




Cubes

It's Hip to be Square

Agenda

- What is a cube?
- How to make a cube
- Cubercise
- Limitations of cubes

 What is a cube?

Practice Cube.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Acrobat Power Pivot Tell me what you want to do...

Get External Data New Query Recent Sources Refresh All

Connections Properties Edit Links

Sort Filter Filter Reapply Advanced

Text to Columns What-If Analysis Forecast Sheet

Group Ungroup Subtotal

Data Analysis

K13

	A	B	C	D	E	F	G	H	I
1	Project Department	51 - PARKS							
2	Project Status	Active							
3									
4	Actual	Column Labels							
5	Row Labels	2016	2017	2018	2019	2020	2021	2022	Grand Total
6	10463 - TENNEY PARK SHORELINE IMPROVEMENTS	\$6,814	(\$6,848)	\$0		(\$70)	\$0		(\$104)
7	10518 - JAMES MADISON IMPROVEMENTS	(\$17,708)	(\$21,409)	(\$19,770)	(\$642)	\$4,932	\$15,248		(\$39,349)
8	10520 - VILAS PRK ROAD/PARKING IMPROVEMENT	\$0	\$0	\$0	(\$0)	(\$0)	\$0		(\$0)
9	10525 - CENTRAL PARK DEVELOPMENT (LAND)	(\$15)	(\$30,472)	\$37,101	(\$4,278)	(\$2,351)	\$0	\$7,415	\$7,400
10	10543 - ALLIED DRIVE AREA POTENTIAL PARK	\$0	\$0	(\$0)	\$0	(\$1,047)	\$1,047		\$0
11	10618 - WALTHAM PARK	(\$2)				\$0	\$0		(\$2)
12	11972 - 2021 RIDE THE DRIVE						\$0		\$0
13	12169 - 2019 RIDE THE DRIVE				\$733	(\$733)			\$0
14	12396 - ATHLETIC FIELD IMPROVEMENTS 2020					\$0	\$0		\$0
15	12397 - BEACH & SHORELINE IMPROVEMENTS 2020				\$0	(\$0)	\$0		\$0
16	12398 - LAND MANAGEMENT 2020				\$0	\$0	(\$5,959)	\$0	(\$5,959)
17	12399 - PARKLAND ACQUISITION 2020					(\$0)		(\$333)	(\$333)
18	12400 - PARK EQUIPMENT 2020					\$0	\$0	\$66,728	\$66,728
19	12403 - PLAYGROUND IMPR & EQUIP 2020					(\$0)	\$0	\$0	\$0
20	12404 - EMERALD ASH BORER MITIGATION 2020					\$0	\$0	\$342	\$342
21	12405 - PARK LAND IMPROVEMENTS 2020					\$0	\$2,180	\$24	\$2,204

Sheet1

- Live connection to MUNIS in Excel
- Allows analysis and monitoring of City's financial data
- Uses pivot tables

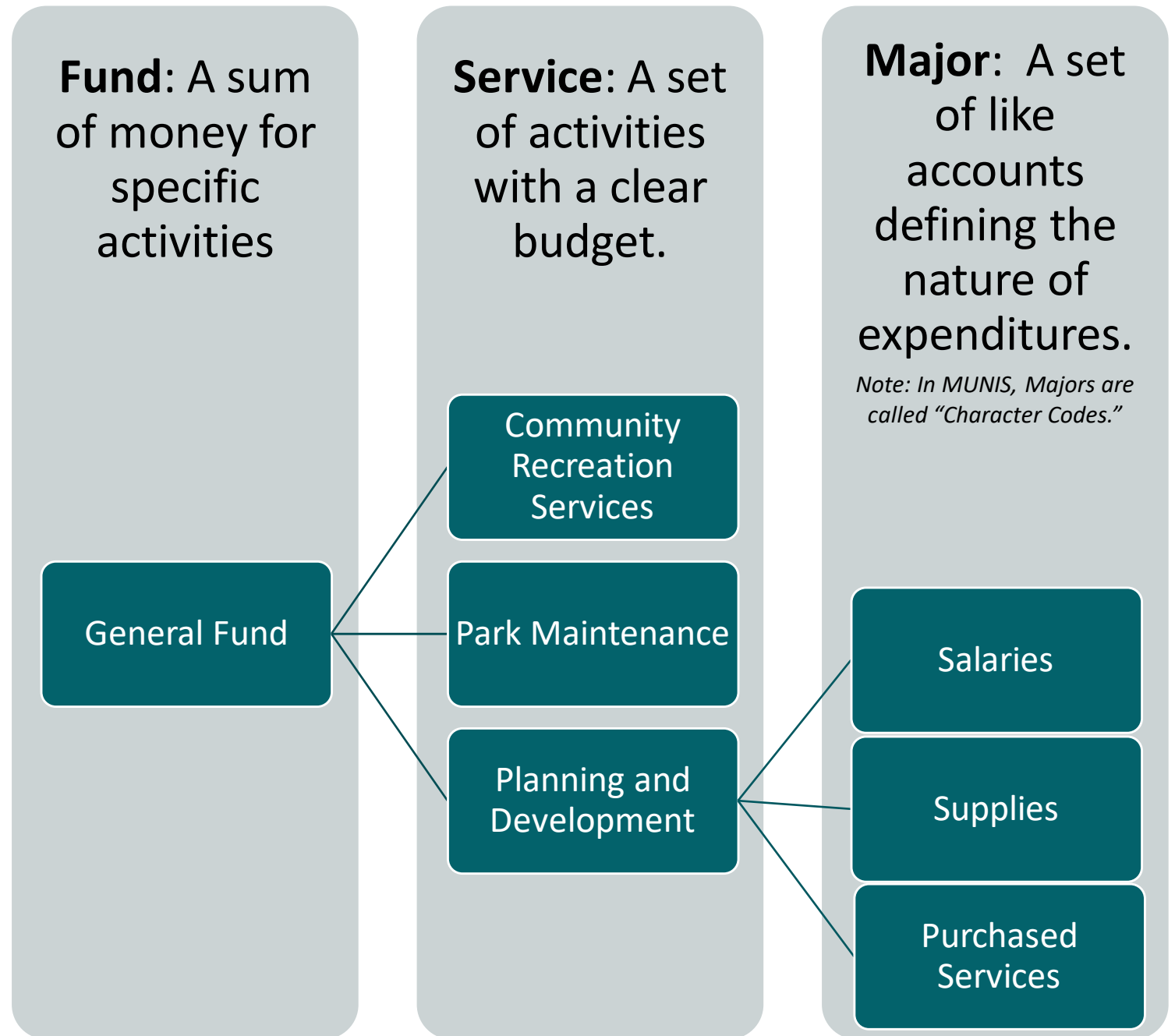
Which cube do I use for this?

