

Activity-Based Cost Management System (CMS): Orientation & Step- by-Step Guide

Kansas Division of the Budget

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Why CMS

The Cost Management System, or CMS, directly links agency activities with cost data and tracks those costs over time by calculating department unit costs and per person costs every payroll period. The department unit costs are tracked on a graph so that trends and variances can be identified and analyzed. Any substantial unit cost increase or decrease will allow agencies to investigate its root cause. In either case, it may be found that the increase or decrease is the result of normal conditions in the agency's annual work cycle. That is, the variance may be fully explainable. However, it is possible that the reason for the variance is unknown. Once the cause of the variance is identified, agencies will then be able to implement process improvements or managerial decisions to accomplish one of two outcomes: (1) in the case of a cost increase, decrease unit costs; or (2) in the case of a cost decrease, determine the cause so that it can be replicated in other areas of the agency. This is the primary purpose of CMS: cost containment or cost reductions through process improvements. And because reports are generated every two weeks, changes can be made within the fiscal year based on desired goals.

It may take several periods of unit cost data to know what a true unit cost should be for a particular activity. Presumably, once a large number of samples are obtained and adjustments are made for seasonal or other variances, one could have a high degree of confidence that the calculated unit cost average is representative of a "true" unit cost for a particular activity. CMS is no more than an Excel tool that can be used to calculate those costs. It is meant to complement the financial systems and data that already exist in Kansas state government. The time horizon for CMS is open-ended. The ultimate goal is continuous improvement of agency processes that over time lead to cost reductions.

What Should Be Measured

While this guide primarily addresses the technical aspects of the CMS template, the **most important** and **time-consuming** task is determining which agency activities should be tracked. This discovery phase will involve soliciting and coordinating input from various department or program managers. After all, this is a tool for them. In addition to determining the outputs, they will need to be able to see the results so that any required actions can be taken. The discovery phase may take several manager meetings. It asks very basic but essential questions about your agency: What do you do? How do you do it? What should it cost? What value are we providing to our customers? To keep things simple in the beginning, it is suggested that each department initially pick five to eight items that in some form provide services that have **direct impact on Kansas citizens**. Additional items can be added at a later time. It is important that identified outputs be confined to those with direct costs related to services for Kansans. Indirect, or overhead costs, will be measured in subsequent phases of the CMS project.

Collecting Output Data

If defining what your agency will measure is the most important aspect of this effort, then determining how output data will be gathered every two weeks is second. It is critical that agencies identify who will be responsible for obtaining outputs from employees and how this should be done. Preliminary experience has demonstrated that having an automated process helps make the collection of output data more efficient and less time-consuming. As part of the CMS package, we've included the Outputs Collection Workbook that allows users to enter information directly into the spreadsheet. This workbook can be placed on a common drive on your agency's network so that multiple users can

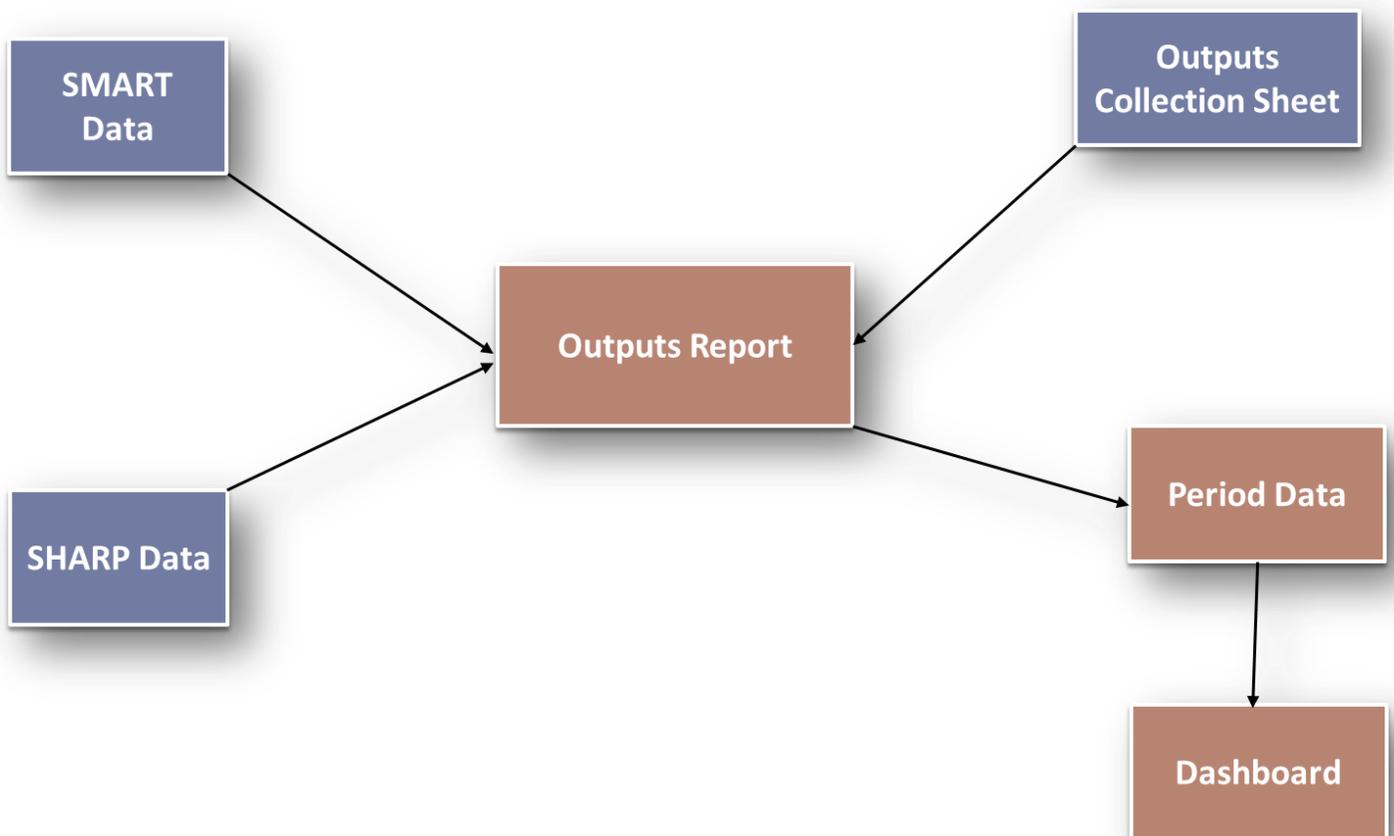
access it from various locations. The workbook is linked to the main CMS report workbook to allow for easy data transfer.

Structure

CMS is a collection of interconnected Excel workbooks as shown in the diagram below (**Figure 1**). The arrows represent the flow of information from the linked workbooks. The blue boxes represent workbooks that contain raw data while the red boxes represent workbooks that process the raw data through the use of pivot tables. CMS is technically a database that makes use of the linking functions to reduce as much as possible the amount of data entry. Overall, there are five workbooks including:

- One workbook each for select SMART and SHARP data;
- An output collection sheet;
- An output report, where most of the calculations are completed;
- A repository for each period of unit costs; and
- A dashboard that graphically displays the trend lines of period unit costs over time.

Figure 1



Customization

The CMS package created by the Division of the Budget represents a basic template to calculate unit costs. Agencies should feel free to modify the template to accommodate their information and management requirements or to make improvements to CMS. We encourage and seek your input to make CMS better and more efficient to use. Many agencies have individuals who are well versed in Excel modeling and we see these individuals as key resources to help improve CMS over time.

Lookup Tabs

Within each of the workbooks is a tab highlighted in green called Lookups (**Figure 2**). This tab provides standard tables for expenditure categories, periods, department names, and agency personnel. It is important that the tabs in each workbook be kept up-to-date. The lookups are critical to the pivot tables and look-up formulas used throughout the CMS. All of the lookup tabs in each of the workbooks will have data included in the first two tables: the expenditure category table and the period table. The department names and the agency roster tables will have to be completed by agencies.

