Vermont State Budget Overview

CLE Training

October 8, 2020

Stephen Klein, Chief Fiscal Officer

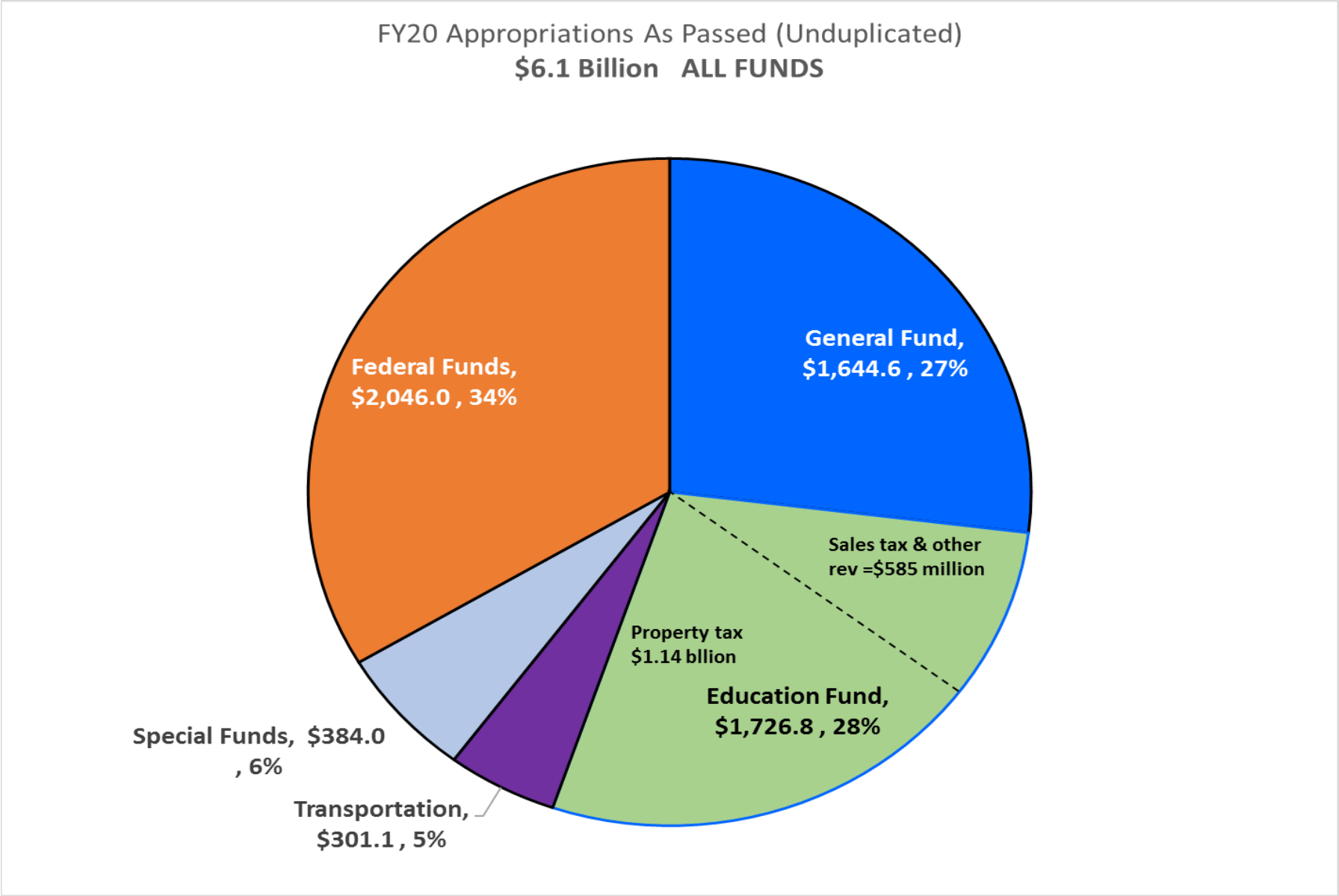
Vermont Legislative
JOINT FISCAL OFFICE

Learning Objectives

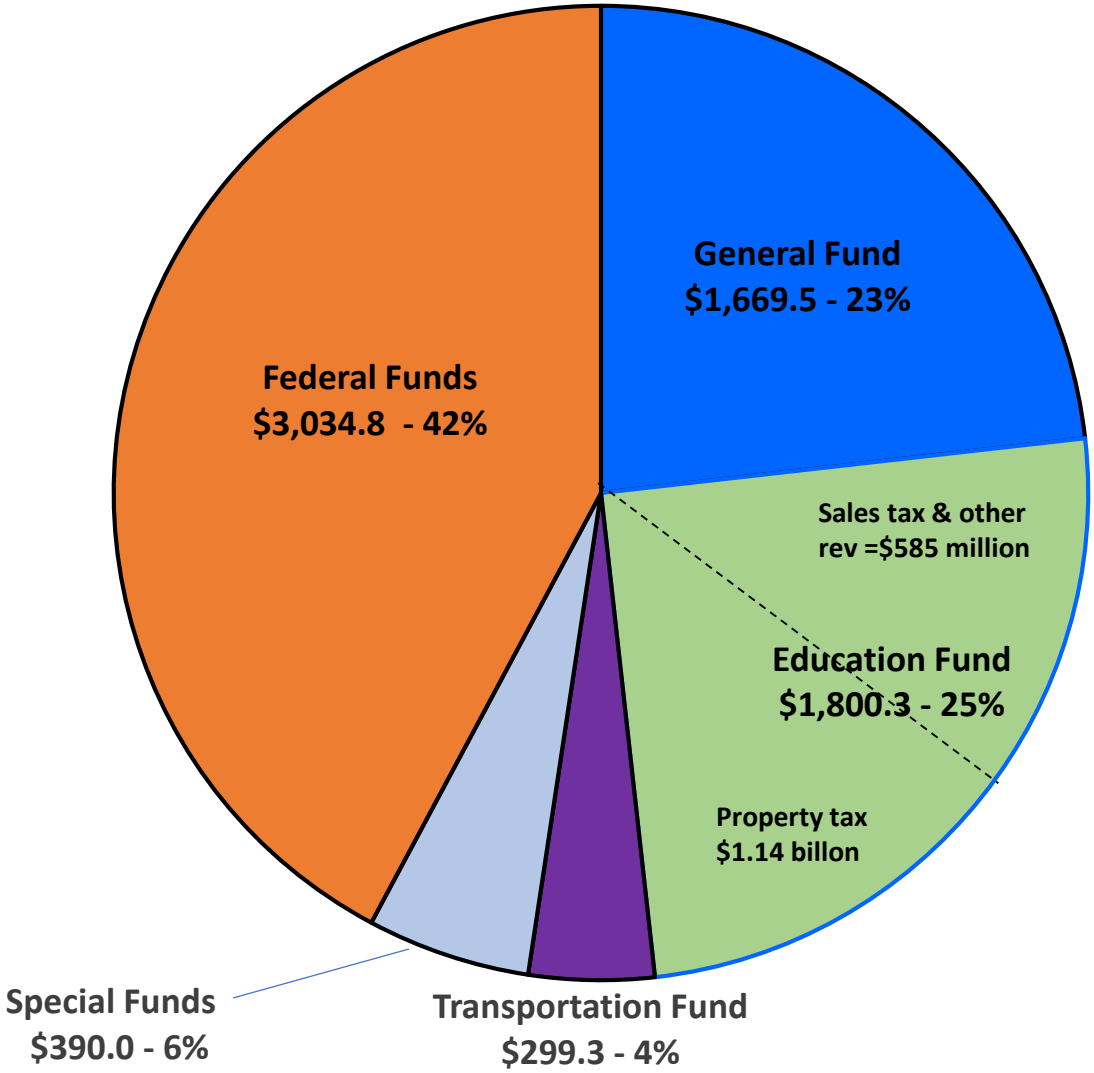
- Describe the budgetary impacts of COVID-19 for Vermont.
- Identify the strengths and weaknesses of the Federal response as it pertains to the Vermont budget.
- Explain budgetary lessons for the future.

Vermont Legislative
JOINT FISCAL OFFICE

FY 20 Budget As Passed (June 2019) Before Budget Adjustments



FY 2021 Appropriations As Passed (Unduplicated)
$7.2 Billion ALL FUNDS



OVERVIEW

This presentation will focus on:

- The pandemic and State and local funding from CARES
  - Amount
  - Context
  - Questions

- Building the Budget for FY 2022
  - Revenue picture
  - Spending picture
  - The solutions

- Future Issues

Vermont Legislative
JOINT FISCAL OFFICE

THE CARES STATE AND LOCAL FUNDING

Vermont has received a lot of CARES funding:

- Vermont has just under .2% of the total U.S. population (U.S. population is approximately 331 million).

- Based on Vermont's population, our share of CARES funds would have been just under $300 million. Vermont received $1.25 billion – more than 4 times our population-based share.

- Per capita – Vermont received just over $2,000.
  - NY and CA received $387; Texas received $389.
  - New Jersey received $390 and issued debt to meet costs.
  - With 21 states receiving the minimum, the remaining states' average were less. Other states face very different spending issues.

Vermont Legislative
JOINT FISCAL OFFICE

Further Change in Funding and Rules are Likely

- Vermont remains well positioned in this Congress.
- The rules and money are subject to change.
- The rules impacting existing funds and the level of funds could change dramatically in the near future...days, weeks, months?
- This makes decisions about spending, evaluation, and program design all open for debate.

Vermont Legislative
JOINT FISCAL OFFICE

Five Impacts the Pandemic has had on the State's Finances

1. Imposed immediate direct financial pressures.
2. Created State and local revenue shortfalls.
3. Weakened State institutions and exacerbated liabilities and areas of underfunding.
4. Required adjusting to a new world–planning, strategic support, and redesign of institutions and services has been critical.
5. Imposed substantial cost in terms of the time spent on fitting resources into needs and assessing appropriateness.

Vermont Legislative
JOINT FISCAL OFFICE

Parameters Determining the Use of CARES Funds

1. Are necessary expenditures incurred due to the public health emergency with respect to the Coronavirus Disease 2019 (COVID–19);

2. Were funds not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the State or government; and

3. Were costs incurred during the period that begins on March 1, 2020 and ends on December 30, 2020?

- Much subsequent guidance was issued

Vermont Legislative
JOINT FISCAL OFFICE

Links for more information – Guidance is regularly updated

September 21, Coronavirus Relief Fund. Reporting and Record Retention Requirements:

https://www.oversight.gov/sites/default/files/oig-reports/OIG-CA-20-027.pdf

September 2, 2020 Guidance:
https://home.treasury.gov/system/files/136/Coronavirus-Relief-Fund-Guidance-for-State-Territorial-Local-and-Tribal-Governments.pdf

September 2, FAQ's:

https://home.treasury.gov/system/files/136/Coronavirus-Relief-Fund-Frequently-Asked-Questions.pdf

Reporting and record keeping:

https://ljfo.vermont.gov/assets/Subjects/Congressional-and-Federal-Resources/0a54d2444a/Treasury-Office-of-Inspector-General-Coronavirus-Relief-Fund-Recipient-Reporting-and-Record-Keeping-Requirements-OIG-CA-20-021-003.pdf

Vermont Legislative
JOINT FISCAL OFFICE

Where does this leave Vermont?

- Do we strictly follow rules that we expect to change, possibly limiting effective use of the funds?
- Do we take risks that may require paybacks?
- Does the nature of the evaluation process impact spending; impact effective use? Eventual paybacks?
- The Legislature and the Administration have identified areas where risks are worth taking, including housing, broadband, and others.
- As indicated above, considering the amount of money involved in Vermont, these choices are real and may have large impacts.