Cube Type	Best Used For...
General Ledger: Projection Cube	Operating Budget Development
General Ledger: Revenue and Expense	Operating Budget Monitoring
Project Cubes	Capital Project Monitoring
Payroll HR/Cubes	Salary, Position, Vacancy Analysis

❏ FREEZE: To understand cubes, you need to understand the chart of accounts!

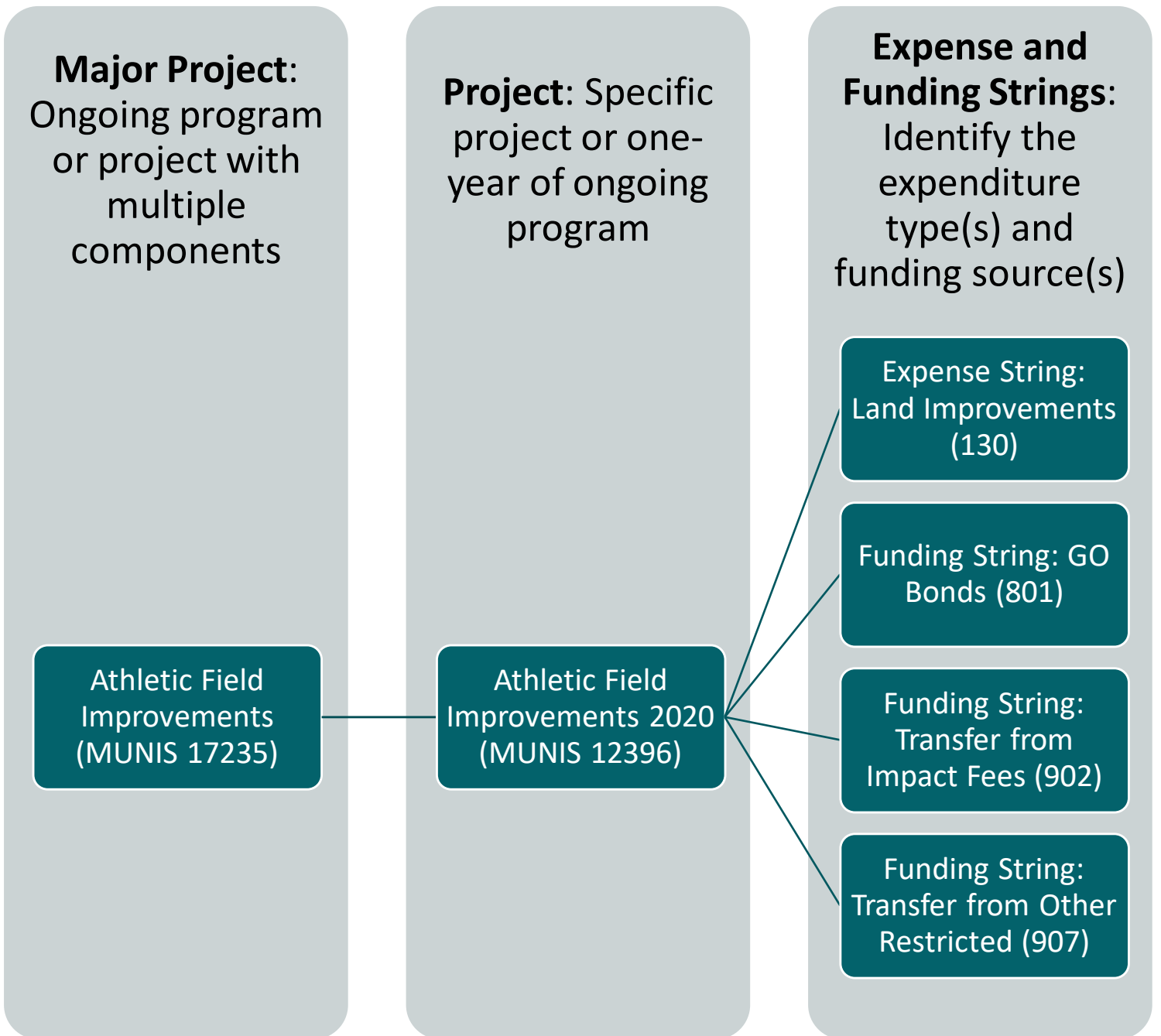
Chart of Accounts: What is it?