- **Expenditure Category Table** – This includes columns for **Account Number**, **Description**, **Monthly Expenditures**, and **Roll-up Description**. The table rolls up state sub-object expenditure categories into familiar categories including: Salaries and Wages, Benefits, Contractual Services, Commodities, Capital Outlay, Capital Improvements, Aid to Locals, Other Assistance, Debt Service, Non-Expense, Premises, and Travel. The last two categories are different than our standard State of Kansas expense categories and represent an attempt to capture ongoing expenses related to building operations and staff travel. Because there are some costs that occur only one time in a month, such as rent, those costs have been given a designation in the Monthly Expenditures column. It will be necessary to spread those costs over the two reporting periods that occur each month to smooth out the expenditure variances that would result from the once-a-month payments.
- **Period Table** – As mentioned above, it is intended that cost data be compiled every pay period. The **Period Table** designates the range of dates that are included in each payroll period. The table helps to clarify which accounting data should be included with the payroll data for a given date. Because payroll and accounting costs occur within different timeframes, the data capture periods for accounting data and payroll data will not be identical. The table attempts to correlate the two in the best possible way.
- **Department Information Table** – This includes columns for **Department ID** numbers and corresponding **Department ID Descriptions** or department names.
- **Agency Personnel Table** -- This includes columns for **Position ID** numbers and corresponding **Employee Names**.

Figure 2

MIS Phase 1&2 outputs--ASTRA Demo.xlsm - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Account	Descr	Monthly Exp	roll up Descr		Start	End	Payroll Period		Dept ID	Dept ID Description		Position ID	Name
2	51000	SALARIES AND WAGES		Salaries and Wages		6/27/2010	7/10/2010	(1) 06/13 - 06/26		2960100128	Sec. of Labor		K0213153	SPARKS, KATHLEEN L
3	510100	CLASSIFIED REGULAR		Salaries and Wages		7/11/2010	7/24/2010	(2) 06/27 - 07/10		2960100228	Legal		K0049722	BROWNLEE, KARIN S
4	510110	CLASSIFIED TEMPORARY		Salaries and Wages		7/25/2010	8/7/2010	(3) 07/11 - 07/24		2960100528	Fiscal Mgmt		K0215235	KEESLING, JENNA R
5	510120	CLASSIFIED SHIFT DIFFERENTIAL		Salaries and Wages		8/8/2010	8/21/2010	(4) 07/25 - 08/07		2960100628	Personnel		K0219879	MC FARLAND, JUSTIN L
6	510130	CLASSIFIED OVERTIME PAY		Salaries and Wages		8/22/2010	9/4/2010	(5) 08/08 - 08/21		2960100728	Communications		K0212233	REDMOND JR, DALE A
7	510140	CLASS HOLIDAY INCL IN BASE		Salaries and Wages		9/5/2010	9/18/2010	(6) 08/22 - 09/04		2960100828	Information Systems		K0169602	TREMBLY, RANDY L
8	510150	CLASS TAXBL EE BUSINESS EXP		Salaries and Wages		9/19/2010	10/2/2010	(7) 09/05 - 09/18		2960205128	Operational Perform Mgmt		K0095928	HERMAN, LAWRENCE J
9	510160	CLASSIFIED LONGEVITY PAY		Salaries and Wages		10/3/2010	10/16/2010	(8) 09/19 - 10/02		2960301428	Records Management		K0088806	* vacant *
10	510170	CLASS HOLIDAY NOT INCL IN BASE		Salaries and Wages		10/17/2010	10/30/2010	(9) 10/03 - 10/16		2960301528	UI Division Directors		K0070246	* vacant *
11	511100	UNCLASSIFIED REGULAR		Salaries and Wages		10/31/2010	11/13/2010	(10) 10/17 - 10/30		2960305328	UI Contact Center		K0067259	* vacant *
12	511110	UNCLASSIFIED TEMPORARY		Salaries and Wages		11/14/2010	11/27/2010	(11) 10/31 - 11/13		2960305340	Benefits		K0169405	* vacant *
13	511120	UNCLASSIFIED SHIFT DIFFERENTIAL		Salaries and Wages		11/28/2010	12/11/2010	(12) 11/14 - 11/27		2960305350	Contributions Admin		K0068447	GRIFFETH, GLENN H
14	511130	UNCLASSIFIED OVERTIME PAY		Salaries and Wages		12/12/2010	12/25/2010	(13) 11/28 - 12/11		2960305500	Audit & Investigations		K0074504	OLIVER MCKNIGHT, LOYCE
15	511140	UNCLASS HOLIDAY INCL IN BASE		Salaries and Wages		12/26/2010	1/8/2011	(14) 12/12 - 12/25		2960305600	Appeals		K0165923	SCHETZ, FRANCIS G
16	511150	UNCLASS TAXBL EE BUSINESS EXP		Salaries and Wages		1/9/2011	1/22/2011	(15) 12/26 - 01/08		2960407100	Workers Compensation		K0071536	ROMERO, JOYCE V
17	511160	UNCLASS LONGEVITY PAY		Salaries and Wages		1/23/2011	2/5/2011	(16) 01/09 - 01/22		2960507500	Industrial Safety		K0100874	* vacant *
18	511170	UNCLASS HOL NOT INCL IN BASE		Salaries and Wages		2/6/2011	2/19/2011	(17) 01/23 - 02/05		2960507600	Boiler inspection		K0050611	HANSEN, KARL R
19	511200	GRADUATE TEACHING ASSISTANTS		Salaries and Wages		2/20/2011	3/5/2011	(18) 02/06 - 02/19		2960600300	LMSIS		K0051874	* vacant *
20	511300	STUDENT RESEARCH ASSISTANTS		Salaries and Wages		3/6/2011	3/19/2011	(19) 02/20 - 03/05		2960805228	UI Board of Review		K0052444	MORRIS, ANNETTE
21	511400	OTHER STUDENTS MONTHLY		Salaries and Wages		3/20/2011	4/2/2011	(20) 03/06 - 03/19		2960808028	UI Board of Review Board		K0049509	KRAUS, LISA D
22	512000	STUDENT EMPLOYEES HOURLY		Salaries and Wages		4/3/2011	4/16/2011	(21) 03/20 - 04/02		2960907228	PERB		K0075633	THOMPSON, TONYA D
23	513000	PATIENT EMPLOYEES		Salaries and Wages		4/17/2011	4/30/2011	(22) 04/03 - 04/16		2960907428	Employment Standards		K0059223	WEISHAAR, TIM J
24	514100	FOSTER GRANDPARENT SR COMPANIO		Salaries and Wages		5/1/2011	5/14/2011	(23) 04/17 - 04/30		2967709901	Wage Claims		K0051604	* vacant *
25	514200	KS NATIONAL GUARD SERVICE PAY		Salaries and Wages		5/15/2011	5/28/2011	(24) 05/01 - 05/14					K0066261	SISS, NANCYA
26	514300	MILITARY PAY DIFFERENTIAL		Salaries and Wages		5/29/2011	6/11/2011	(25) 05/15 - 05/28					K0046946	* vacant *
27	515100	LEGISLATORS COMPENSATION		Salaries and Wages		6/12/2011	6/25/2011	(26) 05/29 - 06/11					K0076098	LAYNE, GREGORY A
28	515200	LEGISLATIVE ALLOWANCES		Salaries and Wages		6/26/2011	7/9/2011	(27) 06/12 - 06/25					K0065857	GALLENTE, DEBRA A
29	516100	CLASS PENSION AND RETIREMENT		Salaries and Wages		7/10/2011	7/23/2011	(28) 06/26 - 07/09					K0059403	* vacant *
30	517100	OTHER EE COMP QUALITY BONUS		Benefits		7/24/2011	8/6/2011	(29) 07/10 - 07/23					K0221535	GUDENKAUF, RICK A
31	517200	EMPLOYEE SUGGESTION AWARDS		Benefits		8/7/2011	8/20/2011	(30) 07/24 - 08/06					K0124754	DELAROSA, ERNESTINA
32	517300	SALARY ADVANCE		Benefits		8/21/2011	9/3/2011	(31) 08/07 - 08/20					K0052300	ANDERSON, CHRISTINE D
33	517400	INTERCHANGE GOVT EE COMP PAY		Benefits		9/4/2011	9/17/2011	(32) 08/21 - 09/03					K0134780	GULL, TERESA A
34	517600	LEAVE PAYMENT ASSESSMENTS		Benefits		9/18/2011	10/1/2011	(33) 09/04 - 09/17					K0069402	SCHMIDT, TAMMY D
35	517800	PARKING COMPENSATION REDUCTION		Benefits		10/2/2011	10/15/2011	(34) 09/18 - 10/01					K0100876	GASSERT, DEBORAH D
36	517900	LOCAL OR TRANSIT TAX		Benefits		10/16/2011	10/29/2011	(35) 10/02 - 10/15					K0071052	LAUBER, M LESTER
37	518100	PUBLIC EE RETIREMENT SYSTEM		Benefits		10/30/2011	11/12/2011	(36) 10/16 - 10/29					K0059593	* vacant *
38	518200	TEACHER RETIREMENT CONTR KPERS		Benefits		11/13/2011	11/26/2011	(37) 10/30 - 11/12					K0066953	HAYES, DEBRA L
39	518300	EDUCATIONAL INST EE RETIRE SYS		Benefits		11/27/2011	12/10/2011	(38) 11/13 - 11/26					K0122027	SMITH, RHEA E
40	518400	ED INST EE PERS PRIOR SVC CRED		Benefits		12/11/2011	12/24/2011	(39) 11/27 - 12/10					K0052734	FLACHSBARTH, ANASTASIA
41	518500	ED INST EE GRP LIFE DISABILITY		Benefits		12/25/2011	1/7/2012	(40) 12/11 - 12/24					K0043991	HENKE, SUE E