Vermont Legislative
JOINT FISCAL OFFICE

Development of the FY 2022 Budget

Current revenue forecasts, less expenditure projections, indicate an unmet budget pressure for FY 2022 of $200 million, or more.

- The General Fund (GF) forecast for FY 2022 is roughly $95 million over FY 2021.
- FY 2021 relied on nonrecurring revenue. To fund the same level of expenditures in FY 2022 would require $41 million more revenue than is currently projected.
- FY 2022 ongoing and one time expenditure pressures are $160–$185 million.

Vermont Legislative
JOINT FISCAL OFFICE

How does a $200M +/- pressure get solved?

- Budget instructions to departments and agencies requiring level funding?
- The temporary higher pandemic Federal Medicaid match (FMAP) continues? $23 million per quarter.
- Remaining $:
  - A revenue upgrade (we are tracking well)?
  - Further savings from the CRF funds resulting in more reversions or other offsets?
  - Use of full reserves? Stabilization Reserve (80), Rainy Day Funds (32) Caseload Reserves (96).
  - Further federal relief?
  - Other?

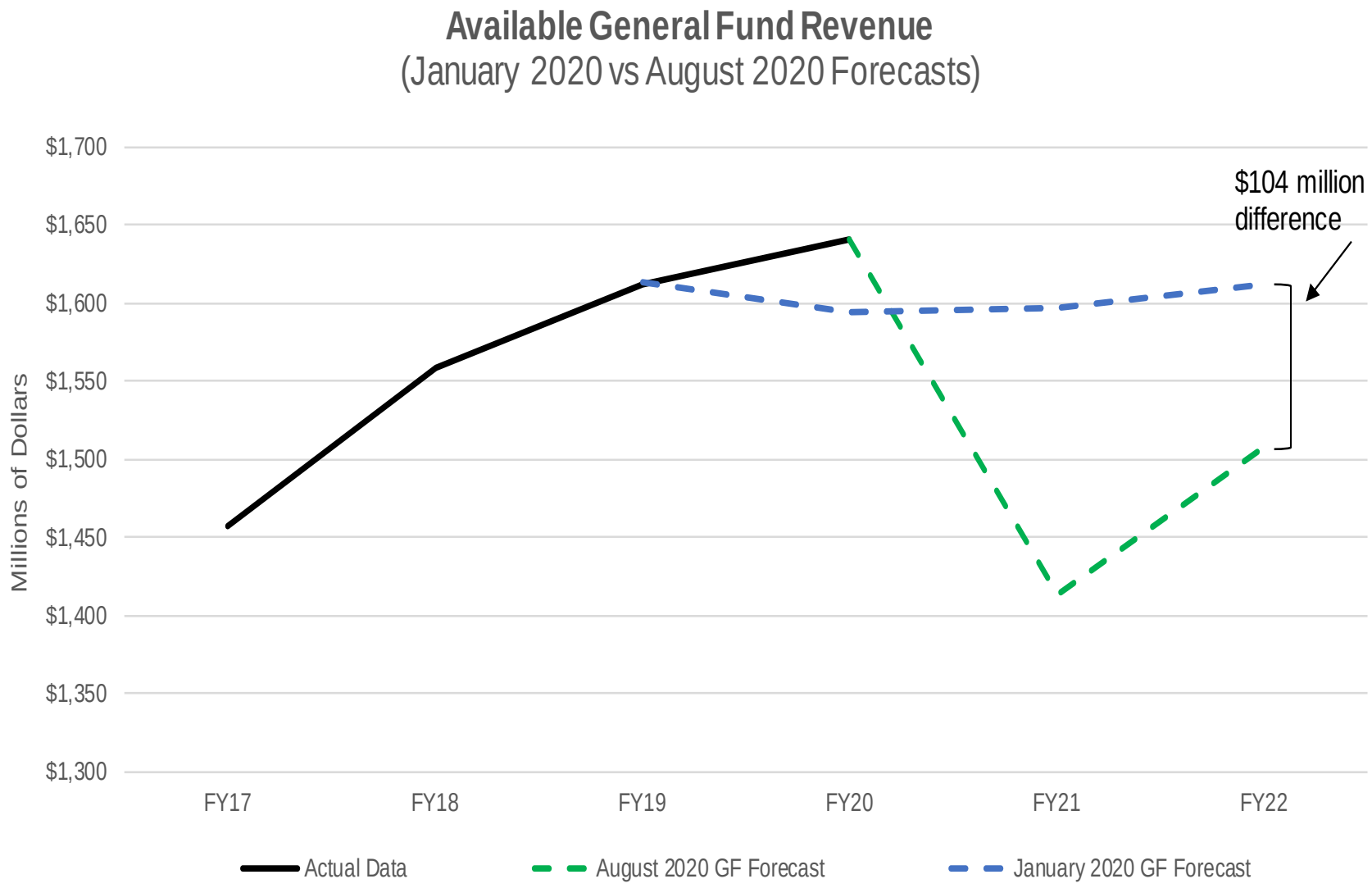
Vermont Legislative
JOINT FISCAL OFFICE

The long term: Issues in Vermont and governmental design

- The pandemic may permanently change how we function.
  - What will service delivery look like moving forward?
  - What will space needs be?
    - *Less due to remote work? More due to social distancing?*
  - How does it impact Vermont institutions?
    - *Higher Ed, Health Care, Human Services, PreK–12 Education?*
  - How does Vermont plan for this type of disruption?
  - How will it impact Vermont's economy and social structure?

- The work we do is couched in these questions–flexibility and redesign will be part of our lives.

Vermont Legislative
JOINT FISCAL OFFICE



Note: Policy changes occured from FY17 through FY20 that reduced available General Fund revenue

Other Resources

Vermont COVID-19 Relief Tracker and Spending Summary:

https://ljfo.vermont.gov/subjects/covid-19-documents/coronavirus-relief-fund-allocation-trackerJFO

General COVID-19 Relief Documents:

https://ljfo.vermont.gov/subjects/covid-19-documents

FY 2021 Budget Documents:

https://ljfo.vermont.gov/subjects/appropriations-and-budget/fy-2021

Vermont Legislative
JOINT FISCAL OFFICE

QUESTIONS?

Thank you

Vermont Legislative
JOINT FISCAL OFFICE

Programmatic and Performance Measure Budgeting

October 8, 2020

VERMONT

LEARNING OBJECTIVES

- Describe Programmatic and Performance Measure Budgeting
- Identify programs and associated performance measures
- Identify how to assess programmatic success

VERMONT

CONTENT BREAKDOWN

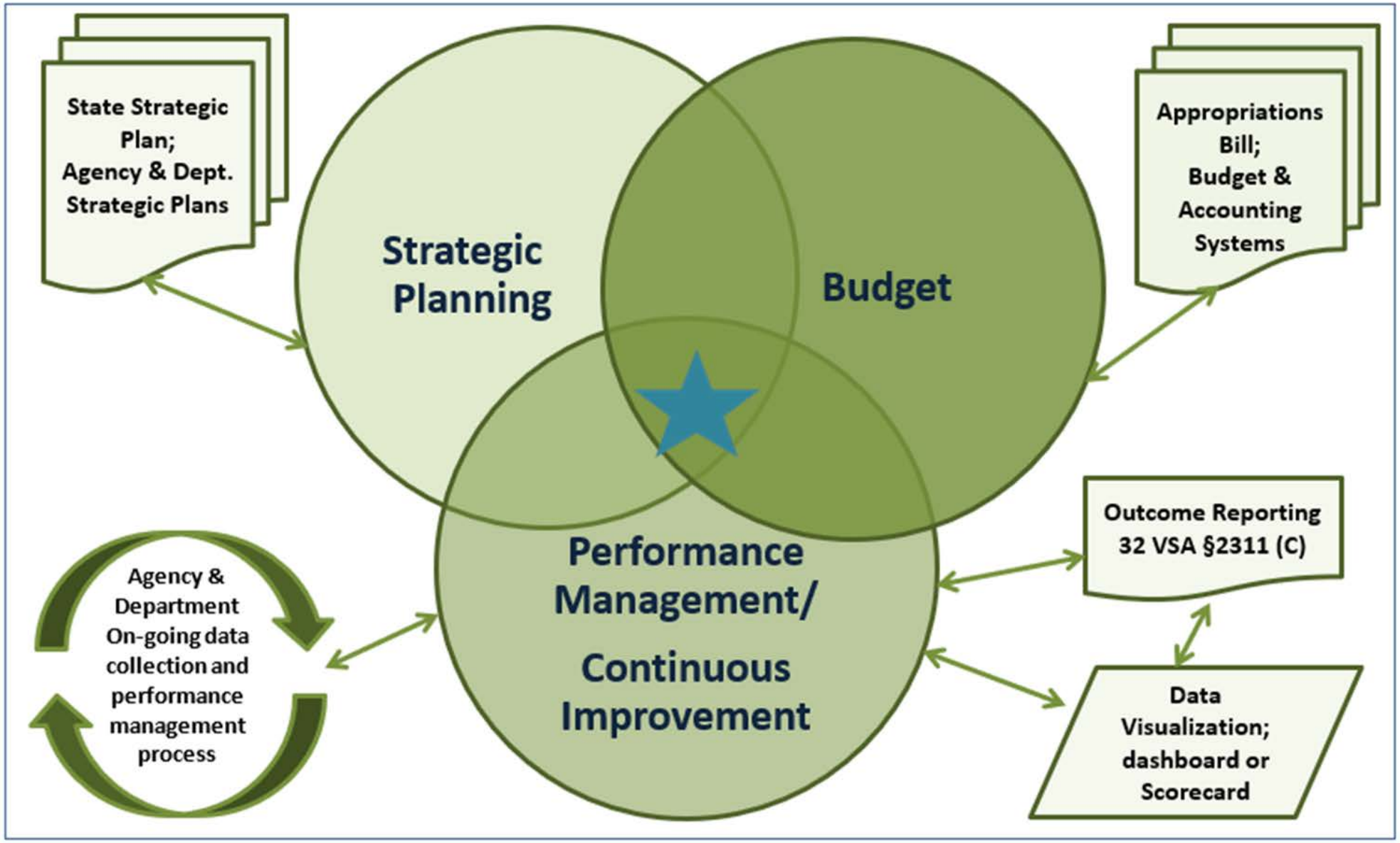
- Where Does Performance Management Fit
- Programmatic Performance, Costs and the Budget
- Development Team
- Performance Measures
- Performance Measure Exercise
- Key Takeaways

VERMONT

WERE DOES PERFORMANCE MANAGEMENT FIT?

