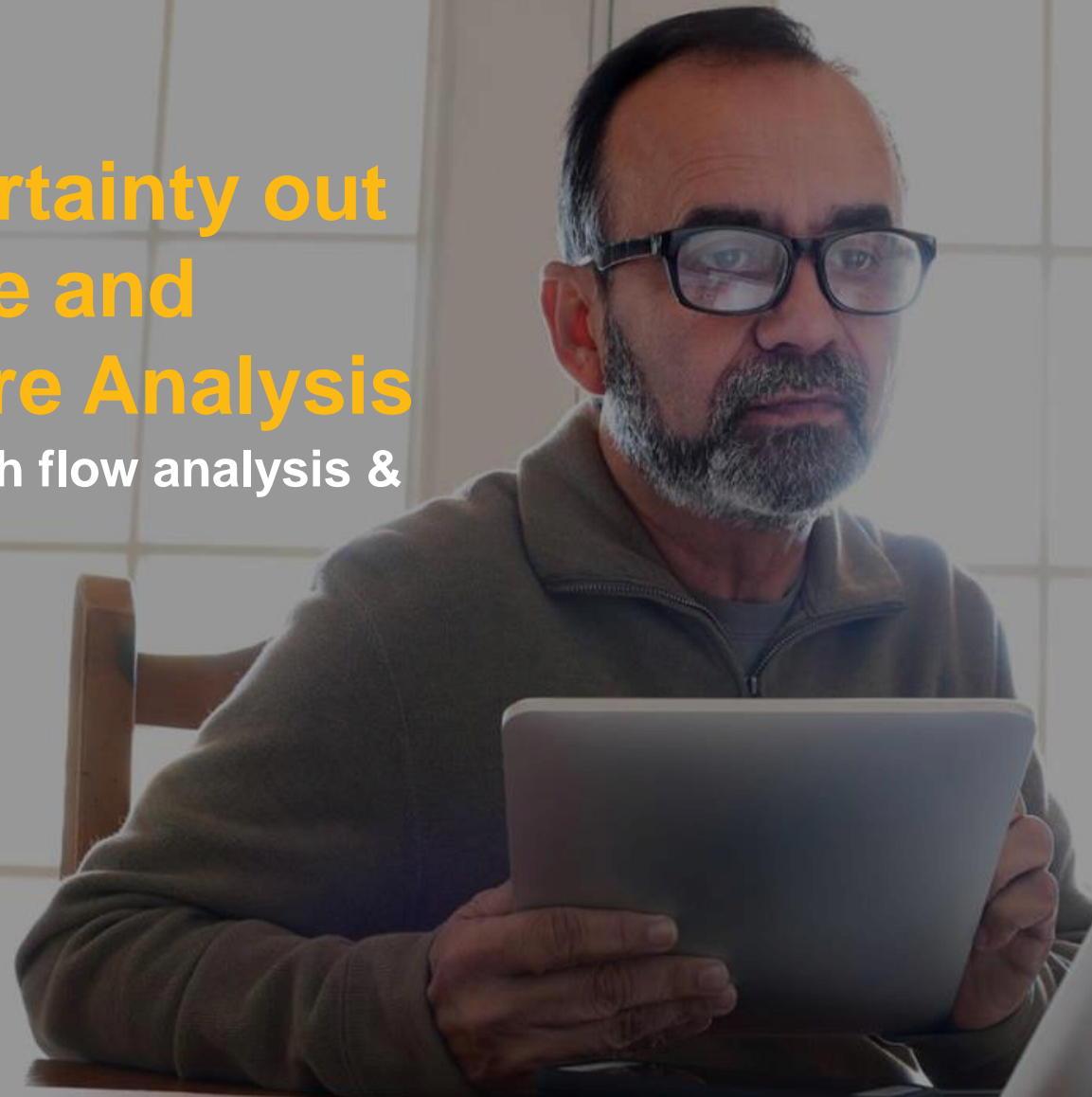


Webinar Series

# Take Uncertainty out of Revenue and Expenditure Analysis

Session #3: Cash flow analysis &  
modeling

July 30, 2020



Disclaimer: The material presented in this webinar is general in nature and is intended for informational purposes only. It is not municipal advisory advice nor a call to action. Please contact your registered municipal advisor to discuss the impact to your organization.