Ready | Garden & Nursery Examiners-1 | Garden & Nursery Examiners-2 | SHARP Table | Lookups | 130%

SMART Data Workbook

Financial data must be extracted from SMART to populate the CMS report. This can be done through a customized SMART report (**Figure 3**). The path for the report is: **General Ledger: General Reports: MIS**. For every report that is run, the user should select the **Add a New Value** tab. The next screen will bring up six data fields (**Figure 4**).

- **Business Unit** – Enter the agency number using the proper SMART format of agency three-digit number followed by two zeros (i.e. 29600).
- **From Date/To Date** – Enter the desired date range. The dates should correspond to the Start and End dates in the **Period Table**.
- **Account Tree** – The default position is **Standard** and is the one that would be most used.
- **Account Code Type** – This drop down menu allows users to select all account codes, Bi-Weekly Account Codes for those costs that are captured every two weeks, or Monthly Account Codes to capture those costs that have been designated as monthly costs in the **Expenditure Category Table** and would need to be spread over two periods.
- **Fund Code Type** – This allows users to have fund codes grouped or ungrouped.

Figure 3

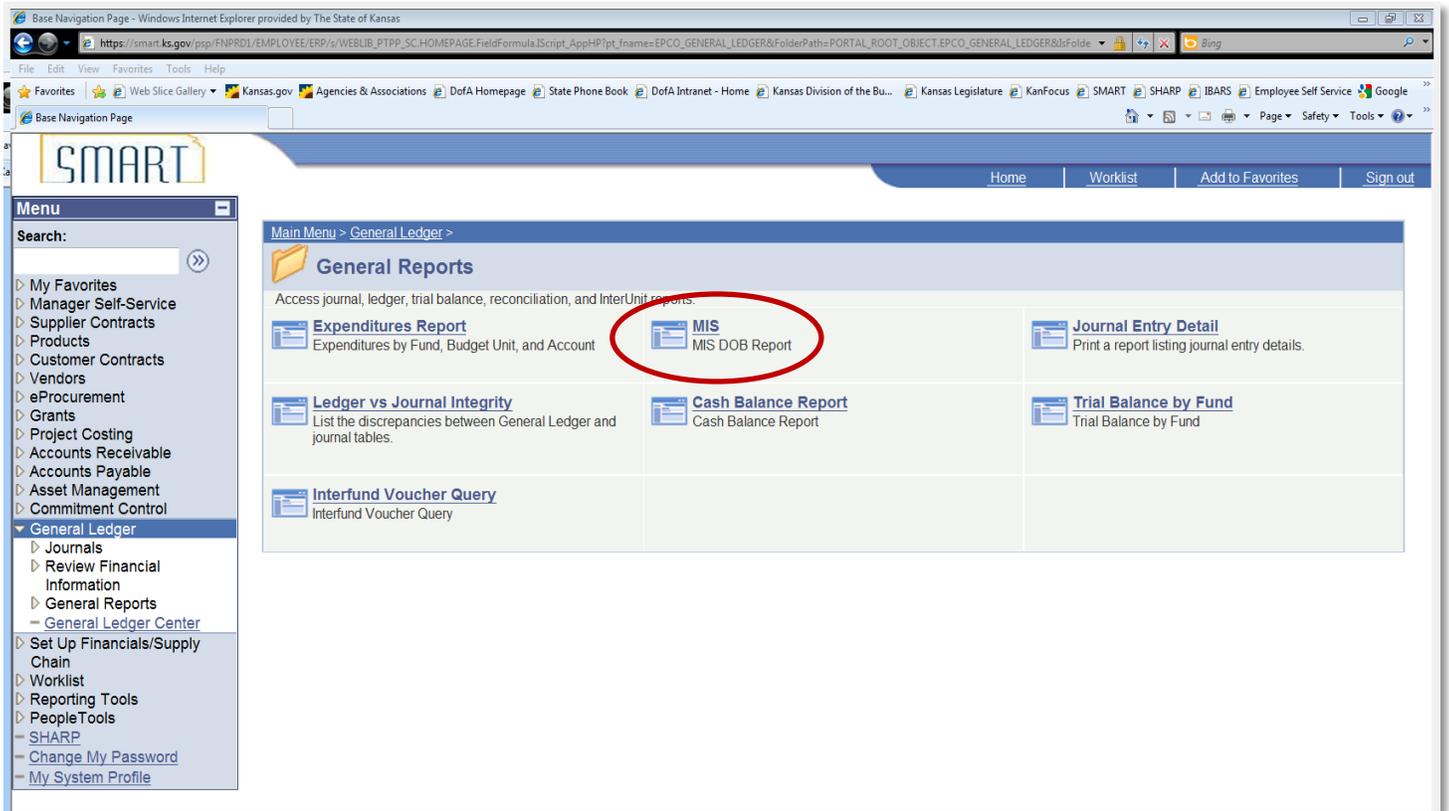
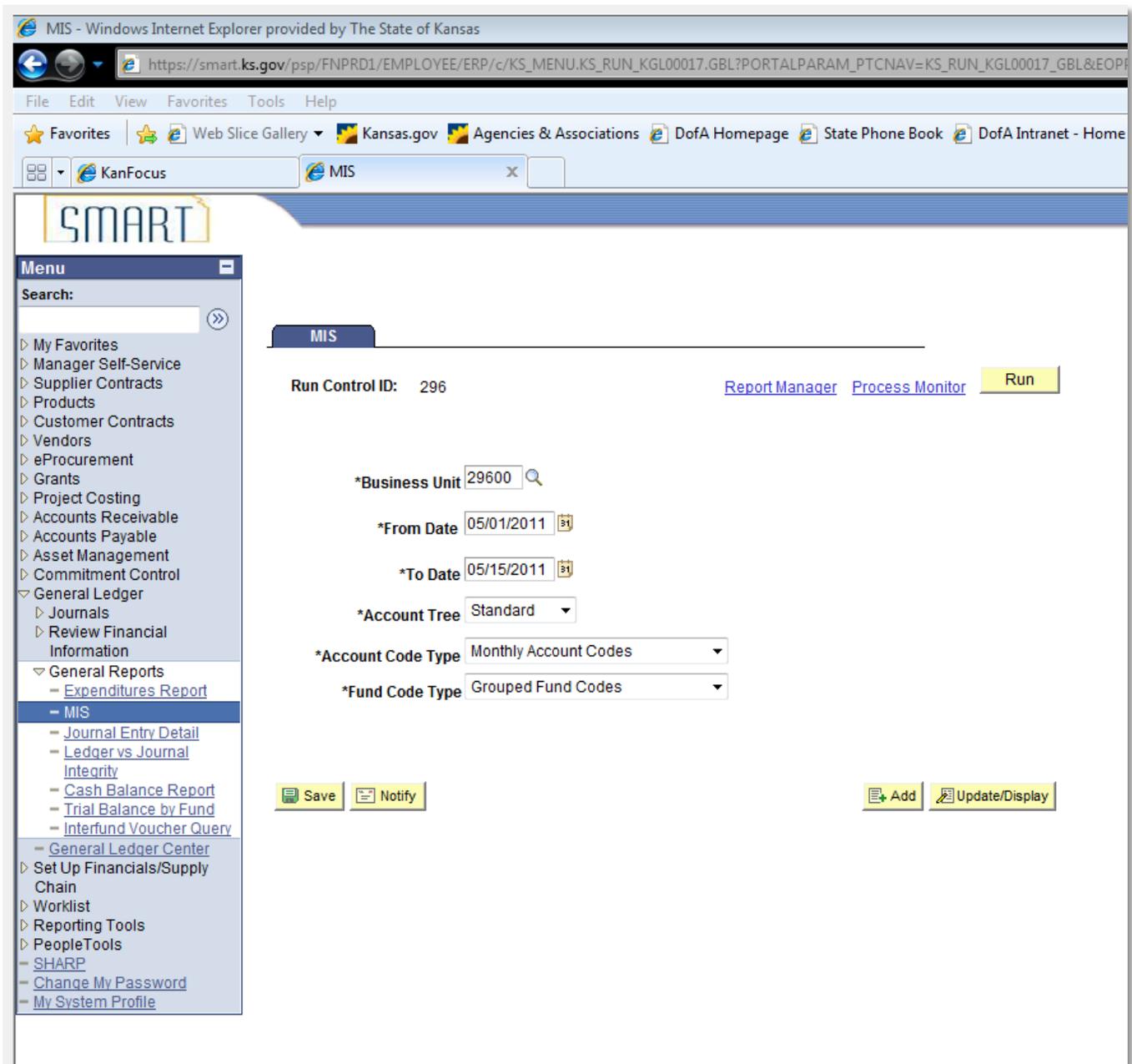
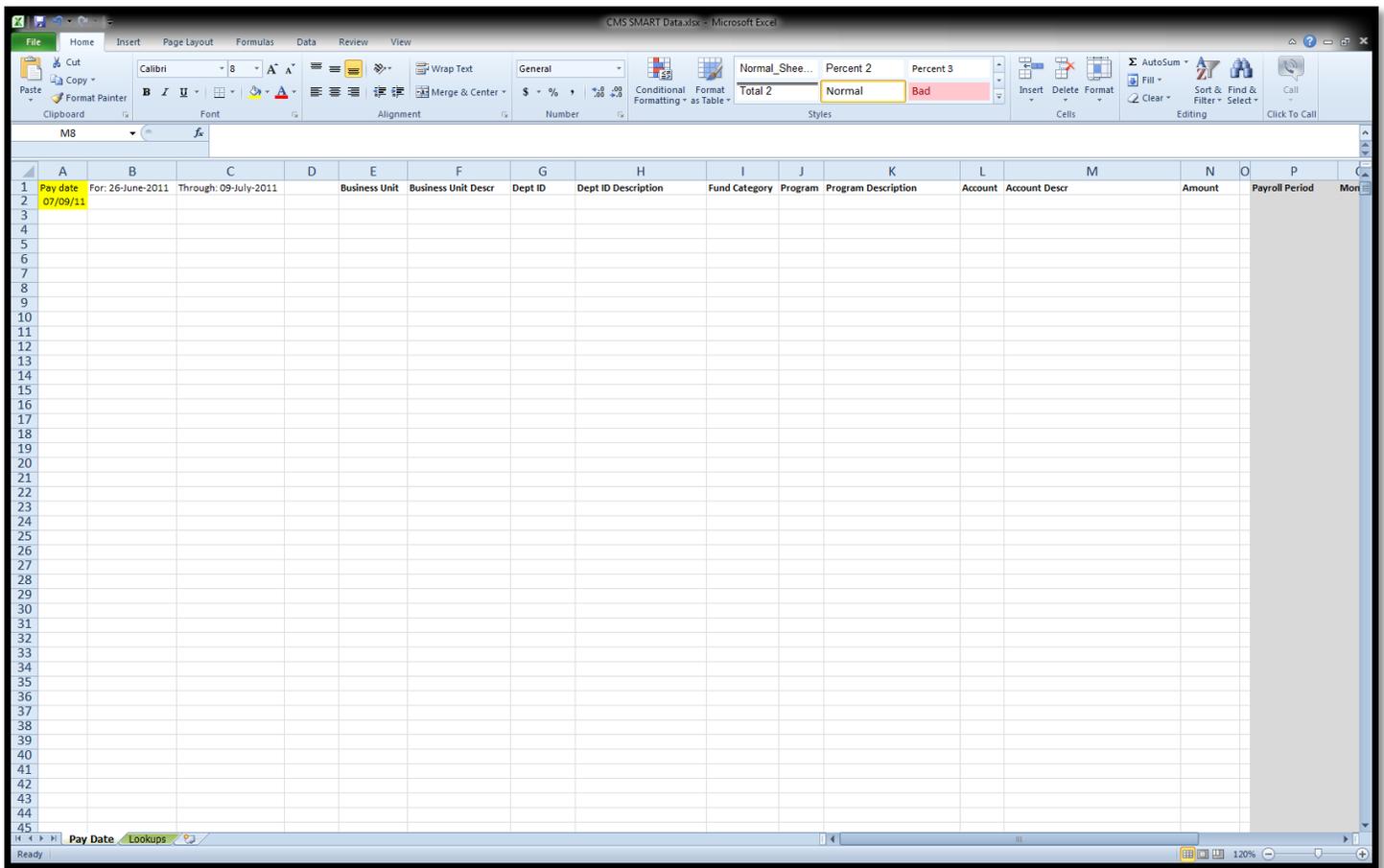