VERMONT

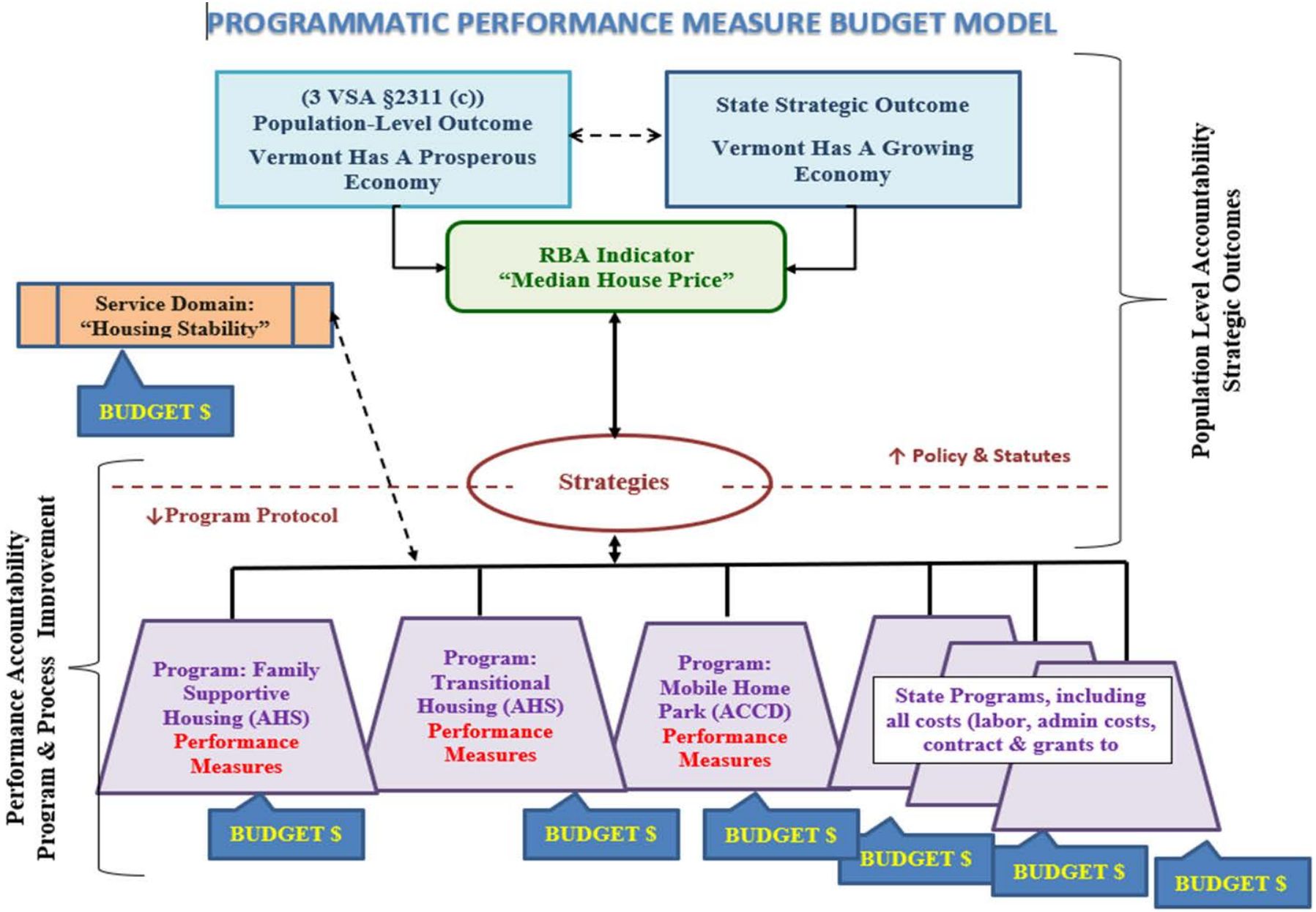
OUTCOMES → STRATEGIES → BUDGET → PROGRAMS → RESULTS → IMPROVEMENTS


State Strategic Plan; Agency & Dept. Strategic Plans
Strategic Planning
Budget
Appropriations Bill; Budget & Accounting Systems
Performance Management/ Continuous Improvement
Agency & Department On-going data collection and performance management process
Outcome Reporting 32 VSA §2311 (C)
Data Visualization; dashboard or Scorecard

VERMONT

OUTCOME-BASED BUDGETING

- Performance Management (CI) answers: **How much did we do; How well did we do it; and Is anyone is better off?**
- Linking the budget and actual costs to the Programs and Service Domains we measure, answers what the value proposition is - per client or per type of service.
- Example: Do we spend the same % of budget on Housing Services, as other states for similar results? If not – how might we improve our results and right-size our investment?
- Allow for data-driven decision making and improved results.



NEW BUDGET CONSTRUCT

- Develop a new budget and accounting construct configured to support performance management;
- Align strategic outcomes with budget & spending, use indicators for accountability; use performance measures to evaluate programs.
- Break down silos.
- Provide data enabling us to target underperforming programs, revise policies, make investments, track costs and determine cost/benefit of the results.
- Enable transparency, accountability, data-driven decisions making.

VERMONT

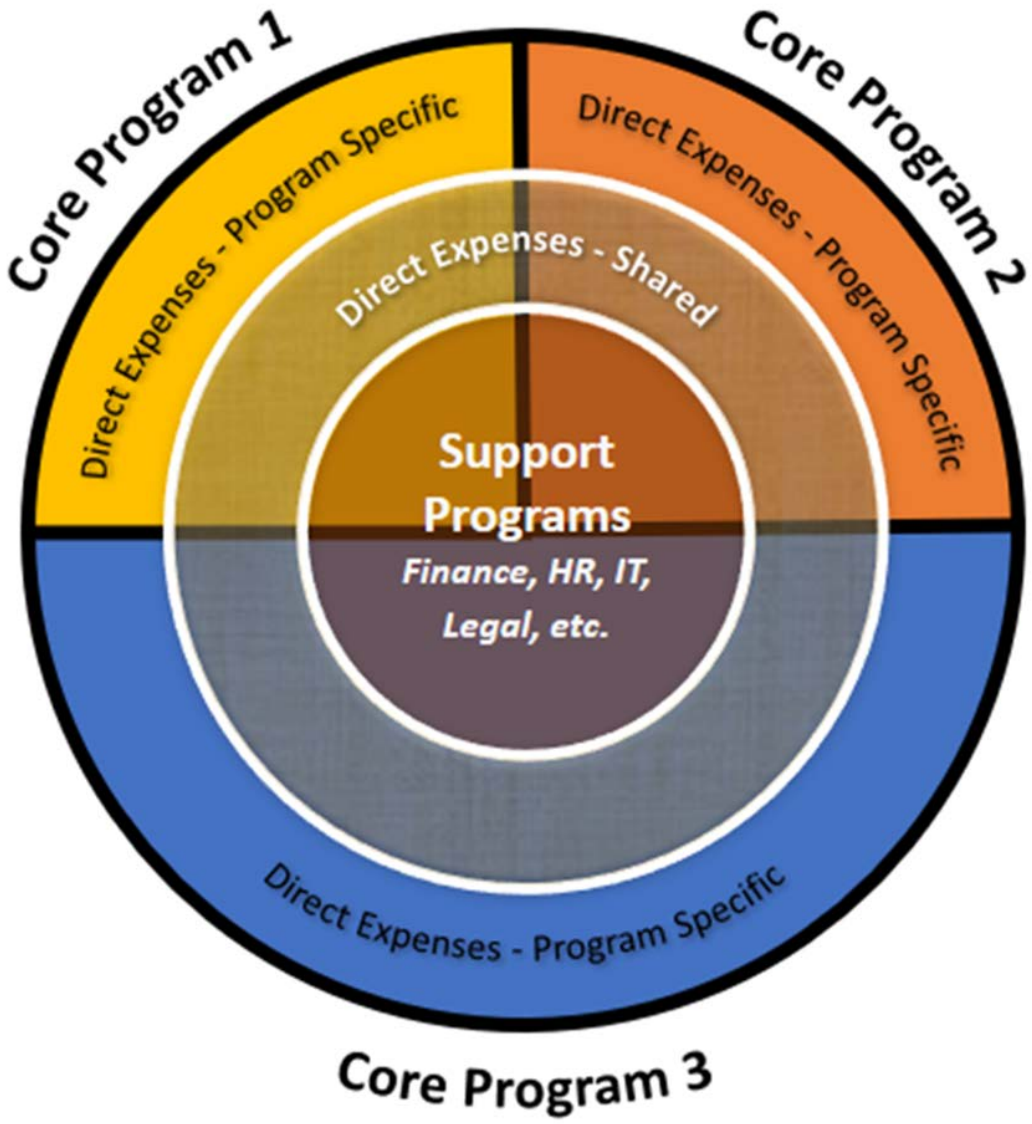
PROGRAMS, COSTS AND BUDGET

VERMONT

FRAMEWORK ADOPTED

SERVICE DOMAINS: Areas of service (big buckets) for which your agency or department is responsible (What services do we provide?) Currently have 46 – we will consolidate.

PROGRAMS: How your management or department manages the delivery of service – with specific criteria (Core or Support?)



Relationship and types of costs within Core and Support Programs.

VERMONT

CORE & SUPPORT PROGRAMS CHARACTERISTICS

CORE PROGRAM:

- Mandate; authority;
- mission; client population
- clients external to SOV
- rules and criteria; program staff
- creates measurable

work explained by performance measures

- serve a distinct function
- significant risks if the work is not performed
- service or activity shares a common outcome with another service or activity

SUPPORT PROGRAM:

- program's clients internal to SOV
- program staff
- program's staff serve multiple Core programs
- program's staff supervised and managed within the Program?
- significant portion of the revenue for the program come from other Programs
- program serves a distinct function
- work explained by performance measures

VERMONT

SERVICES		PROGRAMS		ACTIVITIES
Service Domains or Program Areas	*Delivered through*	Programs (name and staff)	*Enabled by*	Capabilities or Functions
• Housing • Employability • Nutrition • Aging • Health Care • Public Health • Mental Health Services • Substance Use Services • Child Protective Services • Financial Assistance Services		• WIC • Family Supportive Housing • Reach Up • 3Squares VT		• Case Management • Enrollment & Eligibility • Claims Processing • Provider Management

VERMONT

Strategic Outcomes

- Prosperous Economy
  - Growing
  - Affordable
- Vermonter are Healthy
- Environment is Clean & Sustainable
- Children & Youth
  - Protect Vulnerable

Strategic Plan and "Act 186"

Population-Level Indicators:

- % workforce of population;
- Median Home Price;
- # Homeless.