The framework for recording and reporting the City's financial transactions.



Project Ledger: What is it?

The framework for recording and reporting transactions operating projects (such as grants) and capital projects and programs.

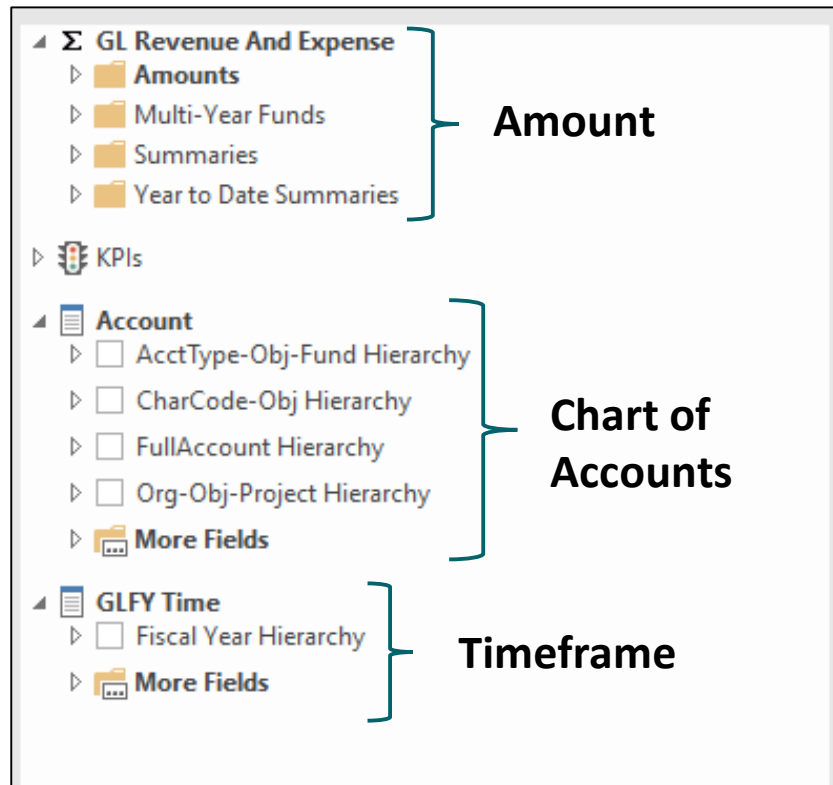


Info within Cubes

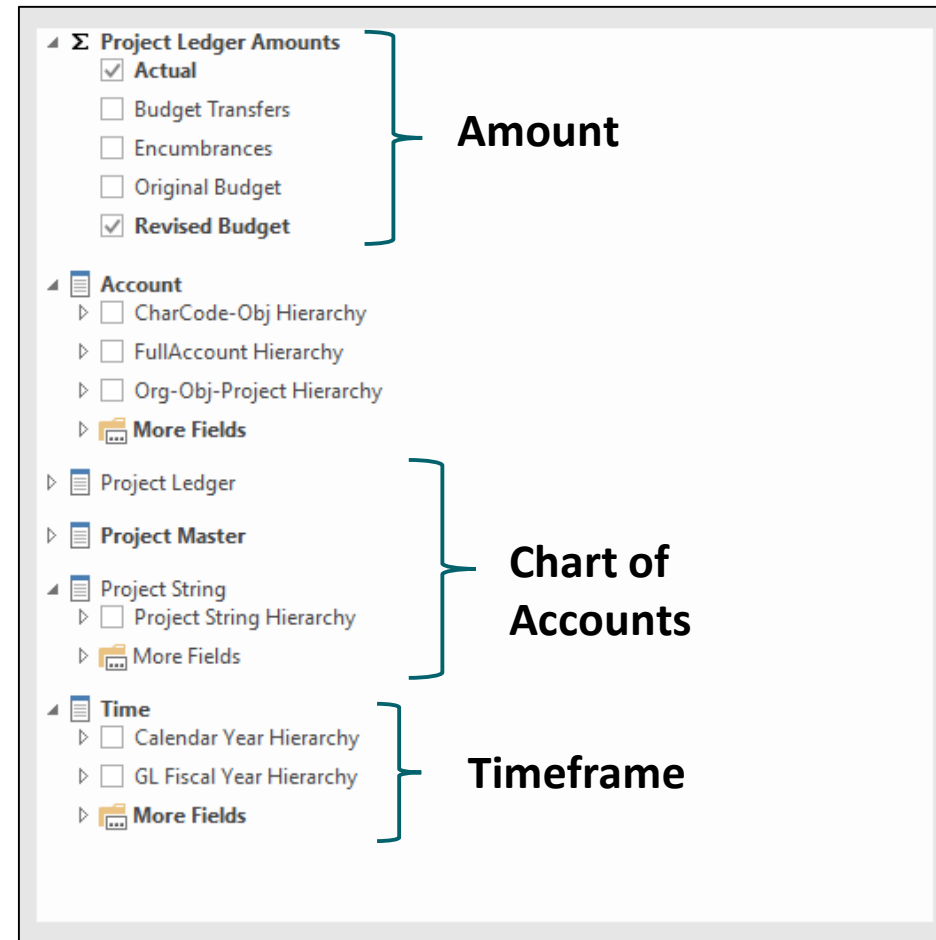
- Amount – How much?
- Chart of Accounts – On what?
- Timeframe – When?