Figure 4



The report will allow the user to copy and paste from the SMART CMS report the data that is necessary for the SMART Data Workbook (**Figure 5**). The workbook contains two areas: data cells and calculated cells. The calculated cells are colored. *No data should be pasted into these cells.* The calculated cells are used to feed data into the pivot tables in the main Outputs Report Workbook. A key cell is the **pay date**, which is highlighted in yellow. This date determines which range of dates is used in the **Period Table** in the Lookup tab. The fields required for the SMART data are indicated in the example below and in the workbook included in the CMS package.

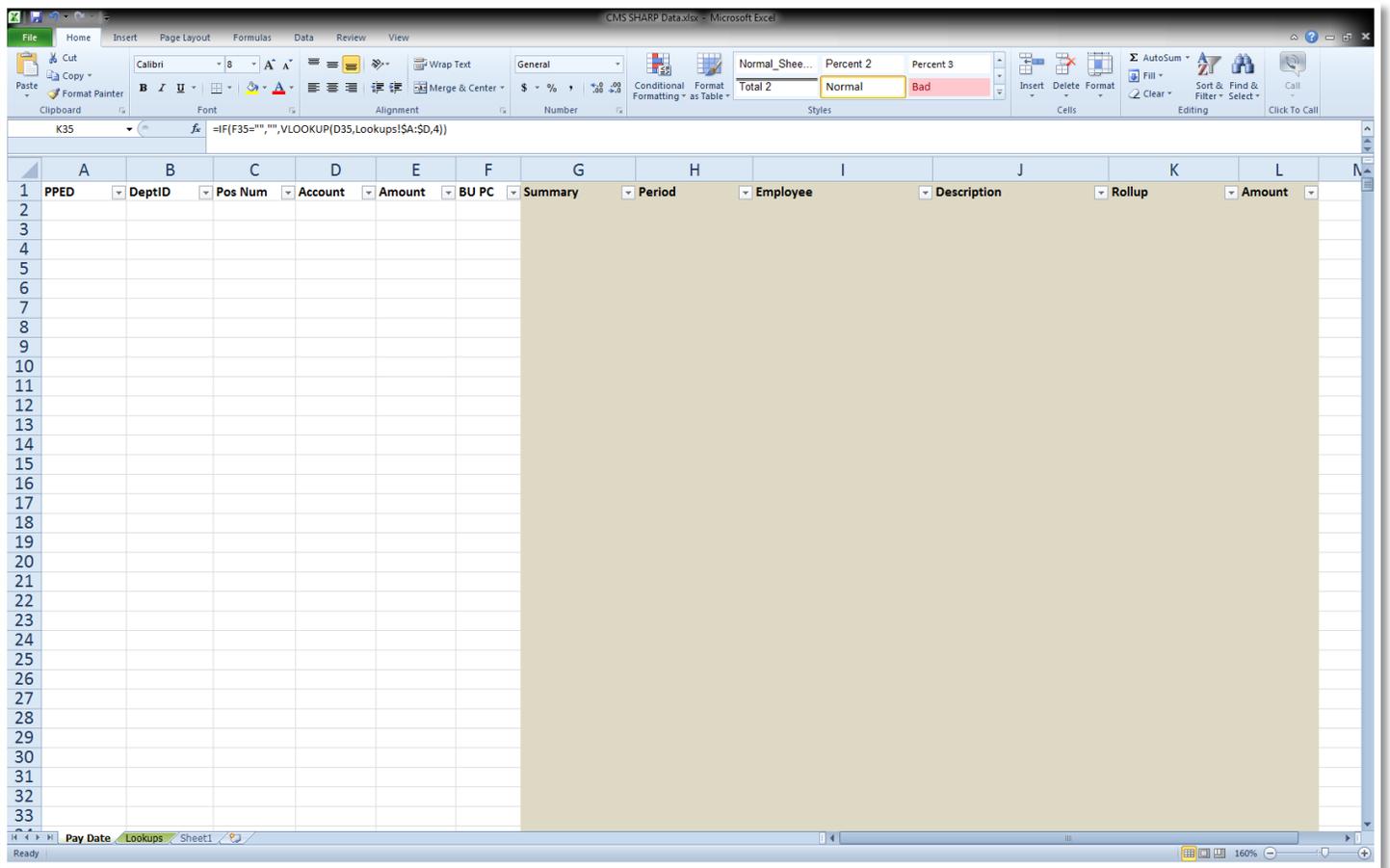
Figure 5



SHARP Data Workbook

The SHARP Data Workbook (**Figure 6**) is very similar to the SMART Data Workbook and also makes use of data cells and calculated cells. The data for the workbook can be obtained by running a query called **KPAYGL5C** in SHARP. It may be necessary to seek assistance from your agency payroll accounting staff. The needed data are indicated in the columns identified in the example below and in the workbook included in the CMS package. Like the SMART workbook, data from this workbook feeds into the Outputs Report Workbook. The workbook contains two areas: data cells (no fill) and calculated cells (colored). No data should be pasted into the calculated cells.

Figure 6



Outputs Collection Workbook

One of the keys to ensuring that CMS is useful for agencies is making the data collection process as efficient as possible. Potentially, large amounts of data from various departments, programs, and employees will need to be collected every period. The Outputs Collection Workbook (**Figure 7**) attempts to make that process as streamlined as possible. The workbook can be placed on a shared drive to allow access by multiple users. The workbook is essential and it feeds data to the Outputs Report.

- **Position Number** – This is the position ID.
- **Employee Name** – By filling in the **Position Number**, the **Employee Name** will automatically populate by using the data in the **Agency Personnel Table** in the **Lookups** tab.
- **Output** – Activity or outcome you wish to measure.
- **Output Time Allocation** – This is the amount of time an employee spent on an activity. It is expressed as a percentage and is an estimate.

In **tab 1 (Figure 8)**, the upper half of the worksheet uses a pivot table to display the department accounting data for the period indicated in the top cell. The information is summarized by department name, expenditure category, and funding source. The pivot table uses information from the SMART Data Workbook and the tables in the Lookup sheet.

The lower half is a table that lists the output names, number of units, allocation of time spent on the output (as a percentage), and the cost per item. The output table draws its information from the Output Collection Workbook; however, the **Cost per Item** column includes calculated cells that uses the accounting data in the pivot table and the outputs to create the per output costs.

Figure 8

Dept ID	Description	Account	SGF	Other	Federal	Total
LMIS		Salaries and Wages	0	6,008	76,685	82,693
		Benefits	0	2,079	28,212	30,291
		Contractual Services	0	5	56,216	56,221
		Commodities	0	2	142,564	142,567
		Premises	0	0	22,848	22,848
		LMIS Total	0	8,094	326,526	334,620
		Grand Total	0	8,094	326,526	334,620

Program A	Units	% Allocation	Cost per Item
Output 1	0	0%	-
Output 2	0	0%	-
Output 3	0	0%	-
Output 4	0	0%	-
Output 5	0	0%	-
Output 6	0	0%	-
Output 7	0	0%	-
Output 8	0	0%	-
Output 9	0	0%	-
Output 10	0	0%	-
Output 11	0	0%	-
Grand Total	0	0%	-

Tab 2 contains output and cost data on a per person basis. **Figures 9 and 10** show the blank sheets with column headings while **Figure 11** provides an example with data filled in. Each row of data includes the following columns:

Staff – This is a listing of staff within a department or program. These cells are linked to the employee list in the Outputs Collection Workbook.

Salary and Benefits – This is a listing of each employee’s salary and benefits. The information is derived from the SHARP Table data tab.

Other Direct Costs – These cells use information from the pivot table in **tab 1**. In most cases, the other direct costs will be spread evenly among department staff. In the current setup, the cells take the total costs, excluding salaries and wages, and divide them by the total number of employees. Agencies may incorporate their own methods for allocating these costs.

Total Employee Costs – This is the employee’s Salaries and Wages plus the prorated Other Direct Costs and equals employee costs for the specified period.

Program Outputs – This lists the number of outputs for each employee. The information is pulled from the Outputs Collection Workbook.

Program Time Spent on Outputs – This lists the percentage of time each employee spends on each output. The information is pulled from the Outputs Collection Workbook.

Program Employee Cost Per Output – These are cells that calculate the cost of each output for each employee using the Total Employee Costs, the percentage of time spent on each output, and the number of each output.

Sum of Employee Cost Per Output – This adds together each of the output costs for each employee. The cells are conditionally formatted so that quick analysis of the costs can be accomplished.