Service Domains or Program Areas

- Housing
- Employability
- Nutrition
- Aging
- Health Care
- Public Health
- Mental Health Services
- Substance Use Services
- Child Protective Services
- Financial Assistance Services

Programs (name and staff)

- WIC
- Family Supportive Housing
- Reach Up
- 3Squares VT

Outcomes-Based Budgeting

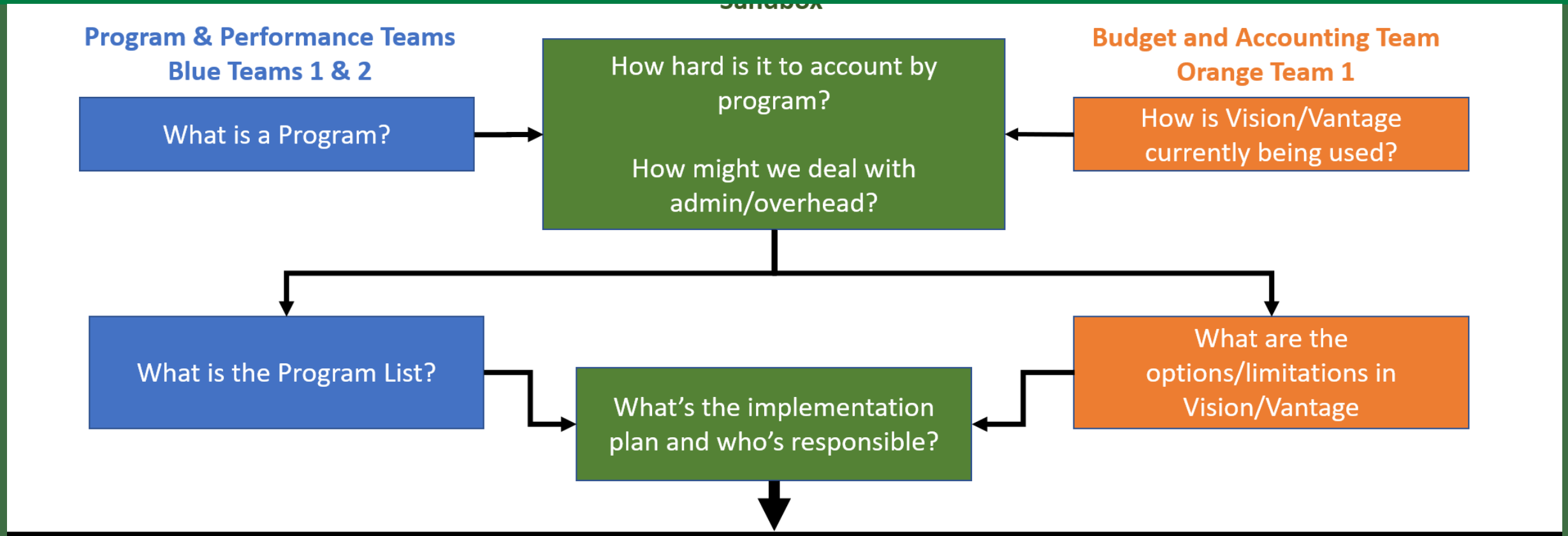
Programmatic Program Measures:

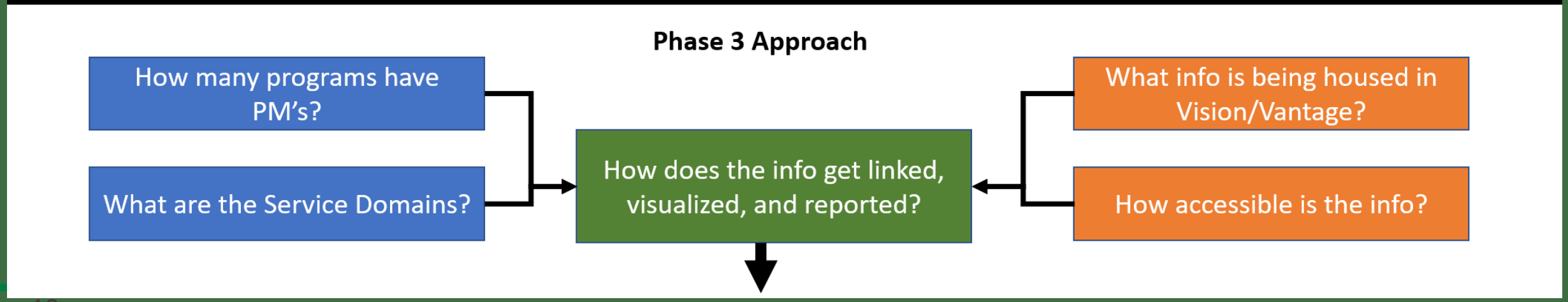
- % FSH families housing stable for 6 months;
- Reach Up participants employed;
- # Families with food insecurity;

VERMONT

DEVELOPMENT TEAM STRUCTURE

VERMONT


Program & Performance Teams
Blue Teams 1 & 2
What is a Program?
How hard is it to account by program?
How might we deal with admin/overhead?
Budget and Accounting Team
Orange Team 1
How is Vision/Vantage currently being used?
What is the Program List?
What's the implementation plan and who's responsible?
What are the options/limitations in Vision/Vantage


Phase 3 Approach
How many programs have PM's?
What are the Service Domains?
How does the info get linked, visualized, and reported?
What info is being housed in Vision/Vantage?
How accessible is the info?

WHICH PERFORMANCE MEASURES ARE THE BEST?

VERMONT

Measuring Performance

How well a program, agency, organization, or service system is working.

How Much	How Well
did we do? (#)	did we do it? (%)

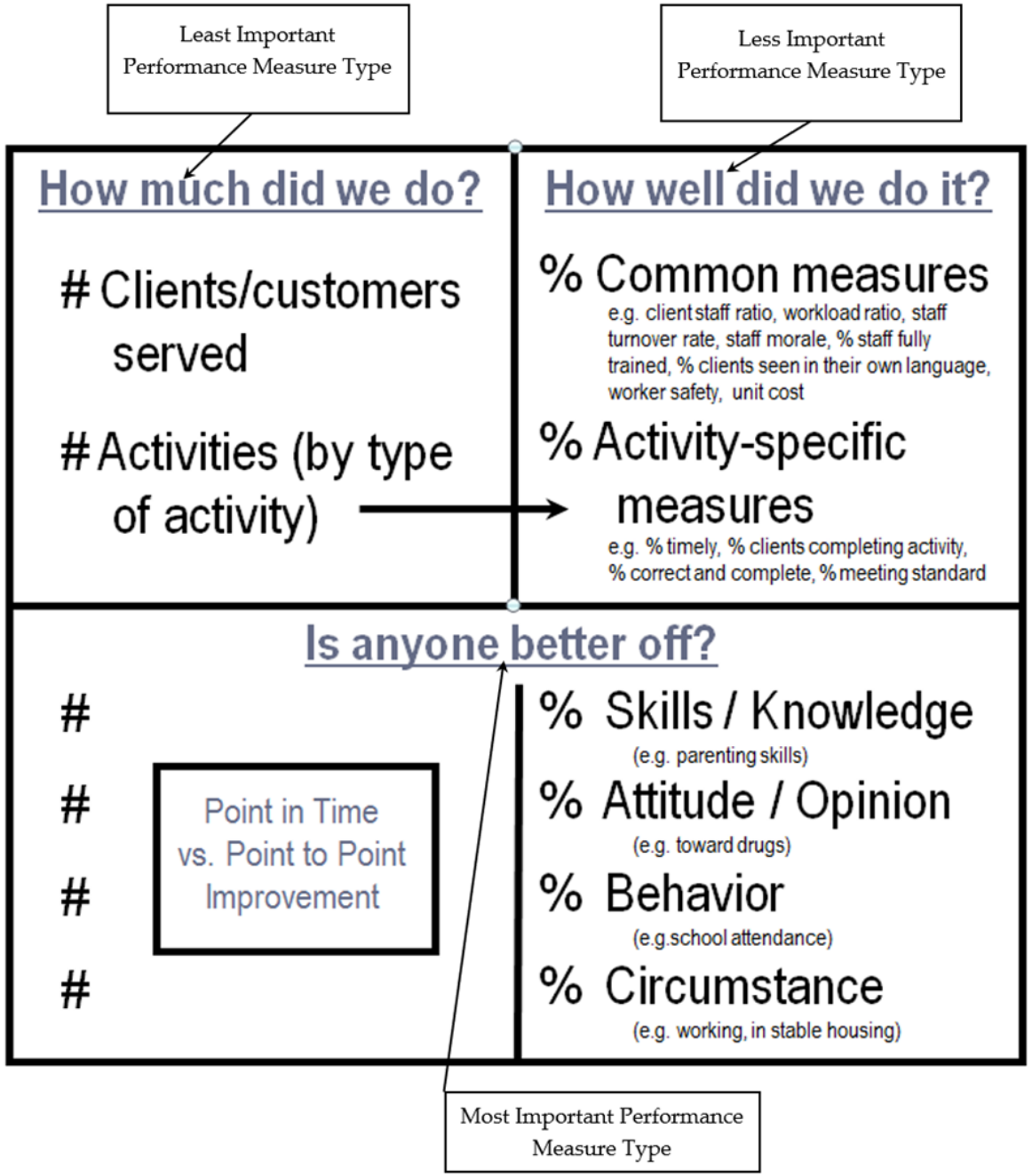
+

Effort
How hard did we try?
Effect
Is anyone better off?

=

How much service did we deliver?	How well did we deliver it?
How much change/ effect did we produce?	What quality of change/ effect did we produce?

VERMONT


Least Important Performance Measure Type
Less Important Performance Measure Type
How much did we do?
Clients/customers served
Activities (by type of activity)
How well did we do it?
% Common measures
e.g. client staff ratio, workload ratio, staff turnover rate, staff morale, % staff fully trained, % clients seen in their own language, worker safety, unit cost
% Activity-specific measures
e.g. % timely, % clients completing activity, % correct and complete, % meeting standard
Is anyone better off?
#
#
#
#
Point in Time vs. Point to Point Improvement
% Skills / Knowledge
(e.g. parenting skills)
% Attitude / Opinion
(e.g. toward drugs)
% Behavior
(e.g.school attendance)
% Circumstance
(e.g. working, in stable housing)
Most Important Performance Measure Type

VERMONT

EXERCISE: PICK THE BEST MEASURES

VERMONT

PROGRAM: HOUSING PROGRAM
CLIENTS: FAMILIES WITH AT LEAST ONE CHILD WHO ARE HOMELESS

Purpose:
Support families to secure housing and transition into permanent housing over time, and strengthen the factors that support stable housing, including employment stability, financial stability, child safety, and family health and wellness

What we do:

- Intensive case management. Every family has a case manager and a case plan to set goals to guide their work, and regular meetings (twice a week) to follow-up on how things are going.
- Coordinate services. Case managers support families by referring families to different services and supports that will help them meet their needs, including:
  - Employment stability
  - Financial stability
  - Child safety
  - Family health and wellness

Performance Measures:

1. # of families who enrolled with an open Family Services – Child Protection case
2. % of families who signed up for an individual savings plan
3. % of families who transition into permanent housing after 6 months
4. % of families whose wages increase after 6 months
5. % of families whose Family Services – Child Protection case closes during engagement with the program
6. # of employer relationships
7. % of families whose savings increased after 6 months
8. % of families who signed up to learn about individual savings plans
9. % of families who secure employment after 3 months
10. # of families enrolled in the program
11. % of employers participating in on-the-job-trainings
12. % of staff who report that their caseloads are manageable
13. % of families who report the case management helped them meet their needs
14. # of children enrolled
15. # of families who enrolled with an open Family Services – Child Protection case
16. % of families who achieved one or more goals in their case plan

VERMONT

PROGRAM: HUNTER EDUCATION PROGRAM
CLIENTS: INDIVIDUALS WHO WISH TO SECURE A HUNTING LICENSE OF ANY KIND IN ORDER TO HUNT

Purpose: All first-time hunting license holders must complete a hunter education course specific to the type of license they wish to buy. The hunter education courses are led by volunteers and cover a range of topics relative to safe and responsible hunting.

What we do:

- Train and manage volunteer instructors in updated regulations and best practice
- Hunter Education Courses
  - General Hunter Education
  - Bowhunter Education
  - Trapper Education
- Administer hunter education cards so that individuals can register for a license

Performance Measures:

1. # of people registered for general hunter education
2. % of volunteer instructors who report enjoying their experience leading courses
3. # of people registered for bowhunter education
4. % of attendees that graduated with their hunter safety card
5. % of people registered who attend all courses
6. # of people registered for hunter education courses by gender, race, and age
7. % of attendees who reported that the course effectively taught them about safe and responsible hunting
8. Cost per course spent by the Department against budgeted cost
9. % of hunting regulation violators who received their hunter education course in the last year
10. # of people registered for trapper education
11. % of attendees that graduated with their hunter safety card who applied for a hunting license that season
12. % of volunteer instructors who report they had the information and training they needed to deliver a high-quality course
13. % of volunteer instructors who return for more than one year of instructing
14. % of attendees who report that they would recommend the hunter education course to a friend
15. # of volunteer instructors
16. # of staff supporting volunteer instructors

VERMONT

PROGRAM: CONTRACTS & GRANTS UNIT
CLIENTS: PROGRAM/GRANT MANAGERS, FINANCE, CONTRACTORS/VENDORS/PROVIDERS

Purpose:
The Contracts/Grants unit is responsible for supporting the drafting, routing for all signatures, execution, and financial management of contracts and grants for the Department. The Unit strives to ensure quality drafts and process in alignment with Bulletin 3.5 and 5 that meet the needs of the program and grant managers acquiring or managing the services to be delivered by an external provider.

