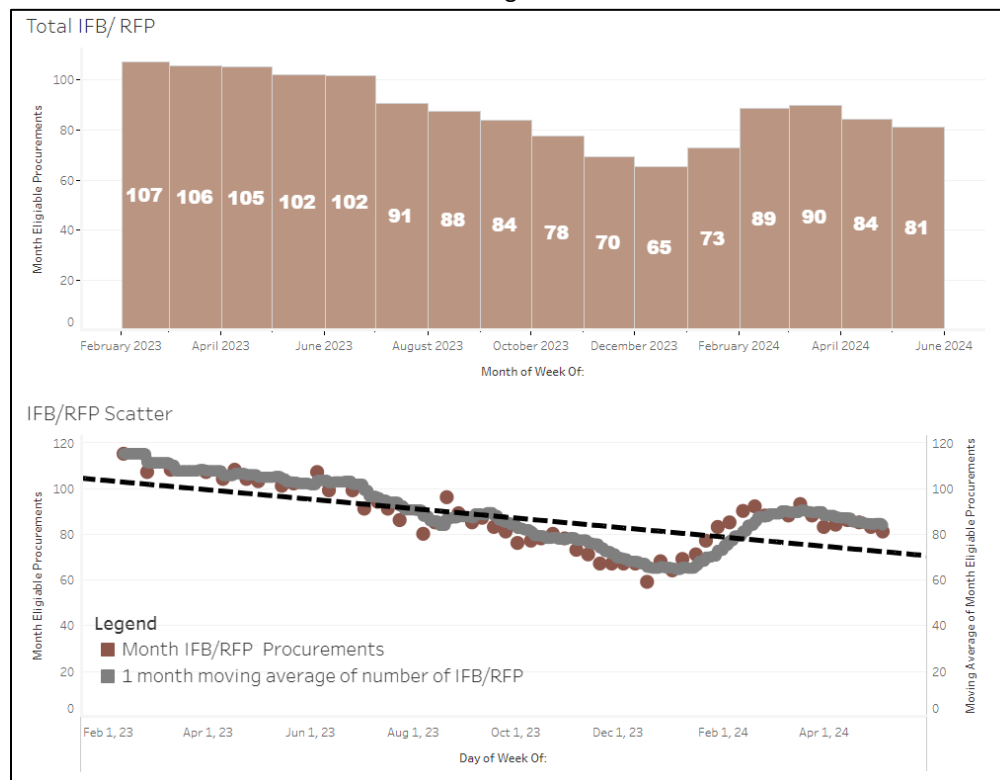


Fig.J

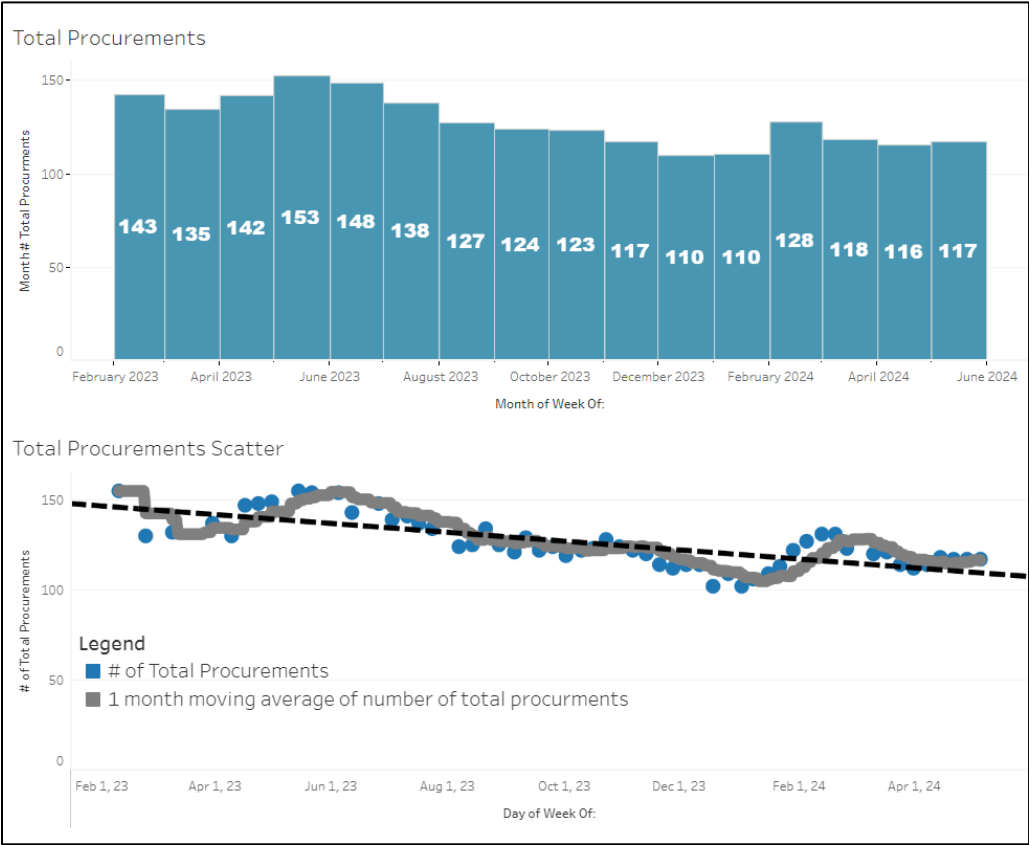


Fig. K

Draft					Under Evaluation					Overall					<div>Section <input type="checkbox"/> (All) <input type="checkbox"/> Commodities <input type="checkbox"/> IT <input checked="" type="checkbox"/> Services</div> <div>Buyer (All)</div> <div>Agency (All)</div> <div>Solicitation Type <input checked="" type="checkbox"/> (All) <input checked="" type="checkbox"/> <\$250K <input checked="" type="checkbox"/> >\$250K</div>
Days until Draft Red	Buyer				Days until Eval Red	Buyer				Days Until Red	Buyer				
-77	Ariel Bradford	Therapy Services for Fulton State Hospital (DMH)			-114	Mertrell Nickens	Actuarial Review of Captive Insurance (DCI)			-234	Ariel Bradford	Market Regulation Actuarial Services (DCI)			
-69	Ariel Bradford	Senior Community Service Employment Program (DHSS)			-113	Ariel Bradford	Market Regulation Actuarial Services (DCI)			-211	Mertrell Nickens	Actuarial Review of Captive Insurance (DCI)			
-55	Mertrell Nickens	SW Temporary Clerical and Labor Personnel QVL			-51	Nicolle Backes	Voluntary Life Insurance			-201	Kristina Cramer	Intensive In-Home and Intensive Family Reunification Services (DSS)			
-47	Ryan Bulinski	Public Drinking Water Mgmt Training Svcs (DNR)			-21	Ashten Lorts	Smoke-Free Rental Housing Program Rebid (DHSS)			-139	Nicolle Backes	Voluntary Life Insurance			