Figure 9

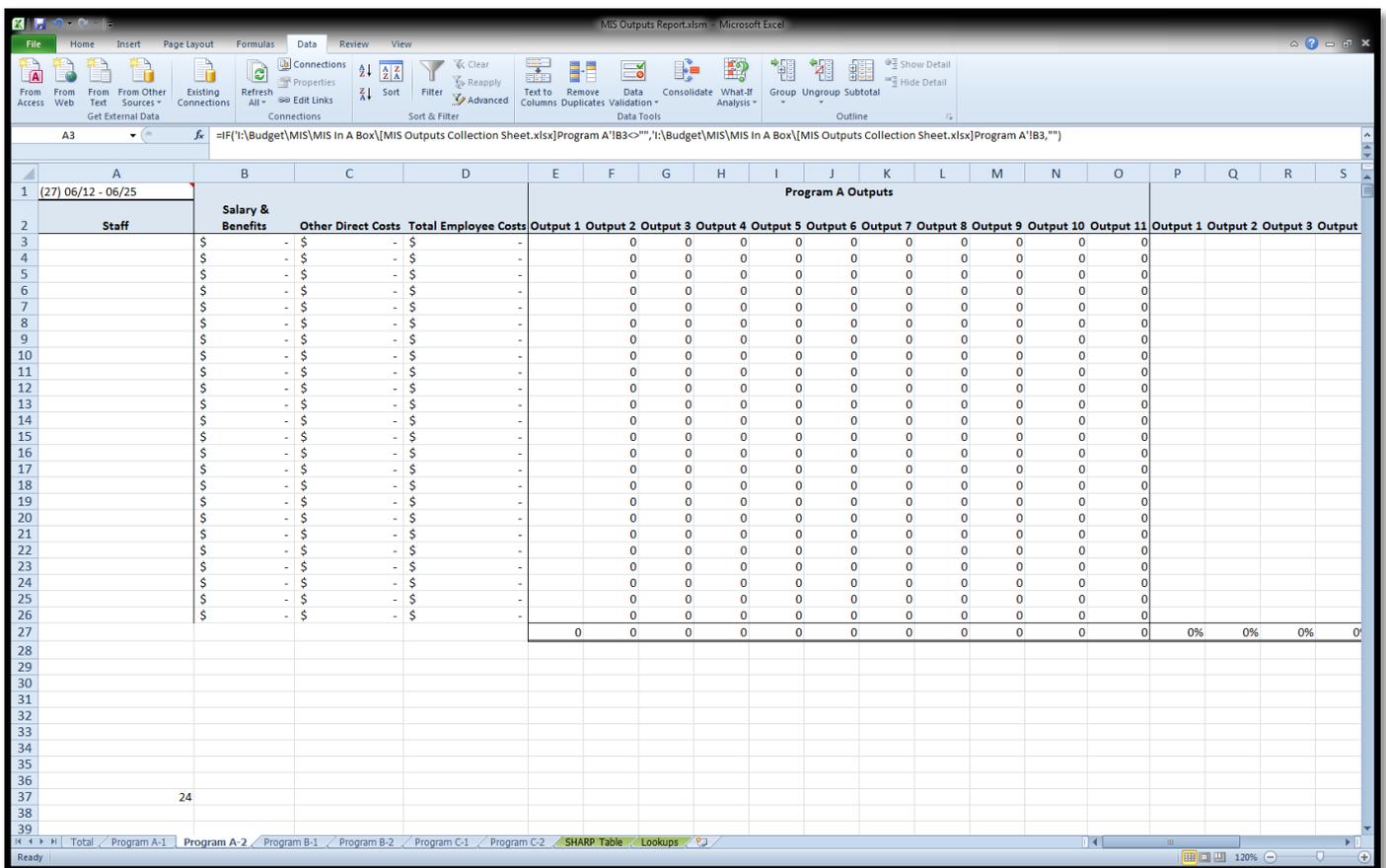


Figure 11

1	A	B			C			D			E			F			G			H			I			J			K			L			M			N		
	Garden & Nursery Examiners	Staff	Salary & Benefits	Other Direct Costs	Total Employee Costs	Number of Nursery Inspections	Number of Big Box Inspections	Number of Lanscaper Inspections	% of Nursery Inspections	% of Big Box Inspections	% of Lanscaper Inspections	Nursery Inspections	Big Box Inspections	Lanscaper Inspections	Total Employee Cost Per Output																									
3	SMITH, GORDON	\$ 2,446.00	\$ 1,059.75	\$ 3,505.75	3	0	1	60%	0%	5%	\$ 701.15		\$ 175.29	\$ 876.44																										
4	DAVIS, RACHEL	\$ 2,122.00	\$ 1,059.75	\$ 3,181.75	8	2	2	57%	15%	12%	\$ 226.70	\$ 238.63	\$ 190.91	\$ 656.24																										
5	BAILEY, SANDRA	\$ 2,122.00	\$ 1,059.75	\$ 3,181.75	6	1	3	54%	7%	20%	\$ 286.36	\$ 222.72	\$ 212.12	\$ 721.20																										
6	JEFFERSON, ANDREW	\$ 1,886.00	\$ 1,059.75	\$ 2,945.75	4	1	2	50%	10%	17%	\$ 368.22	\$ 294.58	\$ 250.39	\$ 913.18																										
7					21	4	8	55%	8%	14%	\$ 395.61	\$ 251.98	\$ 207.17	\$ 791.76																										

Period Data Workbook

As mentioned above, the real value of CMS is being able to track over time the unit costs that are calculated every period, which is about every two weeks. When the unit cost trends are graphed, managers will have a powerful tool to evaluate recent department costs and outcomes. The **Period Data Workbook (Figure 12)** records each output unit cost for each period.

Payroll Period – This is the same listing found in the Lookups tabs for each workbook.

Period – The payroll periods are translated to the 26 pay periods within a fiscal year.

Output Data – For each output, there are two columns of data: the number of **Units** and the **Cost Per Unit**.

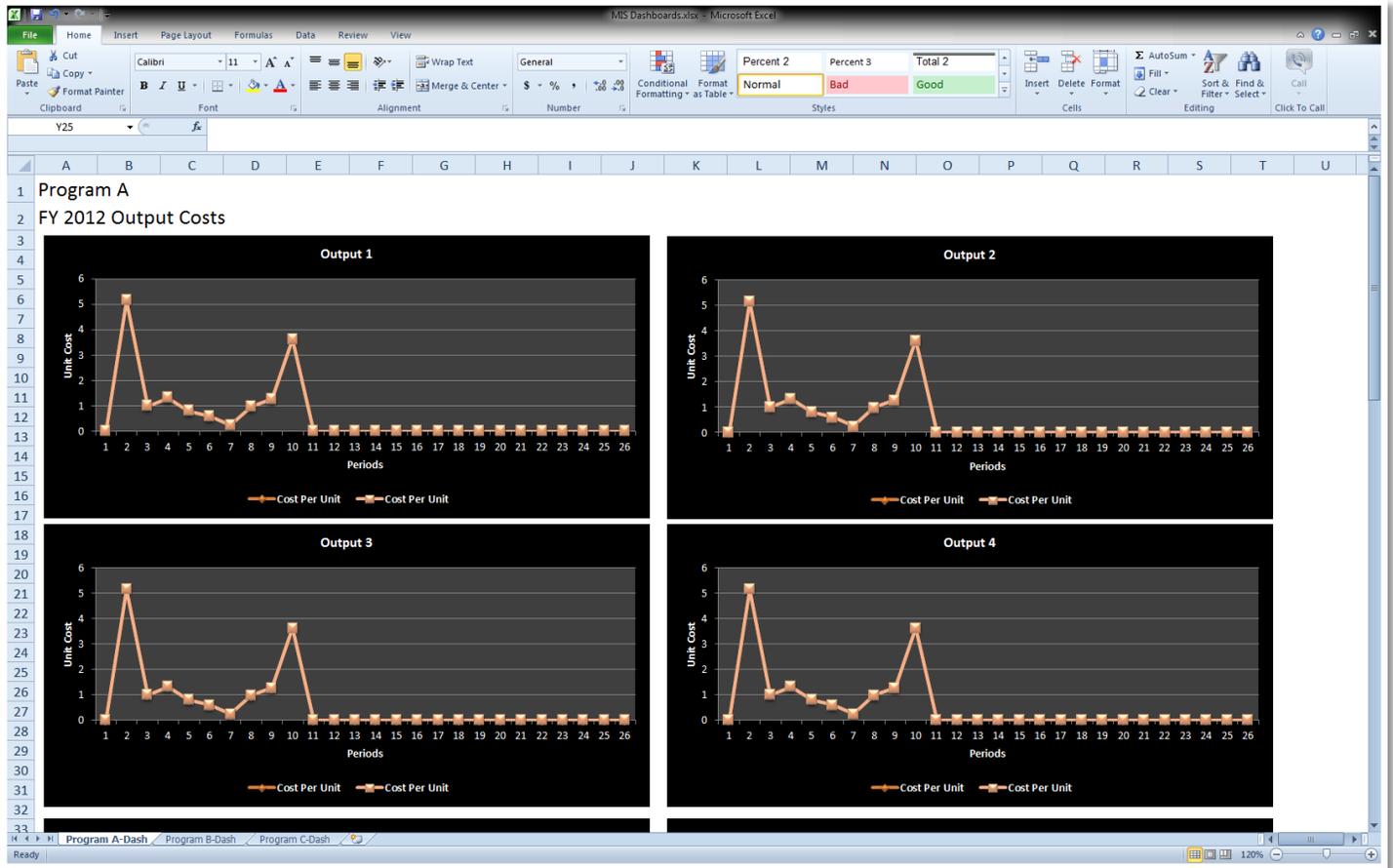
Figure 12

1	2	3	Output 1		Output 2		Output 3		Output 4		Output 5		Output 6		Output 7		Output 8		Output 9	
			Period	Units	Cost Per Unit	Units														
4	(27) 06/12 - 06/25	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	(28) 06/26 - 07/09	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	(29) 07/10 - 07/23	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	(30) 07/24 - 08/06	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	(31) 08/07 - 08/20	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	(32) 08/21 - 09/03	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	(33) 09/04 - 09/17	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	(34) 09/18 - 10/01	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	(35) 10/02 - 10/15	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	(36) 10/16 - 10/29	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	(37) 10/30 - 11/12	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	(38) 11/13 - 11/26	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	(39) 11/27 - 12/10	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	(40) 12/11 - 12/24	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	(41) 12/25 - 01/07	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	(42) 01/08 - 01/21	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	(43) 01/22 - 02/04	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	(44) 02/05 - 02/18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	(45) 02/19 - 03/03	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	(46) 03/04 - 03/17	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	(47) 03/18 - 03/31	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	(48) 04/01 - 04/14	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	(49) 04/15 - 04/28	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	(50) 04/29 - 05/12	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	(51) 05/13 - 05/26	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	(52) 05/27 - 06/09	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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Dashboard Workbook

The Dashboard Workbook (**Figure 13**) allows users to place on a manager’s computer a graphical representation of each program’s or department’s performance. Instead of wading through the complicated data sets in each of the workbooks, the Dashboard Workbook allows a manager to quickly analyze period results and trends; and look for areas that require investigation. The CMS download includes a simple dashboard that is ready to use. However, agencies should feel free to modify or create their own trend-line displays.

Figure 13



CMS: Step-by-Step

Operating the CMS requires familiarity with pivot tables, lookup formulas, and linking functions in Excel.