Info within Cubes

GL Cubes



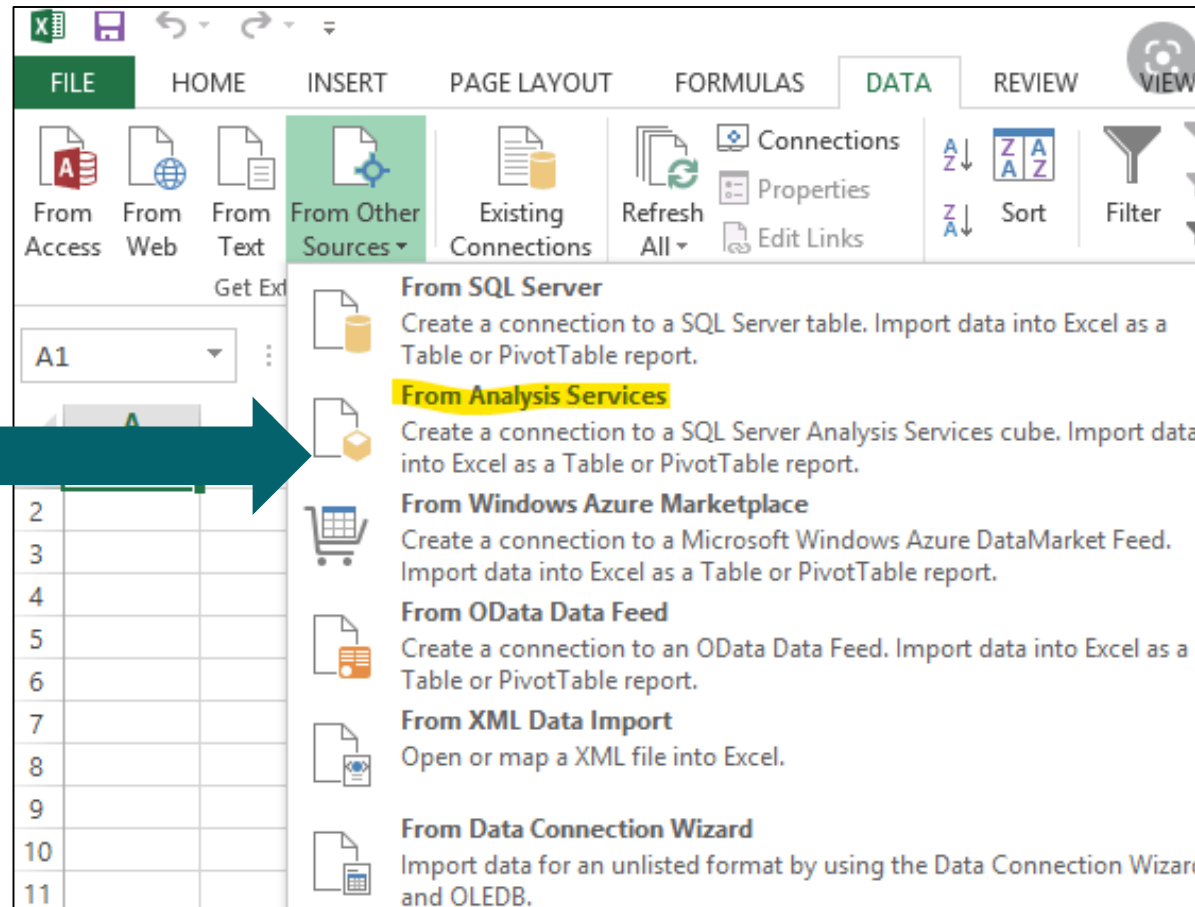
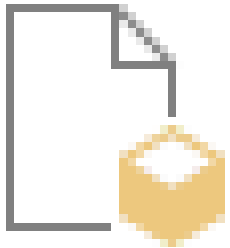
PL Cubes



How to *Make* a Cube

1. Go to Data Tab > From Other Sources > From Analysis Services

Helpful hint: To remember where to go, just look for the option with the cube next to it!



2. Conquer the Data Connection Wizard



Data Connection Wizard

Connect to Database Server

Enter the information required to connect to the database server.

1. Server name:

2. Log on credentials

☒ Use Windows Authentication

☐ Use the following User Name and Password

User Name:

Password:

Cancel < Back **Next >** Finish

Server Name: tylerlsn1

Data Connection Wizard

Select Database and Table

Select the Database and Table/Cube which contains the data you want.

Select the database that contains the data you want:

munprod_General Ledger Cubes

munprod_Accounts Receivable Cubes

munprod_Business License Cubes

munprod_Fixed Assets Cubes

munprod_General Ledger Cubes

munprod_Inventory Cubes

munprod_Payroll HR Cubes

GLRevenueAndExpenseCube

State Reporting Cube

	Modified	Created
Projection	3/4/2022 2:24:56 AM	
Assets and Liabilities	3/4/2022 2:25:24 AM	
Munis GL Revenue and Expense	3/4/2022 2:24:56 AM	
Munis State Reporting	3/4/2022 2:25:00 AM	

Cancel < Back **Next >** Finish

General Ledger Cubes

Data Connection Wizard

Select Database and Table

Select the Database and Table/Cube which contains the data you want.