What we do:
- Intake requests for contracts and grants
- Manage compliance with Bulletin 3.5 and 5
- Support quality drafts to benefit the business
- Ensure timely execution of contracts
- Manage all financial transactions through closeout

Performance Measures:
1. # of contracts requested per quarter
2. % of grants executed within 1 month
3. % of IT contracts executed within 4 months
4. % of contracts or grants sent back to the Contracts/Grants unit for drafting edits during the routing for signature phase
5. # of grants requested per quarter
6. % of program staff who report that the contract and grant execution process meets their needs
7. % of staff in the Contracts/Grants unit who are trained to draft contract and grant language
8. % of staff in the Contracts/Grants unit who feel that they are trained adequately to execute their responsibilities well
9. % of program staff who report understanding the contract and grant execution process
10. # of different contractors/vendors/providers
11. % of contractors/vendors/providers who report understanding the contract and grant execution process
12. % of time spent executing contracts in the routing for signature phase
13. % of time spent executing contracts in the drafting phase

VERMONT

KEY TAKEAWAYS

VERMONT

KEY TAKEAWAYS

- Performance Management aligns with and is as important as the Strategic Plan and Budget
- Making the transition to these methods and tools is not difficult but can take time.
- Expect pushback – this is not about RIF or cost cuts – it's about maximizing resources
- Better outcomes and results and better use of limited resources

VERMONT

THANK YOU!

Susan Zeller
Chief Performance Officer
Agency of Administration
Susan.Zeller@Vermont.gov
(802) 272-3950

STATE OF VERMONT
Continuous Improvement

VERMONT

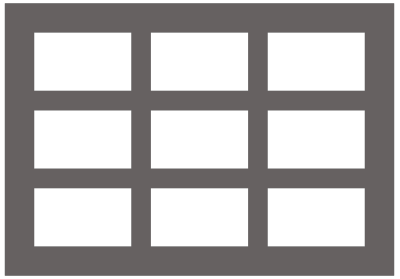
Financial Analysis in Excel – Building a Strong Foundation

October 8, 2020

VERMONT

LEARNING OBJECTIVES

- Recognize the importance of, and how to use, tables and structured referencing



- Identify how to apply Pivot Tables, Pivot Charts and Slicers to Excel files

VERMONT

CONTENT BREAKDOWN

- Common Data Structures and A1 Notation
  - Overview
  - Examples
  - Limits and Pitfalls
- Table Data (Flat Data) and Structured Referencing
  - Overview
  - Examples
  - Benefits
- Pivot Tables and Charts
  - Overview
  - Examples
  - Benefits

COMMON DATA STRUCTURES AND A1 NOTATION

VERMONT

Common Data Structures

- Columns representing observations
- Subtotals breaking up the data
- Mixed data types

	A	B	C	D	E	F
8	Agency/Dept Name	Total Approved Amount	FY2020 Actual Amount	FY2020 Encumbered Amount	FY2021 Approved Amount	Amount Remaining
9	**Approved 5/11/2020**					
10	Agency 1	5,999,974	4,740,696			1,259,278
11	Agency 4	1,595,419	405,766	111,444	1,069,409	8,800
12	Agency 3	15,344,974	-			15,344,974
13	Agency 4	1,396,459	474,474		40,000	881,985
14	Agency 5	115,759,576	99,909,693	1,094,396	24,764,705	(10,009,219)
15	Agency 6	10,661,405	6,597			10,654,808
16	Agency 7	1,165,934	1,433,444			(267,510)
17	Agency 9	443,567	577,179			(133,612)
18	Agency 9	6,114,016	1,379,650		4,733,387	979
19	Agency 10	4,669,960	1,666,975		109,350	2,893,635
20	Agency 11	5,449,377				
21	**Subtotal**	**168,600,661**	**110,594,475**	**1,205,841**	**30,716,851**	**26,083,495**
22	**Approved 5/19/2020**					
23	Project 1	1,000,000			1,000,000	-
24	**Subtotal**	**1,000,000**			**1,000,000**	**-**
25	**Approved 6/9/2020**					
26	Project 2	10,400,000			7,600,000	2,800,000
27	**Subtotal**	**10,400,000**			**7,600,000**	**2,800,000**
28	**Approved 6/30/2020**					
29	Project 3	4,700,000				4,700,000
30	**Subtotal**	**4,700,000**			**-**	**4,700,000**
31	**TOTAL OBLIGATED as of 6/30/2020**	**184,700,661**	**110,594,474.60**	**1,205,841**	**39,316,851**	**33,583,495**

* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

Common Data Structures

- Data stacked vertically
- End result at the bottom

	A	B
1	Total Available	1,200,000,000
2	Appropriated June/July	98,000,000
3	Restatement Appropriations	152,180,354
4		949,819,646
5	Waterfall Appropriation 1	30,000,000
6	Waterfall Appropriation 2	10,000,000
7	Waterfall Appropriation 3	1,000,000
8	Waterfall Appropriation 4	2,100,000
9	Waterfall Appropriation 5	72,450
10		906,647,196
11	Others Allocations (total)	225,000,000
12		681,647,196

* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

A1 Notation

- References to specific cells using column letters and row numbers

	A	B	C	D	E	F
8	Agency/Dept Name	Total Approved Amount	FY2020 Actual Amount	FY2020 Encumbered Amount	FY2021 Approved Amount	Amount Remaining
9	**Approved 5/11/2020**					
10	Agency 1	5,999,974	4,740,696			1,259,278
11	Agency 4	1,595,419	405,766	111,444	1,069,409	8,800
12	Agency 3	15,344,974	-			15,344,974
13	Agency 4	1,396,459	474,474		40,000	881,985
14	Agency 5	115,759,576	99,909,693	1,094,396	24,764,705	(10,009,219)
15	Agency 6	10,661,405	6,597			10,654,808
16	Agency 7	1,165,934	1,433,444			(267,510)
17	Agency 9	443,567	577,179			(133,612)
18	Agency 9	6,114,016	1,379,650		4,733,387	979
19	Agency 10	4,669,960	1,666,975		109,350	2,893,635
20	Agency 11	5,449,377				5,449,377
21	**Subtotal**	**168,600,661**	**110,594,475**	**1,205,841**	**30,716,851**	=SUM(F10:F20)
22	**Approved 5/19/2020**					
23	Project 1	1,000,000			1,000,000	-
24						
25	**Subtotal**	**1,000,000**			**1,000,000**	-
26	**Approved 6/9/2020**					
27	Project 2	10,400,000			7,600,000	2,800,000
28	**Subtotal**	**10,400,000**			**7,600,000**	**2,800,000**
29	**Approved 6/30/2020**					
30	Project 3	4,700,000				4,700,000
31	**Subtotal**	**4,700,000**			-	**4,700,000**
32	**TOTAL OBLIGATED as of 6/30/2020**	**184,700,661**	**110,594,474.60**	**1,205,841**	**39,316,851**	**33,583,495**

* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

A1 Notation

- References to specific sheets within the workbook

	A	B	C
1	Total Available	1,200,000,000	
2	Appropriated June/July	98,000,000	='JuneJuly Appropriations'!H82
3	Restatement Appropriations	152,180,354	='Restatement Appropriations'!H23
4		949,819,646	=B1-B2-B3
5	Waterfall Appropriation 1	30,000,000	
6	Waterfall Appropriation 2	10,000,000	
7	Waterfall Appropriation 3	1,000,000	
8	Waterfall Appropriation 4	2,100,000	
9	Waterfall Appropriation 5	72,450	
10		906,647,196	=B4-B5-B6-B7-B8-B9
11	Others Allocations (total)	225,000,000	
12		681,647,196	=B10-B11

* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

Limits and Pitfalls

- Not always easy to know when a cell is not being added
- Inserting additional rows can throw off calculations
- Limits further analysis

	A	B	C	D	E	F
8	Agency/Dept Name	Total Approved Amount	FY2020 Actual Amount	FY2020 Encumbered Amount	FY2021 Approved Amount	Amount Remaining
9	**Approved 5/11/2020**					
10	Agency 1	5,999,974	4,740,696			1,259,278
11	Agency 4	1,595,419	405,766	111,444	1,069,409	8,800
12	Agency 3	15,344,974	-			15,344,974
13	Agency 4	1,396,459	474,474		40,000	881,985
14	Agency 5	115,759,576	99,909,693	1,094,396	24,764,705	(10,009,219)
15	Agency 6	10,661,405	6,597			10,654,808
16	Agency 7	1,165,934	1,433,444			(267,510)
17	Agency 9	443,567	577,179			(133,612)
18	Agency 9	6,114,016	1,379,650		4,733,387	979
19	Agency 10	4,669,960	1,666,975		109,350	2,893,635
20	Agency 11	5,449,377				5,449,377
21	**Subtotal**	**168,600,661**	**=SUM(C10:C19)**	**1,205,841**	**30,716,851**	**26,083,495**
22	**Approved 5/19/2020**		SUM(**number1**, [number2], ...)			
23	Project 1	1,000,000			1,000,000	-
24						
25	**Subtotal**	**1,000,000**			**1,000,000**	**-**
26	**Approved 6/9/2020**					
27	Project 2	10,400,000			7,600,000	2,800,000
28	**Subtotal**	**10,400,000**			**7,600,000**	**2,800,000**
29	**Approved 6/30/2020**					
30	Project 3	4,700,000				4,700,000
31	**Subtotal**	**4,700,000**			**-**	**4,700,000**
32	**TOTAL OBLIGATED as of 6/30/2020**	**184,700,661**	**110,594,474.60**	**1,205,841**	**39,316,851**	**33,583,495**

* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

Limits and Pitfalls

- Difficult to understand what data is actually being used from off sheet references

- Relies on manual updates to formulas

	A	B	C
1	Total Available	1,200,000,000	
2	Appropriated June/July	98,000,000	='JuneJuly Appropriations'!H82
3	Restatement Appropriations	152,180,354	='Restatement Appropriations'!H23
4		949,819,646	=B1-B2-B3
5	Waterfall Appropriation 1	30,000,000	
6	Waterfall Appropriation 2	10,000,000	
7	Waterfall Appropriation 3	1,000,000	
8	Waterfall Appropriation 4	2,100,000	
9	Waterfall Appropriation 5	72,450	
10	Waterfall Appropiation 6	500,000	
11		906,647,196	=B4-B5-B6-B7-B8-B9
12	Others Allocations (total)	225,000,000	
13		681,647,196	=B11-B12

* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

TABLE DATA (FLAT DATA) AND STRUCTURED REFERENCING

VERMONT

Table Data

- Every cell has a value
- Each column is distinct in purpose and type
- Formatted as a table (Ctrl+T) and given a name
- No subtotals

	A	B	C	D	E	F
9	Approved Date	Agency/Dept Name	Total Approved Amount	FY2020 Actual Amount	FY2020 Encumbered Amount	FY2021 Approved Amount
10	5/11/2020	Agency 1	$5,999,974.00	$4,740,696.40	$0.00	$0.00
11	5/11/2020	Agency 4	$1,595,419.00	$405,765.61	$111,444.06	$1,069,409.33
12	5/11/2020	Agency 3	$15,344,974.00	$0.00	$0.00	$0.00
13	5/11/2020	Agency 4	$1,396,459.00	$474,474.43	$0.00	$40,000.00
14	5/11/2020	Agency 5	$115,759,576.00	$99,909,693.45	$1,094,396.49	$24,764,704.89
15	5/11/2020	Agency 6	$10,661,405.00	$6,596.96	$0.00	$0.00
16	5/11/2020	Agency 7	$1,165,934.00	$1,433,443.59	$0.00	$0.00
17	5/11/2020	Agency 9	$443,567.00	$577,179.00	$0.00	$0.00
18	5/11/2020	Agency 9	$6,114,016.00	$1,379,649.99	$0.00	$4,733,387.01
19	5/11/2020	Agency 10	$4,669,960.00	$1,666,975.17	$0.00	$109,349.69
20	5/19/2020	Project 1	$1,000,000.00	$0.00	$0.00	$1,000,000.00
21	6/19/2020	Project 2	$10,400,000.00	$0.00	$0.00	$7,600,000.00
22	6/30/2020	Project 3	$4,700,000.00	$0.00	$0.00	$0.00

* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

Watch for Table Data Impostors!