1. Fill out the **Department Information Table** and the **Agency Personnel Table** in each Lookups worksheet in each workbook of the CMS template. If necessary, adjust the date ranges and the corresponding payroll periods in the **Period Table**.
2. Download financial data from SMART using query. The path to the query in SMART is: **General Ledger: General Reports: MIS**. Copy the SMART data from the following columns: **Business Unit; Business Unit Descr; Dept ID; Dept ID Description; Fund Category; Program; Program Description; Account; Account Descr;** and **Amount**. Paste the data into the corresponding fields in the **SMART Data Workbook**.
3. Download payroll data using the KPAYGL5C query. Copy the SHARP data from the following fields: **PPED; Dept ID; Pos Num; Account;** and **BU PC**. Paste the data into the corresponding fields in the **SHARP Data Workbook**.

Note: Because the data from the KPAYGL5C query is in a different format, it may be necessary to change the format of the dates in the PPED column so that it is compatible with the Lookup tables. The dates in the KPAYGL5C are in a “General” format while the dates in the SHARP Data Workbook are in a “Custom” format to match the dates in the Lookup tables. When copying the data from the query into the workbook, make sure to select “Match Destination Formats” under the pasting options.

4. For the **Outputs Collection Workbook**, ensure that each department or program name is designated on each tab. Add sheets if necessary. Each employee for each department or program must have a row. Place the workbook on a shared drive. Ensure that all data in the **Outputs Collection Workbook** is completed each period by designated staff.
5. For the **Outputs Report Workbook**, ensure that each department or program name is designated on each tab. If necessary, add sheets by copying existing sheets. Make sure that each department or program has two tabs. For example, Administration-1 and Administration-2.
6. In the **Outputs Report Workbook**, update all formulas to reflect source data names. Most of the updates are required in the **tab 2** sheets for the formulas that link data to the **Outputs Collection Workbook**. The CMS template uses generic program names as placeholders throughout the workbook formulas. It is necessary to change the generic names to the specific names that will be used by the agency. This is very important and represents the underlying functionality of CMS. Examples of this are provided in **Figure 14** and **Figure 15**.
7. In the **Outputs Report Workbook**, update all pivot tables to reflect source data names. This can be done by clicking in the pivot table and selecting Change Data Source (**Figure 16**).

- Refresh the data in the **Outputs Report Workbook** by going to the Data ribbon and clicking Refresh All. This will establish the data links to the appropriate workbooks.

Figure 14

The screenshot shows an Excel spreadsheet titled "MIS Outputs Report.xlsm". The formula bar at the top displays the formula: `=!:\Budget\MIS\MIS In A Box\[MIS Outputs Collection Sheet.xlsx]Program A!C2`, which is circled in red. The spreadsheet contains a table with columns for Dept ID, Description, Account, and various cost categories (SGF, Other, Federal, Total). Below this is a section for "Program A" with columns for Units, % Allocation, and Cost per Item, listing outputs 1 through 11 and a Grand Total.

Dept ID	Description	Account	SGF	Other	Federal	Total
LMIS	Salaries and Wages		0	6,008	76,685	82,693
	Benefits		0	2,079	28,212	30,291
	Contractual Services		0	5	56,216	56,221
	Commodities		0	2	142,564	142,567
	Premises		0	0	22,848	22,848
LMIS Total			0	8,094	326,526	334,620
Grand Total			0	8,094	326,526	334,620

Program A	Units	% Allocation	Cost per Item
Output 1	0	0%	-
Output 2	0	0%	-
Output 3	0	0%	-
Output 4	0	0%	-
Output 5	0	0%	-
Output 6	0	0%	-
Output 7	0	0%	-
Output 8	0	0%	-
Output 9	0	0%	-
Output 10	0	0%	-
Output 11	0	0%	-
Grand Total	0	0%	-

Figure 15

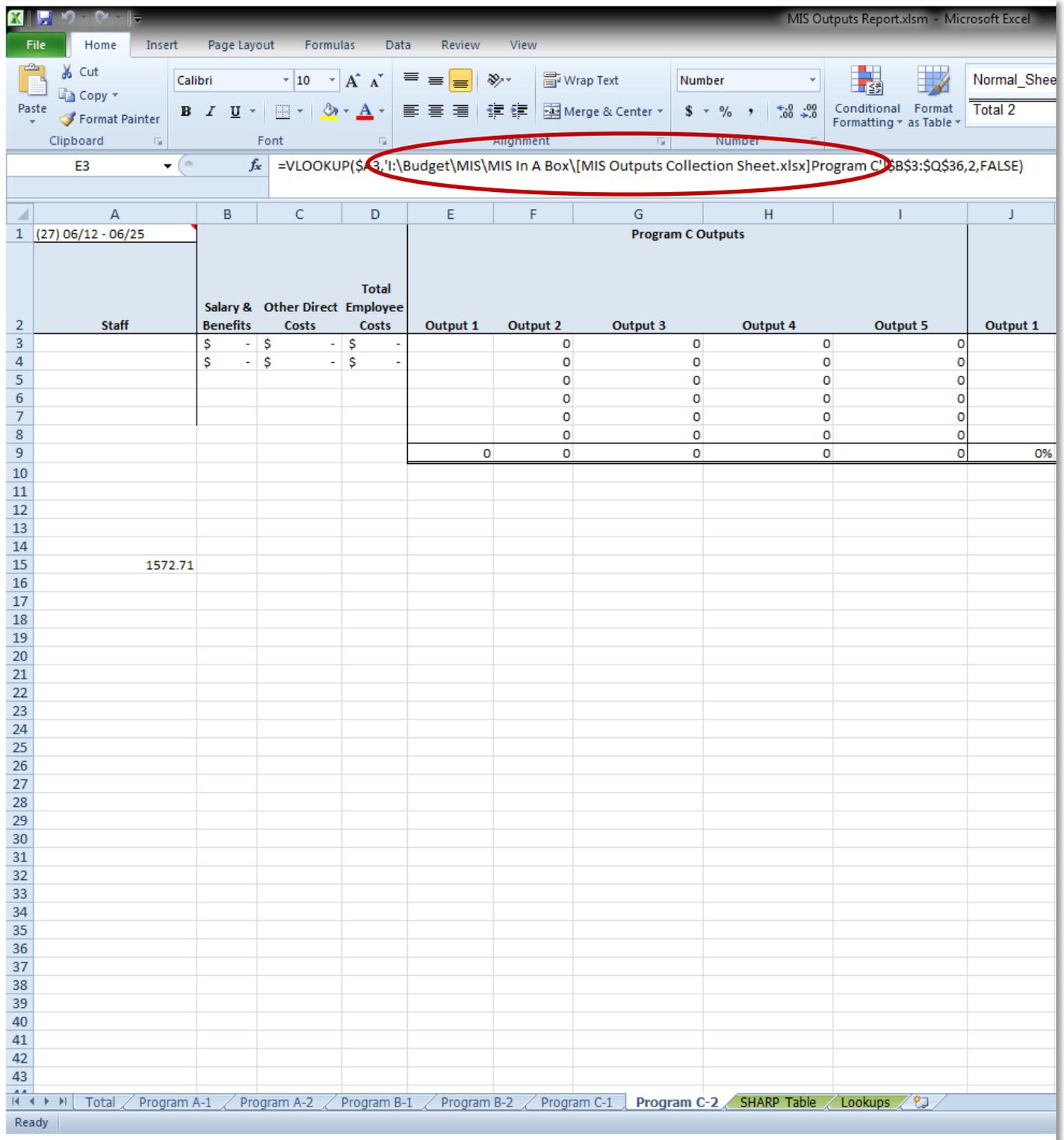
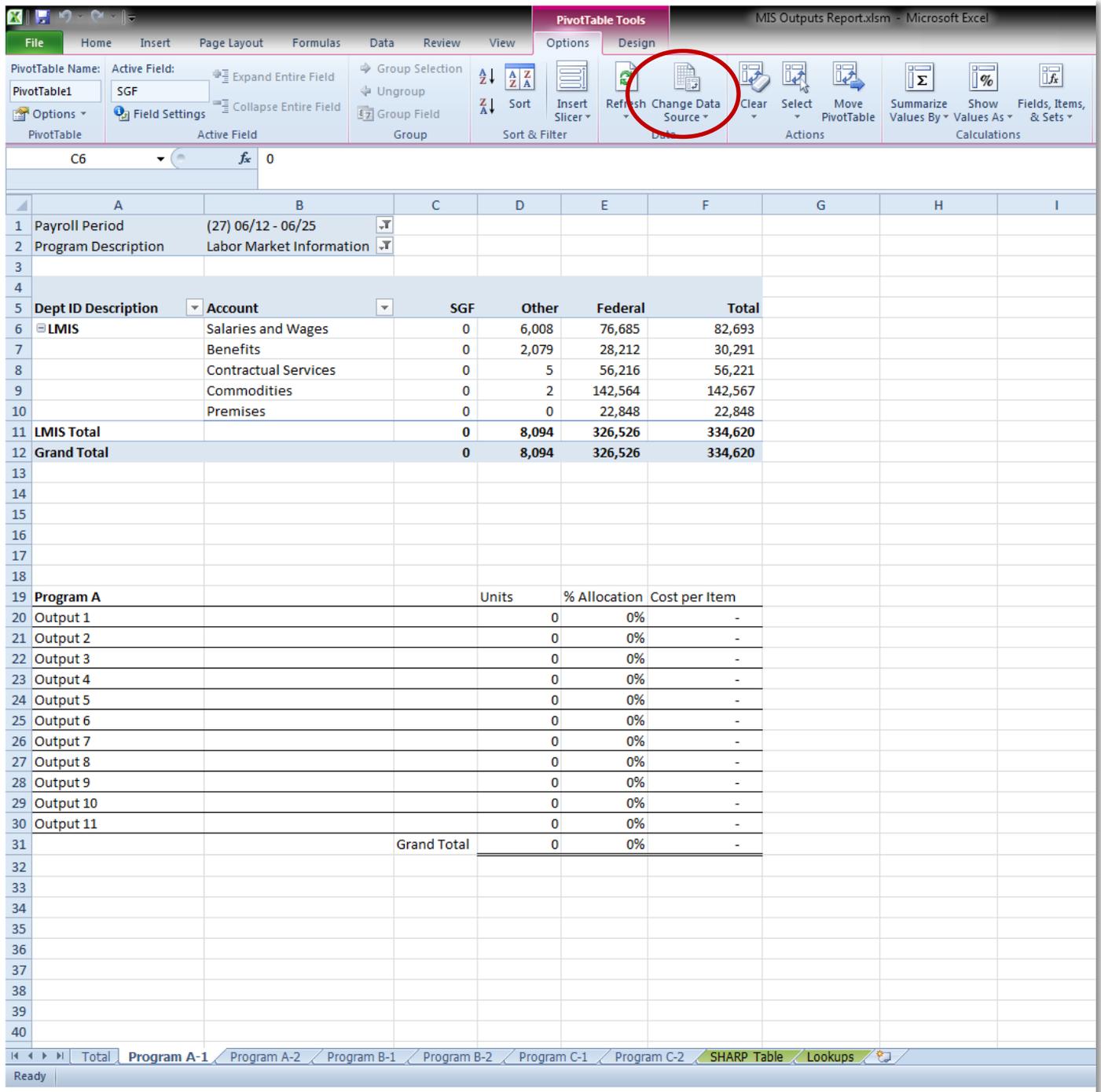