Select the database that contains the data you want:

munprod_General Ledger Cubes

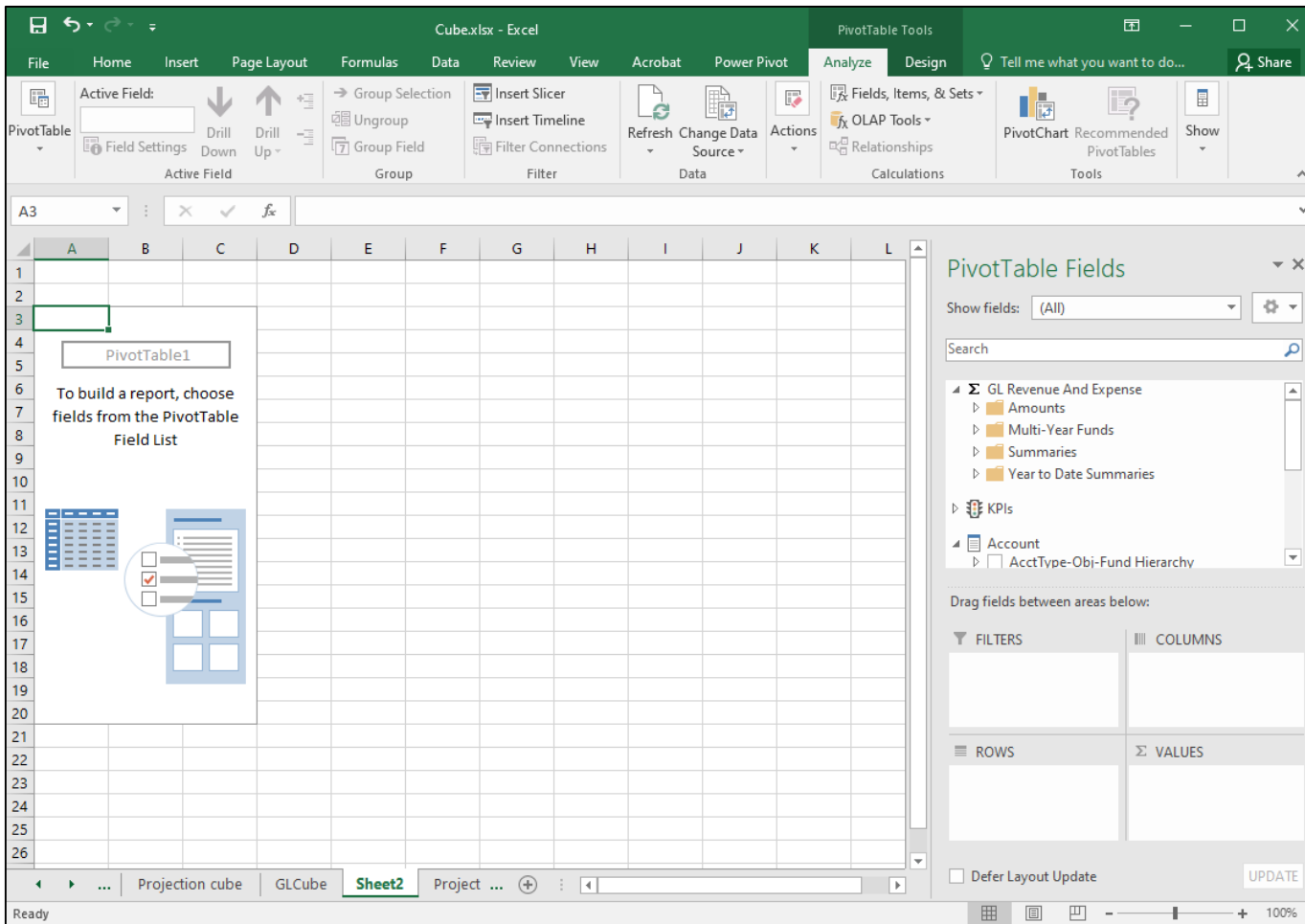
☒ Connect to a specific cube or table:

Name	Description	Modified	Created
Budget Projections Cube	Munis Budget Projection	5/19/2022 2:25:02 AM	
GLAssetsAndLiabilitiesCube	Munis GL Assets and Liabilities	5/19/2022 2:25:31 AM	
GLRevenueAndExpenseCube	Munis GL Revenue and Expense	5/19/2022 2:25:04 AM	
State Reporting Cube	Munis State Reporting	5/19/2022 2:25:07 AM	