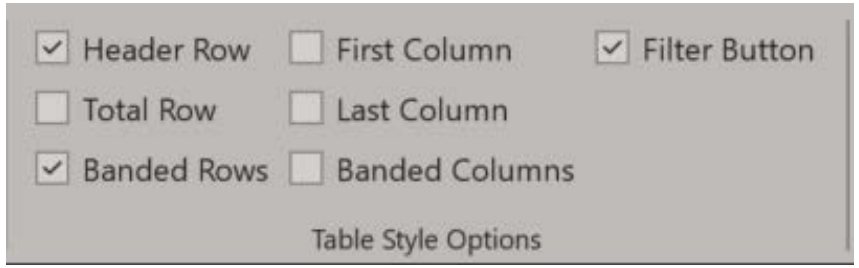
	A	B	C	D	E	F	G	H	I	J
1	Quarter Ending	Department	UnitNo	Vendor Number	Vendor	City	State	DeptID Description	DeptID	Amount
2	43646	Transportation Agency	8100	SINGLE	LONGE,MYKAYLA,E	N TROY	VT	Department of Motor Vehicles	8100002100	46
3	43646	Defender General's Office	2110	188606	Powell,Thomas PHD	Shelburne	VT	AC Orleans	2110015000	4306.72
4	43646	Children and Families	3440	265819	The Learning Home Family Child Care	Brandon	VT	DCFS - Child Development	3440030000	4187.45
5	43646	Children and Families	3440	265819	The Learning Home Family Child Care	Brandon	VT	DCFS - Child Development	3440030000	1143.15
6	43646	Children and Families	3440	265819	The Learning Home Family Child Care	Brandon	VT	DCFS - Child Development	3440030000	2306.02
7	43646	Children and Families	3440	360711	The Learning Garden, LLC	Waitsfield	VT	DCFS - Child Development	3440030000	1480.8
8	43646	Children and Families	3440	360711	The Learning Garden, LLC	Waitsfield	VT	DCFS - Child Development	3440030000	296.16
9	43646	Defender General's Office	2110	350389	The Law office of Christopher C Moll LLC	Essex Junction	VT	AC Addison	2110010500	18750
10	43646	Defender General's Office	2110	356053	The Law Office of Matthew Hart Esq.	Pittsford	VT	AC Rutland	2110015500	750
11	43646	Defender General's Office	2110	36527	The Law Office of Corby A. Gary	St Johnsbury	VT	PD Caledonia	2110001500	50
12	43646	Defender General's Office	2110	36527	The Law Office of Corby A. Gary	St Johnsbury	VT	AC Caledonia	2110011500	390
13	43646	Women's Commission	3310	375903	The Law Office of Abigail A. Hartman Esq	Montpelier	VT	Sexual Harrass Public Outreach	3310891801	7200
14	43646	Children and Families	3440	32988	Kids' School	Stowe	VT	DCFS - Child Development	3440030000	2981.69
15	43646	Children and Families	3440	32988	Kids' School	Stowe	VT	DCFS - Child Development	3440030000	8748.71
16	43646	Children and Families	3440	32988	Kids' School	Stowe	VT	DCFS - Child Development	3440030000	7230.9
17	43646	Children and Families	3440	32988	Kids' School	Stowe	VT	DCFS - Child Development	3440030000	1150
18	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	10800
19	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	16500
20	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	2700
21	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	407.06
22	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	4724.23
23	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	1526.44
24	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	138.77
25	43646	Transportation Agency	8100	359746	The Islander	N Hero	VT	Maintenance & Ops Bureau	8100002000	192
26	43646	Secretary of State's Office	2230	359746	The Islander	N Hero	VT	State Archives & Records Admin	2230012000	1104

VERMONT

Table Benefits

- Auto sort and filter
- Visible headers
- Auto subtotals
- Styling

	Approved Date	Agency/Dept Name	Total Approved Amount	FY2020 Actual Amount	FY2020 Encumbered A	FY2021 Approved
17	5/11/2020	Agency 9	$443,567.00	$577,179.00	$0.00	$0.00
18	5/11/2020	Agency 9	$6,114,016.00	$1,379,649.99	$0.00	$4,733,387.01
19	5/11/2020	Agency 10	$4,669,960.00	$1,666,975.17	$0.00	$109,349.69
20	5/11/2020	Agency 11	$5,449,377.00	$0.00	$0.00	$0.00
21	5/19/2020	Project 1	$1,000,000.00	$0.00	$0.00	$1,000,000.00
22	6/19/2020	Project 2	$10,400,000.00	$0.00	$0.00	$7,600,000.00
23	6/30/2020	Project 3	$4,700,000.00	$0.00	$0.00	$0.00
24	**Total**	**14**	**$184,700,661.00**	**$110,594,474.60**	**$1,205,840.55**	**$39,316,850.92**

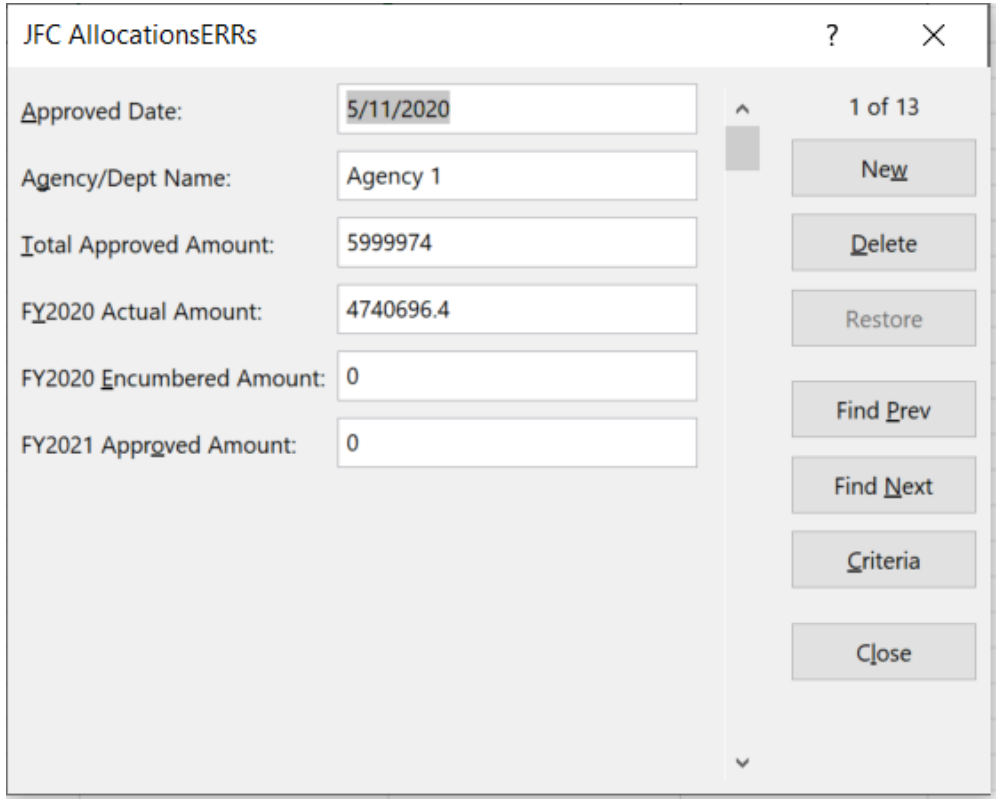


* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

Table Benefits

- Data extension
- Form entry
- Structured referencing



* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

Structured Referencing

A special way to write formulas that references tables and specifiers instead of cells

Syntax = TableName[Specifier]

<u>Specifiers</u>

- ColumnName — Column without headers or totals
- #All — Headers, data and totals
- #Data — Just data rows
- #Headers — Just headers
- #Totals — Just totals
- #This Row or @ — Current row

VERMONT

Structured Referencing

AVERAGE

=[@[Total Approved Amount]]-SUM(Finances[@[FY2020 Actual Amount]:[FY2021 Approved Amount]])

	A	B	C	D	E	F	G
9	Approved Date	Agency/Dept Name	Total Approved Amount	FY2020 Actual Amount	FY2020 Encumbered Amount	FY2021 Approved Amount	Remaining
10	5/11/2020	Agency 1	$5,999,974.00	$4,740,696.40	$0.00	$0.00	Amount]]-SUM(
11	5/11/2020	Agency 4	$1,595,419.00	$405,765.61	$111,444.06	$1,069,409.33	$8,800.00
12	5/11/2020	Agency 3	$15,344,974.00	$0.00	$0.00	$0.00	$15,344,974.00
13	5/11/2020	Agency 4	$1,396,459.00	$474,474.43	$0.00	$40,000.00	$881,984.57
14	5/11/2020	Agency 5	$115,759,576.00	$99,909,693.45	$1,094,396.49	$24,764,704.89	-$10,009,218.83
15	5/11/2020	Agency 6	$10,661,405.00	$6,596.96	$0.00	$0.00	$10,654,808.04
16	5/11/2020	Agency 7	$1,165,934.00	$1,433,443.59	$0.00	$0.00	-$267,509.59
17	5/11/2020	Agency 9	$443,567.00	$577,179.00	$0.00	$0.00	-$133,612.00
18	5/11/2020	Agency 9	$6,114,016.00	$1,379,649.99	$0.00	$4,733,387.01	$979.00
19	5/11/2020	Agency 10	$4,669,960.00	$1,666,975.17	$0.00	$109,349.69	$2,893,635.14
20	5/11/2020	Agency 11	$5,449,377.00	$0.00	$0.00	$0.00	$5,449,377.00
21	5/19/2020	Project 1	$1,000,000.00	$0.00	$0.00	$1,000,000.00	$0.00
22	6/19/2020	Project 2	$10,400,000.00	$0.00	$0.00	$7,600,000.00	$2,800,000.00
23	6/30/2020	Project 3	$4,700,000.00	$0.00	$0.00	$0.00	$4,700,000.00
24	**Total**	**14**	**$184,700,661.00**	**$110,594,474.60**	**$1,205,840.55**	**$39,316,850.92**	**$33,583,494.93**
25							
26	**Total Approved**	$184,700,661.00	=SUM(Finances[Total Approved Amount])				
27							
28	**Total Approved Before Date**	5/15/2020					
29	**Total Approved**	$168,600,661.00	=SUMIFS(Finances[Total Approved Amount],Finances[Approved Date],"<B29")				