-34	Sarah Sclesky	Landfill Assessment Services QVL (DNR)			-6	Kristina Cramer	Intensive In-Home and Intensive Family Reunification Services (DSS)			-101	Ariel Bradford	Interstate Process Server Services (DSS)			
-24	Ariel Bradford	Food Warehousing and Delivery Services (DESE)			10	Mertrell Nickens	SW Language Interpretation Translation Services (formally Verbal Language Interpretation Services)			-52	Melissa Sackett	SW Recycling Services - Jefferson City & Cole County			
-17	Kristina Cramer	Missing Youth and Human Trafficking (DSS)			11	Mertrell Nickens	Fire Safety - Additional Continued Ed Training Courses QVL			-39	Mertrell Nickens	SW Language Interpretation Translation Services (formally Verbal Language Interpretation Services)			
-8	Madison Williams	Durable Medical Equipment Consultation Services (DSS)			12	Julie Kleffner	HMO/PPO Network Access Services			-38	Madison Williams	Window Washing Services for Jefferson City State Office Buildings (FMDC)			
	Mertrell Nickens	Tourism Temporary Personnel Services QVL (DED)			14	Melissa Sackett	SW Hazardous Waste Disposal and Recycling Services			-36	Ashten Lorts	Workers' Compensation Telephone Triage Services (OAGS) -- Rebid			
	Sarah Sclesky	Gulf Hypoxia Outreach & Education Project 2 (DNR)			17	Mertrell Nickens	Statewide Security Guards QVL - Add Vendors			-26	Nicolle Backes	Missouri Parenting Partnership Program (MOPPP) (DESE)			
5	Kristina Cramer	Chafee Foster Care Program for Success (DSS)								-24	Ashten Lorts	Smoke-Free Rental Housing Program Rebid (DHSS)			
											Nicolle Backes	Behavioral Professional Recruitment			