Cancel < Back **Next >** **Finish**

GLRevenueAndExpenseCube

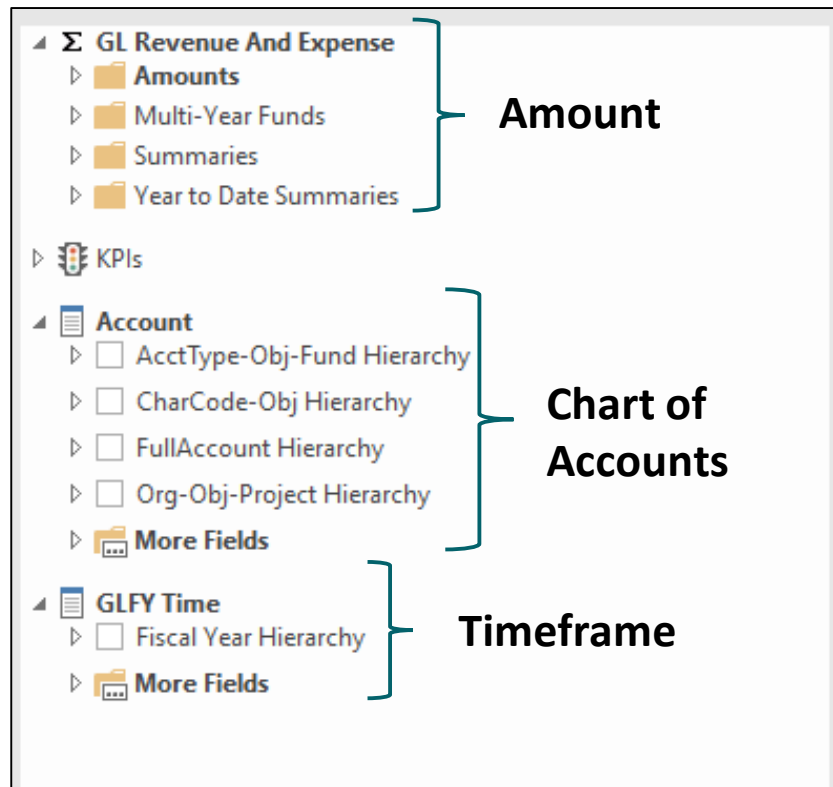
3. Get the info!



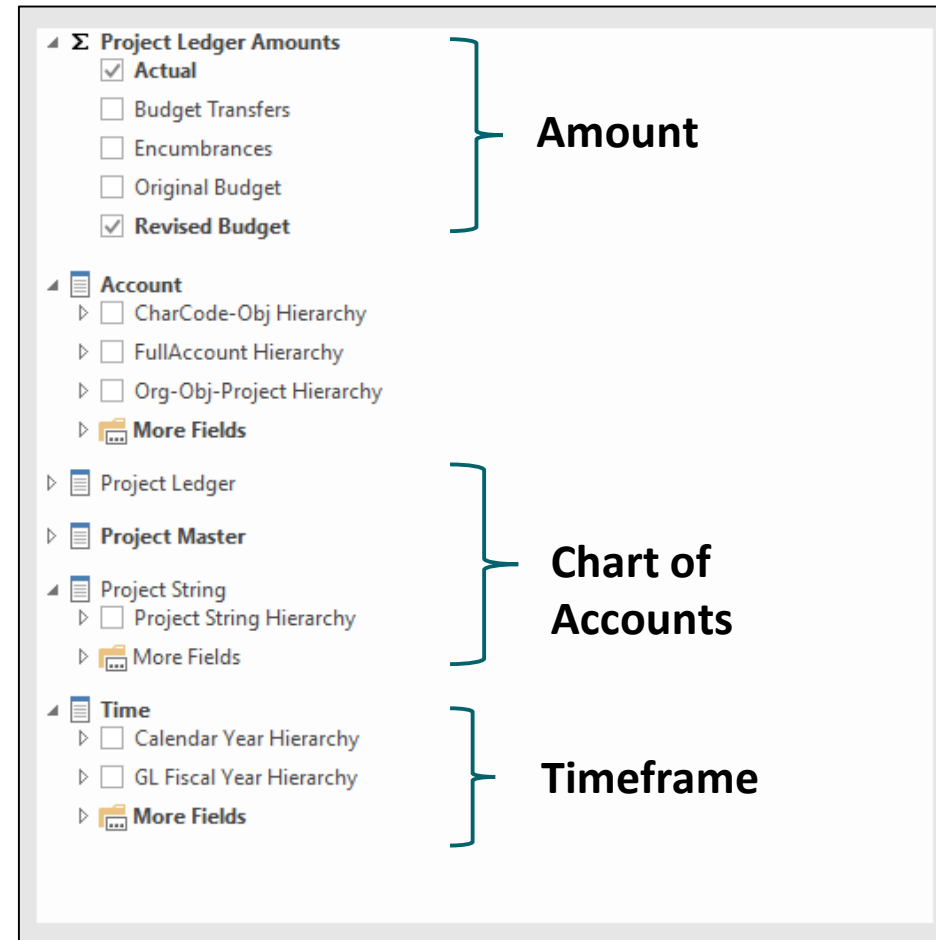
Drag items under
“PivotTable Fields”
to Filters, Rows,
Columns, and
Values fields to
manipulate

3. Reminder of What's Available

GL Cubes



PL Cubes

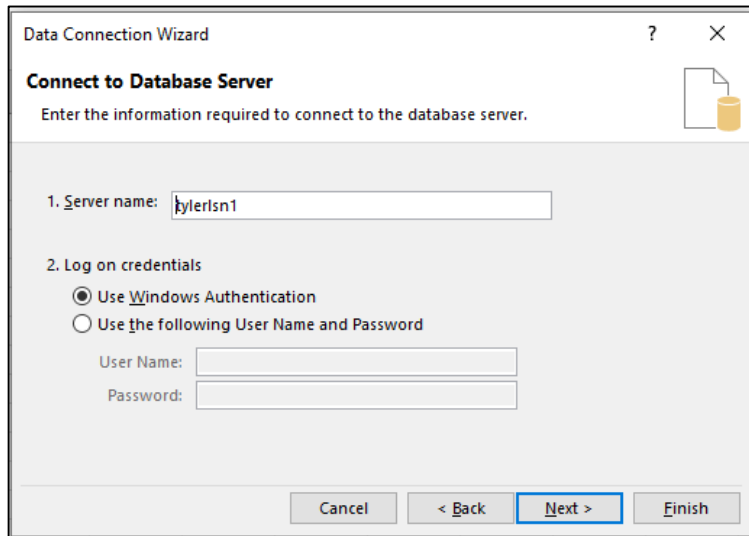


Demonstration

 Let's stretch the brain
muscle with cubercise!