* The data shown above is for demonstration purposes only and does not reflect actual amounts

VERMONT

Structured Referencing Benefits

- Assuming good column naming conventions, you know exactly what data is being used in your calculations
- Ensures that all data is included
- Can be used to write more powerful formulas in combination with dynamic arrays
- Is necessary for more advanced Excel functions (i.e. DAX and Power Query)

Agency 1	=UNIQUE(Finances[Agency/Dept Name])
Agency 4	
Agency 3	
Agency 5	
Agency 6	
Agency 7	
Agency 9	
Agency 10	
Agency 11	
Project 1	
Project 2	
Project 3	

PIVOT TABLES AND CHARTS

VERMONT

Pivot Tables and Pivot Charts

- A table or visual that provides basic statistics and aggregations from a more extensive table
- Used to automatically organize or group data and calculate things like sums, averages, mins, maxs, counts, etc.
- Transforms columns into rows and rows into columns

Source Data

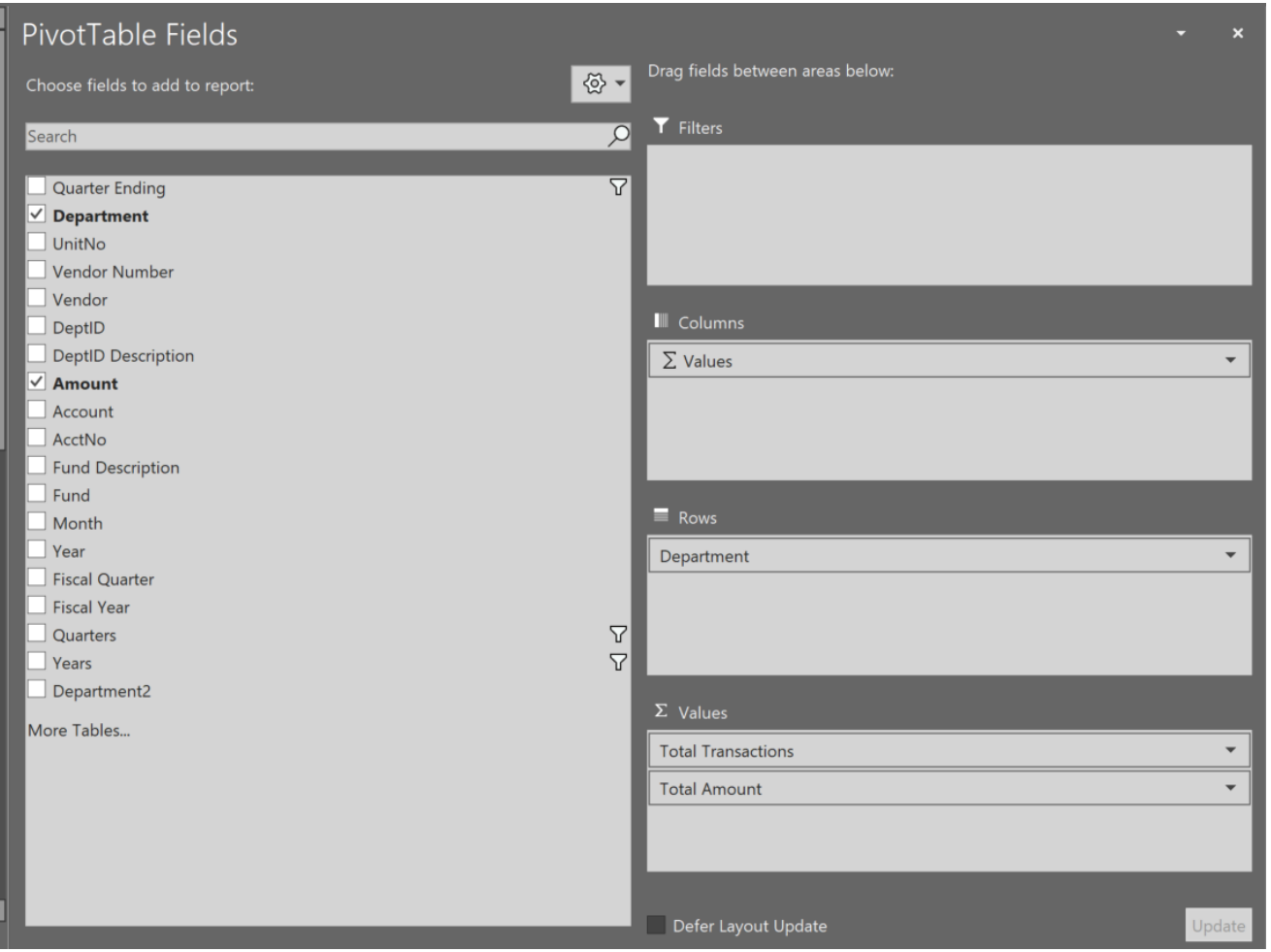
	A	B	C	D	E	F	G	H	I	J
1	Quarter Ending	Department	UnitNo	Vendor Number	Vendor	City	State	DeptID Description	DeptID	Amount
2	43646	Transportation Agency	8100	SINGLE	LONGE,MYKAYLA,E	N TROY	VT	Department of Motor Vehicles	8100002100	46
3	43646	Defender General's Office	2110	188606	Powell,Thomas PHD	Shelburne	VT	AC Orleans	2110015000	4306.72
4	43646	Children and Families	3440	265819	The Learning Home Family Child Care	Brandon	VT	DCFS - Child Development	3440030000	4187.45
5	43646	Children and Families	3440	265819	The Learning Home Family Child Care	Brandon	VT	DCFS - Child Development	3440030000	1143.15
6	43646	Children and Families	3440	265819	The Learning Home Family Child Care	Brandon	VT	DCFS - Child Development	3440030000	2306.02
7	43646	Children and Families	3440	360711	The Learning Garden, LLC	Waitsfield	VT	DCFS - Child Development	3440030000	1480.8
8	43646	Children and Families	3440	360711	The Learning Garden, LLC	Waitsfield	VT	DCFS - Child Development	3440030000	296.16
9	43646	Defender General's Office	2110	350389	The Law office of Christopher C Moll LLC	Essex Junction	VT	AC Addison	2110010500	18750
10	43646	Defender General's Office	2110	356053	The Law Office of Matthew Hart Esq.	Pittsford	VT	AC Rutland	2110015500	750
11	43646	Defender General's Office	2110	36527	The Law Office of Corby A. Gary	St Johnsbury	VT	PD Caledonia	2110001500	50
12	43646	Defender General's Office	2110	36527	The Law Office of Corby A. Gary	St Johnsbury	VT	AC Caledonia	2110011500	390
13	43646	Women's Commission	3310	375903	The Law Office of Abigail A. Hartman Esq	Montpelier	VT	Sexual Harrass Public Outreach	3310891801	7200
14	43646	Children and Families	3440	32988	Kids' School	Stowe	VT	DCFS - Child Development	3440030000	2981.69
15	43646	Children and Families	3440	32988	Kids' School	Stowe	VT	DCFS - Child Development	3440030000	8748.71
16	43646	Children and Families	3440	32988	Kids' School	Stowe	VT	DCFS - Child Development	3440030000	7230.9
17	43646	Children and Families	3440	32988	Kids' School	Stowe	VT	DCFS - Child Development	3440030000	1150
18	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	10800
19	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	16500
20	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	2700
21	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	407.06
22	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	4724.23
23	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	1526.44
24	43646	Children and Families	3440	362850	The Janet S. Munt Family Room, Inc	Burlington	VT	DCFS - Child Development	3440030000	138.77
25	43646	Transportation Agency	8100	359746	The Islander	N Hero	VT	Maintenance & Ops Bureau	8100002000	192
26	43646	Secretary of State's Office	2230	359746	The Islander	N Hero	VT	State Archives & Records Admin	2230012000	1104

VERMONT

Summarized by a Pivot Table

Department	Total Transactions	Total Amount
Administration Agency	466	$25,415,637.97
Agency of Digital Services	1341	$34,927,883.32
Agriculture, Food&Mrkts Agency	4567	$22,890,955.48
Attorney General's Office	1989	$3,951,009.65
Auditor of Accounts' Office	196	$2,675,851.91
Buildings & Gen Serv-Capital	875	$51,387,349.23
Buildings & Gen Serv-Gov'tal	3065	$5,187,452.56
Buildings & Gen Serv-Prop	12768	$73,839,117.43
Children and Families	30370	$452,039,179.17
Commerce & Communty Dev Agency	373	$2,647,572.97
Corrections	8872	$95,431,177.67
Crime Victims' Services Center	1566	$12,770,657.64
Criminal Justice Trng Council	449	$1,651,651.58
Defender General's Office	5422	$16,736,861.52
Disabilities Aging Ind. Living	5580	$369,428,336.37
DLL - Div of Liquor Control	2143	$19,257,991.55
DLL - Division of Lottery	428	$13,636,052.07
Economic Development	1227	$9,820,838.58
Education Agency	8973	$1,185,879,637.71
Enhanced 911 Board	370	$4,532,001.69
Environmental Conservation	4003	$86,461,629.27
Executive Office	167	$484,575.41
Finance & Management	164	$143,851,252.51
Finance & Management-FMS	96	$1,544,362.39
Financial Regulation	1504	$4,150,858.72
Fish & Wildlife	6150	$11,198,638.95
Forests, Parks & Recreation	5651	$20,460,113.49
Green Mountain Care Board	693	$4,253,349.83
Health	13283	$148,480,082.07
Housing & Comm Development	2387	$19,157,455.25
Human Resources-Gov'tal	935	$507,871,503.13
Human Resources-Prop	217	$313,399,992.00