Figure 16



- In each pivot table in the **Outputs Report Workbook** there are cells with a filter button next to Program Descriptions and Payroll Period (**Figure 17**). Click on the filter button and select the date in the menu. This will load the pivot table with the SMART accounting data. Do this for all of the **tab 1** sheets.

Figure 17

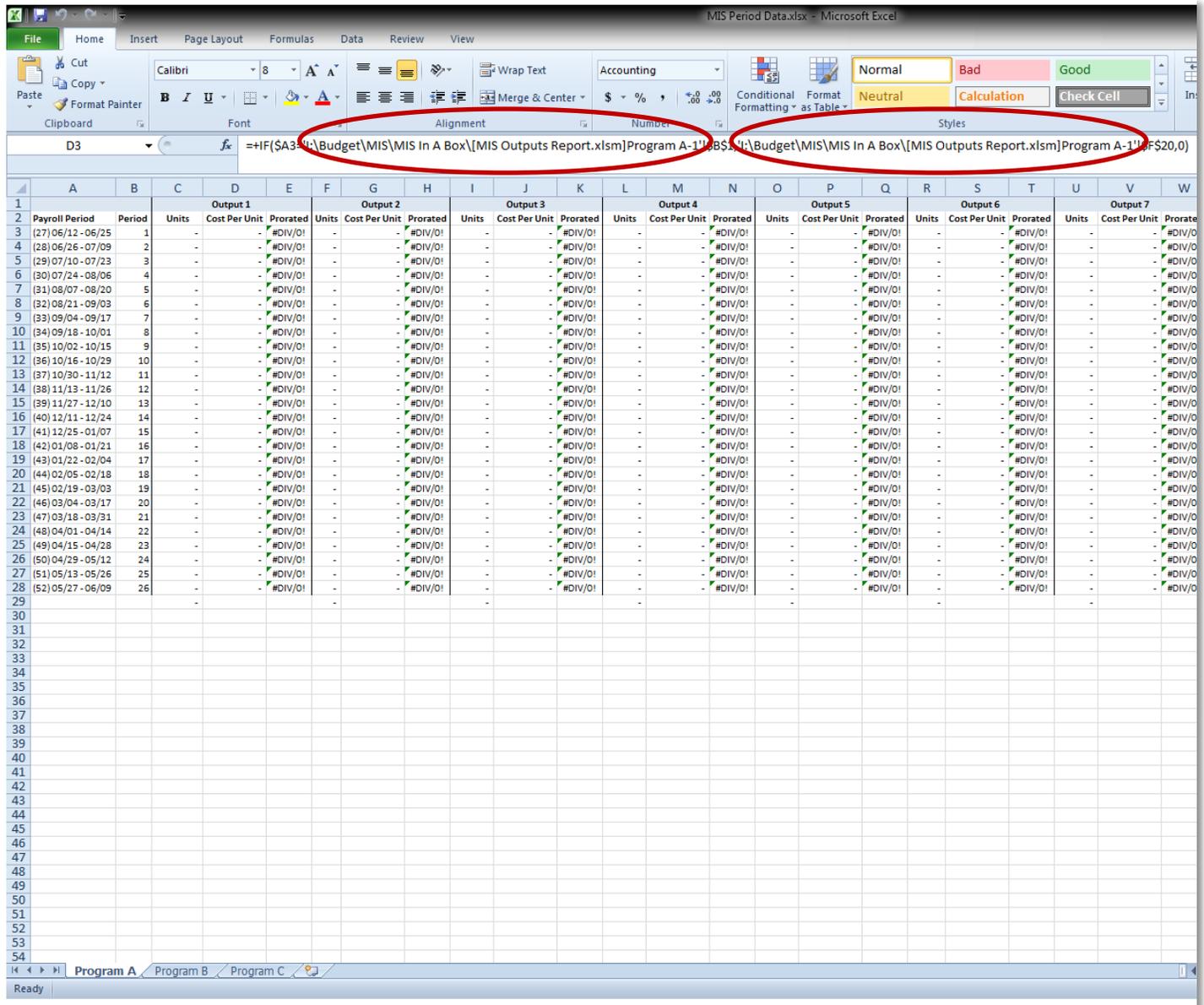
Dept ID	Description	Account	SGF	Other	Federal	Total
LMIS		Salaries and Wages	0	6,008	76,685	82,693
		Benefits	0	2,079	28,212	30,291
		Contractual Services	0	5	56,216	56,221
		Commodities	0	2	142,564	142,567
		Premises	0	0	22,848	22,848
LMIS Total			0	8,094	326,526	334,620
Grand Total			0	8,094	326,526	334,620

Program A	Units	% Allocation	Cost per Item
Output 1		0	0%
Output 2		0	0%
Output 3		0	0%
Output 4		0	0%
Output 5		0	0%
Output 6		0	0%
Output 7		0	0%
Output 8		0	0%
Output 9		0	0%
Output 10		0	0%
Output 11		0	0%
Grand Total		0	0%

10. In the **SHARP Table** worksheet, refresh or update the data in the pivot table. The data in this pivot table is used for the Program 2 sheets.

11. Ensure **Period Data Workbook** is capturing new period data. This will require changing the generic program names used in the CMS template formulas (**Figure 18**).

Figure 18



12. Ensure new period data is reflected in graphs. This will require updating the graph source data references.

Questions & Comments

Any issues or questions relating to CMS can be directed to Brendan Yorkey in the Division of the Budget.

Brendan can be reached at brendan.yorkey@budget.ks.gov and **785-296-2436**.