Cubercise 1

- What was your agency's 2021 actual expenditures for perm wages (51110)?



Data Connection Wizard

Connect to Database Server
Enter the information required to connect to the database server.

1. Server name:

2. Log on credentials

☒ Use Windows Authentication

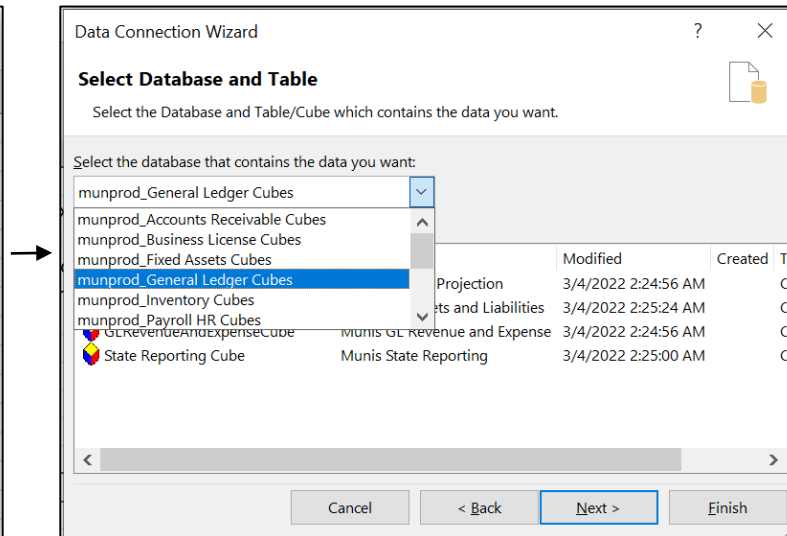
☐ Use the following User Name and Password

User Name:

Password:

Cancel < Back **Next >** Finish

Server Name: tylerlsn1



Data Connection Wizard

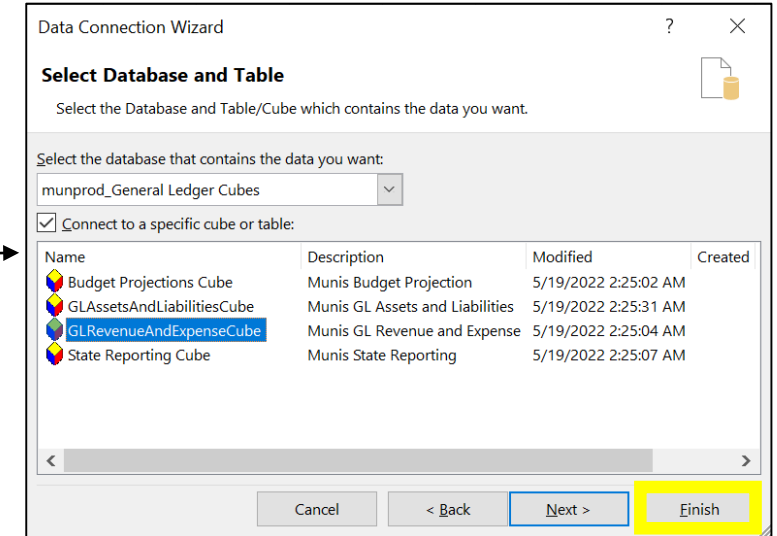
Select Database and Table
Select the Database and Table/Cube which contains the data you want.

Select the database that contains the data you want:

	Modified	Created
munprod_General Ledger Cubes	3/4/2022 2:24:56 AM	
munprod_Accounts Receivable Cubes	3/4/2022 2:25:24 AM	
munprod_Business License Cubes	3/4/2022 2:24:56 AM	
munprod_Fixed Assets Cubes	3/4/2022 2:25:00 AM	
munprod_General Ledger Cubes	3/4/2022 2:24:56 AM	
munprod_Inventory Cubes	3/4/2022 2:24:56 AM	
munprod_Payroll HR Cubes	3/4/2022 2:24:56 AM	
GLRevenueAndExpenseCube	3/4/2022 2:24:56 AM	
State Reporting Cube	3/4/2022 2:25:00 AM	

Cancel < Back **Next >** Finish

General Ledger Cubes



Data Connection Wizard

Select Database and Table
Select the Database and Table/Cube which contains the data you want.

Select the database that contains the data you want:

☒ Connect to a specific cube or table:

Name	Description	Modified	Created
Budget Projections Cube	Munis Budget Projection	5/19/2022 2:25:02 AM	
GLAssetsAndLiabilitiesCube	Munis GL Assets and Liabilities	5/19/2022 2:25:31 AM	
GLRevenueAndExpenseCube	Munis GL Revenue and Expense	5/19/2022 2:25:04 AM	
State Reporting Cube	Munis State Reporting	5/19/2022 2:25:07 AM	

Cancel < Back **Next >** **Finish**

GLRevenueAndExpenseCube

Cubercise 1

- What was your agency's 2021 actual expenditures for perm wages (51110)?