Reference Tables | Department Exercise | Department Pivot



VERMONT

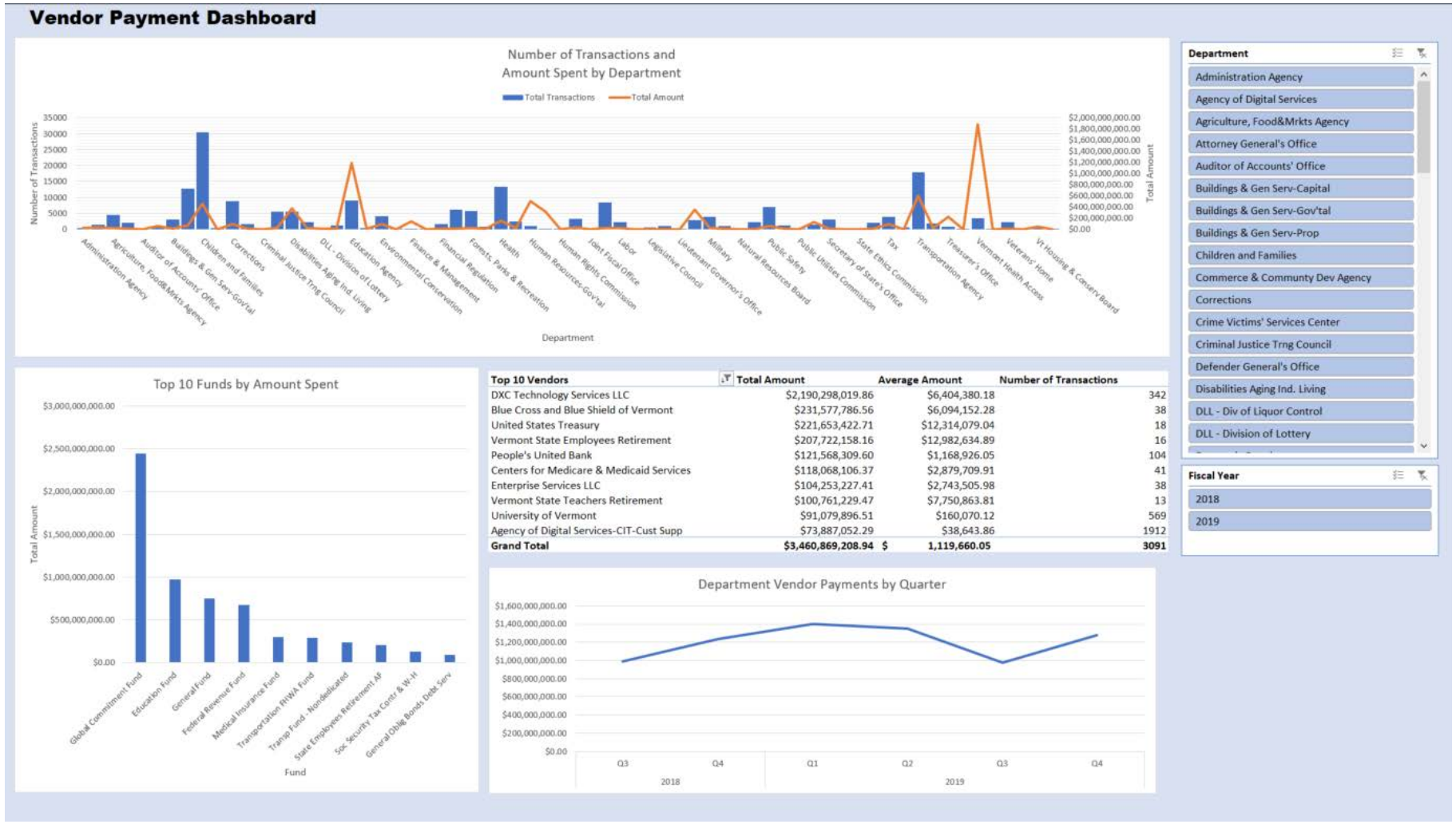
Summarized by a Pivot Table

	A	B	C	D	E	F	G	H
1	Quarterly Vendor Payments	Fiscal Year	Fiscal Quarter					
2		2018		2019				Grand Total
3	Department	Q3	Q4	Q1	Q2	Q3	Q4	
4	Vermont Health Access	$305,025,130.81	$320,261,125.20	$298,254,997.38	$342,999,107.94	$305,181,659.92	$313,648,440.29	$1,885,370,461.54
5	Education Agency	$49,845,704.00	$291,411,165.23	$211,543,237.09	$281,809,496.28	$45,928,580.13	$305,341,454.98	$1,185,879,637.71
6	Transportation Agency	$82,089,915.17	$94,980,603.79	$130,842,482.74	$117,933,118.11	$71,569,965.90	$96,995,901.18	$594,411,986.89
7	Human Resources-Gov'tal	$91,413,442.71	$76,097,934.39	$89,518,353.35	$77,829,634.33	$92,982,852.87	$80,029,285.48	$507,871,503.13
8	Children and Families	$71,980,245.20	$73,432,400.93	$72,389,968.87	$87,820,728.11	$69,053,891.07	$77,361,944.99	$452,039,179.17
9	Disabilities Aging Ind. Living	$62,214,563.76	$58,861,346.29	$61,921,491.95	$61,133,602.89	$64,365,369.71	$60,931,961.77	$369,428,336.37
10	Mental Health	$55,333,242.80	$59,646,194.58	$44,669,868.26	$65,330,633.15	$62,126,433.59	$62,755,826.02	$349,862,198.40
11	Human Resources-Prop	$50,006,648.21	$56,134,092.91	$51,261,481.19	$53,726,722.59	$47,369,497.83	$54,901,549.27	$313,399,992.00
12	Treasurer's Office	$14,842,176.69	$495,552.02	$193,628,800.78	$1,748,170.59	$14,223,438.34	$1,687,984.70	$226,626,123.12
13	Health	$24,227,735.38	$26,274,736.90	$22,719,495.38	$21,439,096.37	$22,129,667.89	$31,689,350.15	$148,480,082.07
14	Finance & Management	$22,172,426.66	$21,386,807.42	[illegible]	[illegible] 498,909.40	$23,784,912.51	$18,493,021.45	$143,851,252.51
15	Retirement	$21,400,019.59	$20,229,695.60	[illegible]	[illegible] 712,555.38	$21,655,906.10	$18,436,834.64	$123,054,373.29
16	Corrections	$17,113,951.94	$12,661,762.66	$19,291,914.11	$15,697,349.03	$14,687,384.37	$15,978,815.56	$95,431,177.67

Chart Area
C[illegible]ndor Payments
Value: $35,515,175.07
Row: Finance & Management
Column: 2019 - Q1

VERMONT

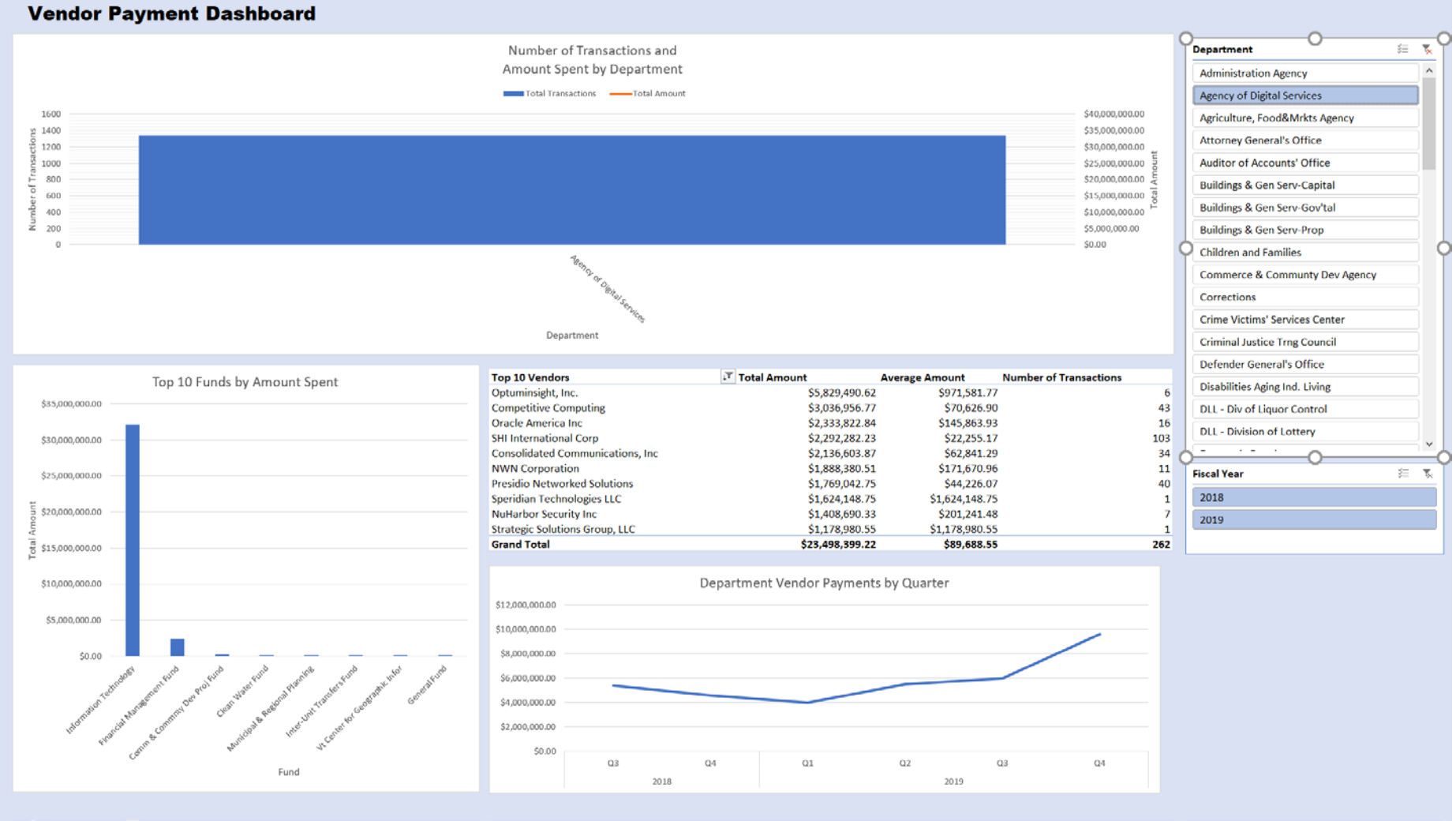
Visualized by a Pivot Chart



Top 10 Vendors	Total Amount	Average Amount	Number of Transactions
DXC Technology Services LLC	$2,190,298,019.86	$6,404,380.18	342
Blue Cross and Blue Shield of Vermont	$231,577,786.56	$6,094,152.28	38
United States Treasury	$221,653,422.71	$12,314,079.04	18
Vermont State Employees Retirement	$207,722,158.16	$12,982,634.89	16
People's United Bank	$121,568,309.60	$1,168,926.05	104
Centers for Medicare & Medicaid Services	$118,068,106.37	$2,879,709.91	41
Enterprise Services LLC	$104,253,227.41	$2,743,505.98	38
Vermont State Teachers Retirement	$100,761,229.47	$7,750,863.81	13
University of Vermont	$91,079,896.51	$160,070.12	569
Agency of Digital Services-CIT-Cust Supp	$73,887,052.29	$38,643.86	1912
Grand Total	**$3,460,869,208.94**	**$ 1,119,660.05**	**3091**

VERMONT

Visualized by a Pivot Chart and Filtered by a Slicer



Top 10 Vendors	Total Amount	Average Amount	Number of Transactions
Optuminsight, Inc.	$5,829,490.62	$971,581.77	6
Competitive Computing	$3,036,956.77	$70,626.90	43
Oracle America Inc	$2,333,822.84	$145,863.93	16
SHI International Corp	$2,292,282.23	$22,255.17	103
Consolidated Communications, Inc	$2,136,603.87	$62,841.29	34
NWN Corporation	$1,888,380.51	$171,670.96	11
Presidio Networked Solutions	$1,769,042.75	$44,226.07	40
Speridian Technologies LLC	$1,624,148.75	$1,624,148.75	1
NuHarbor Security Inc	$1,408,690.33	$201,241.48	7
Strategic Solutions Group, LLC	$1,178,980.55	$1,178,980.55	1
Grand Total	**$23,498,399.22**	**$89,688.55**	**262**

VERMONT

Pivot Table and Pivot Chart Benefits

- Can automate simple data processing tasks
- Provides flexibility to look at data through different lenses
- Can quickly generate ad hoc reports
- Can be formatted in many different ways
- Can be linked together through slicers

KEY TAKEAWAYS

VERMONT

KEY TAKEAWAYS

- There are many benefits to using tables, structured referencing and pivot tables and charts and you should use them whenever possible
- Making the transition to these methods and tools is not difficult but can take time, do it anyway because it will save you time on the backend
- Understanding these foundational concepts are important for using more advanced Excel functions
- Always try to put data in a format that can be easily reported on and don't mix data fields (i.e. text and numbers) and purposes (collection versus reporting) if you can help it

THANK YOU!

Justin Kenney
Director of Continuous Improvement and Planning
Agency of Administration
Justin.Kenney@Vermont.gov
(802) 461-6259

STATE OF VERMONT
Continuous Improvement

VERMONT