	A	B
1	Object	51110 - PERMANENT WAGES
2		
3	Actual	Column Labels
4	Row Labels	2021
5	00 - UNDEFINED	\$4,739,722.66
6	10 - ASSESSOR	\$1,799,818.08
7	11 - ATTORNEY	\$2,257,573.85
8	12 - CIVIL RIGHTS	\$1,512,598.13
9	13 - CLERK	\$634,811.14
10	14 - COMMON COUNCIL	\$207,461.75
11	15 - FINANCE	\$3,140,780.22
12	16 - HUMAN RESOURCES	\$1,513,938.79
13	17 - INFORMATION TECHNOLOGY	\$4,077,072.28
14	19 - MAYOR	\$1,131,885.95
15	20 - MUNICIPAL COURT	\$359,388.47
16	21 - TREASURER	\$0.00
17	22 - EMPLOYEE ASSISTANCE PROGRAM	\$284,916.98
18	30 - FIRE	\$35,471,301.49
19	31 - POLICE	\$45,902,896.66
20	32 - PUBLIC HEALTH MADISON DANE	\$11,840,076.79
21	33 - OFFICE OF INDEPENDENT MONITOR	\$0.00
22	40 - ENGINEERING	\$3,435,985.71

Cubercise 2

- What is your agency's current 2023 cost-to-continue budget (Level 1)?
 - Type of cube? **Projection**
 - Amount? **Level 1 (cost to continue)**
 - Chart of Accounts? **Segment 3 (agency)**
 - Timeframe? **Projection number (2023X)**

Data Connection Wizard

Connect to Database Server

Enter the information required to connect to the database server.

1. **Server name:**

2. **Log on credentials**

☒ Use **Windows Authentication**

☐ Use the following User Name and Password

User Name:

Password:

Data Connection Wizard

Select Database and Table

Select the Database and Table/Cube which contains the data you want.

Select the database that contains the data you want:

		Modified	Created
munprod_General Ledger Cubes		3/4/2022 2:24:56 AM	
munprod_Accounts Receivable Cubes		3/4/2022 2:25:24 AM	
munprod_Business License Cubes		3/4/2022 2:24:56 AM	
munprod_Fixed Assets Cubes		3/4/2022 2:24:56 AM	
munprod_General Ledger Cubes	Projection	3/4/2022 2:24:56 AM	
munprod_Inventory Cubes	Assets and Liabilities	3/4/2022 2:24:56 AM	
munprod_Payroll HR Cubes		3/4/2022 2:24:56 AM	
GLRevenueAndExpenseCube	Munis GL Revenue and Expense	3/4/2022 2:24:56 AM	
State Reporting Cube	Munis State Reporting	3/4/2022 2:24:56 AM	

Data Connection Wizard

Select Database and Table

Select the Database and Table/Cube which contains the data you want.

Select the database that contains the data you want:

☒ **Connect to a specific cube or table:**

Name	Description	Modified	Created
Budget Projections Cube	Munis Budget Projection	5/26/2022 2:25:19 AM	
GLAssetsAndLiabilitiesCube	Munis GL Assets and Liabilities	5/26/2022 2:25:48 AM	
GLRevenueAndExpenseCube	Munis GL Revenue and Expense	5/26/2022 2:25:21 AM	
State Reporting Cube	Munis State Reporting	5/26/2022 2:25:24 AM	

Cubercise 2

- What is your agency's current 2023 cost-to-continue budget (Level 1)?

	A	B
1	Projection Number	(Multiple Items) ▼
2		
3	Row Labels ▼	Level 01
4	00 - UNDEFINED	-256,471,438.02
5	10 - ASSESSOR	2,925,797.87
6	11 - ATTORNEY	2,938,832.31
7	12 - CIVIL RIGHTS	2,135,405.51
8	13 - CLERK	3,728,986.73
9	14 - COMMON COUNCIL	858,281.56
10	15 - FINANCE	4,076,499.93
11	16 - HUMAN RESOURCES	1,712,743.28
12	17 - INFORMATION TECHNOLOGY	9,300,238.08
13	19 - MAYOR	1,164,749.81
14	20 - MUNICIPAL COURT	224,260.22
15	21 - TREASURER	0.00
16	22 - EMPLOYEE ASSISTANCE PROGRAM	470,826.26
17	28 - ROOM TAX COMMISSION	0.00
18	30 - FIRE	63,985,686.97
19	31 - POLICE	83,276,007.33
20	32 - PUBLIC HEALTH MADISON DANE	72,248.04

Note: Finance is still prepping for operating kick-off, so **the numbers in this cube are not final**. In other words, don't panic at what you see!

Limitations of Cubes

Cube Tips and Tricks

- Should be able to email cubes to others, and their Munis access should drive what they can see.
- Refreshing is a blessing and a curse. To keep an artifact, break the connection – Excel > Data > Connections > Remove.
- When first creating a cube, check it against the Munis Account Inquiry to make sure it is in line with expectations.
- Note: Cubes have a one day lag.

Testimony from a Real Cube User!

Kathy Schwenn – Water Utility Financial Manager and Cube User
Extraordinaire!

GO FORTH AND CUBE!



It takes a bit of practice to work with cubes, but makes analyzing MUNIS data much easier and more efficient! Try practicing with them to solve a specific problem, and don't be afraid to "break them"!

Reference: Cube Glossary

- Segment 3: Agency
- Segment 4: Service
- Character code: Major
- Encumbrance: Money that is obligated to be spent but has not be spent
- Requisition: Money that is on its way out the door
- Project String Type: Indicates whether the string is for expenditures or revenues, helpful filter

Project Ledger Setup