# Meet your panelists



**Alicia Antonetti-  
Tricker**



**Tim Berry**

# 3-part webinar series

## Webinar series focus

The importance of scenario modeling and tools

Adjusting revenue expectations

Controlling cost to reduce expenditures

Aligning revenues and expenditures to manage your cash flow and budgets

Modeling highlights for each area of focus

## Webinar dates

June 18

- Revenue analysis & modeling

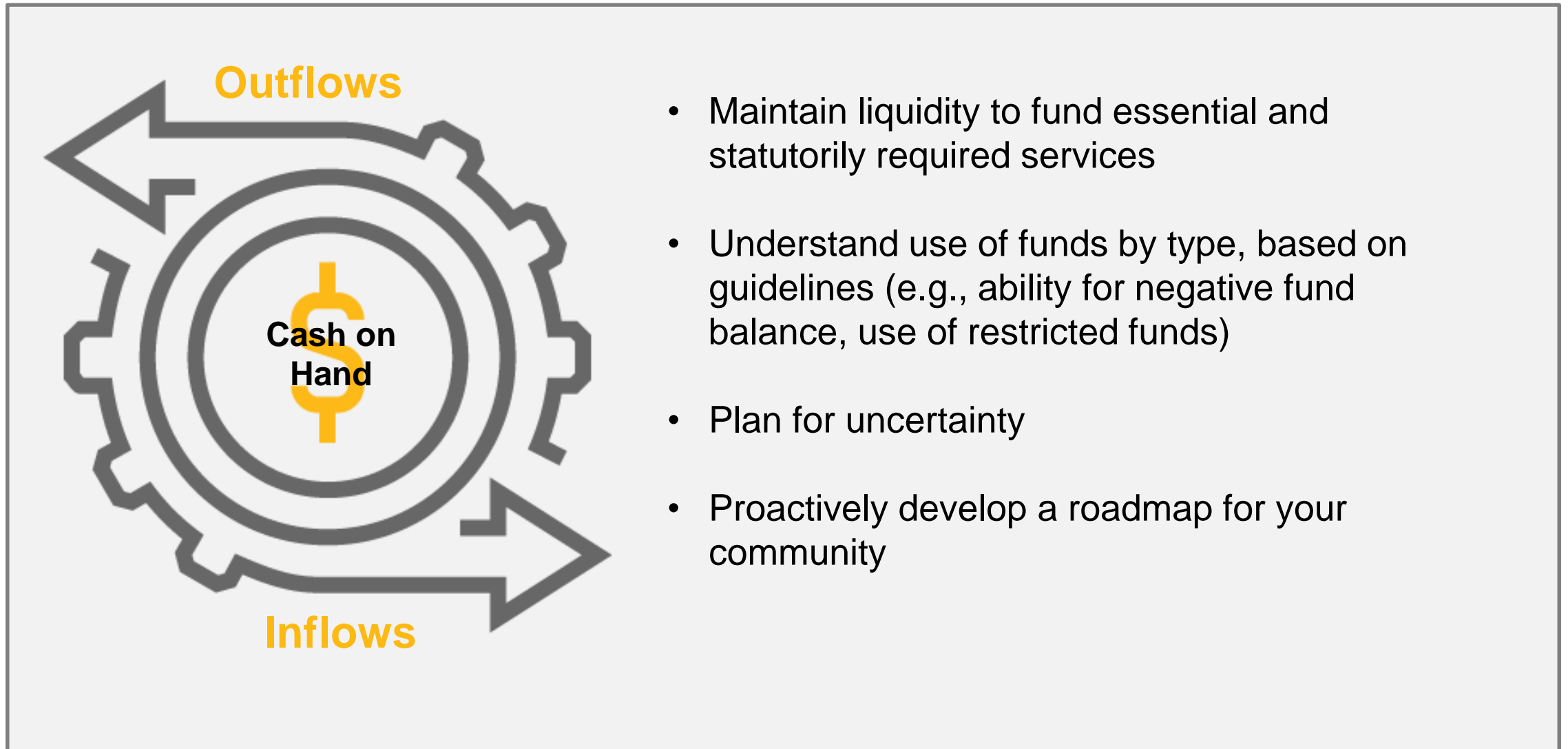
July 9

- Expenditure analysis & modeling

July 30

- Cash flow analysis & modeling

# Why cash flow management?



- Maintain liquidity to fund essential and statutorily required services
- Understand use of funds by type, based on guidelines (e.g., ability for negative fund balance, use of restricted funds)
- Plan for uncertainty
- Proactively develop a roadmap for your community

# How to develop a cash flow model: 3 steps

**Step 1**



**Determine Cash**  
Cash On Hand +  
Reserves



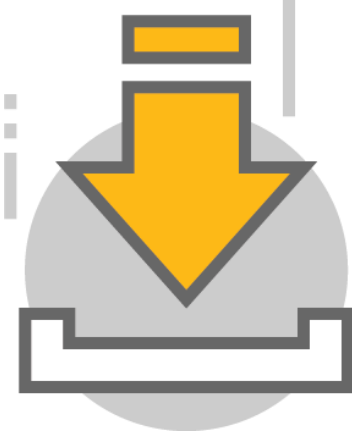
**Step 2**



**Model Inflows**  
Revenues + Other Sources  
of Cash



**Step 3**

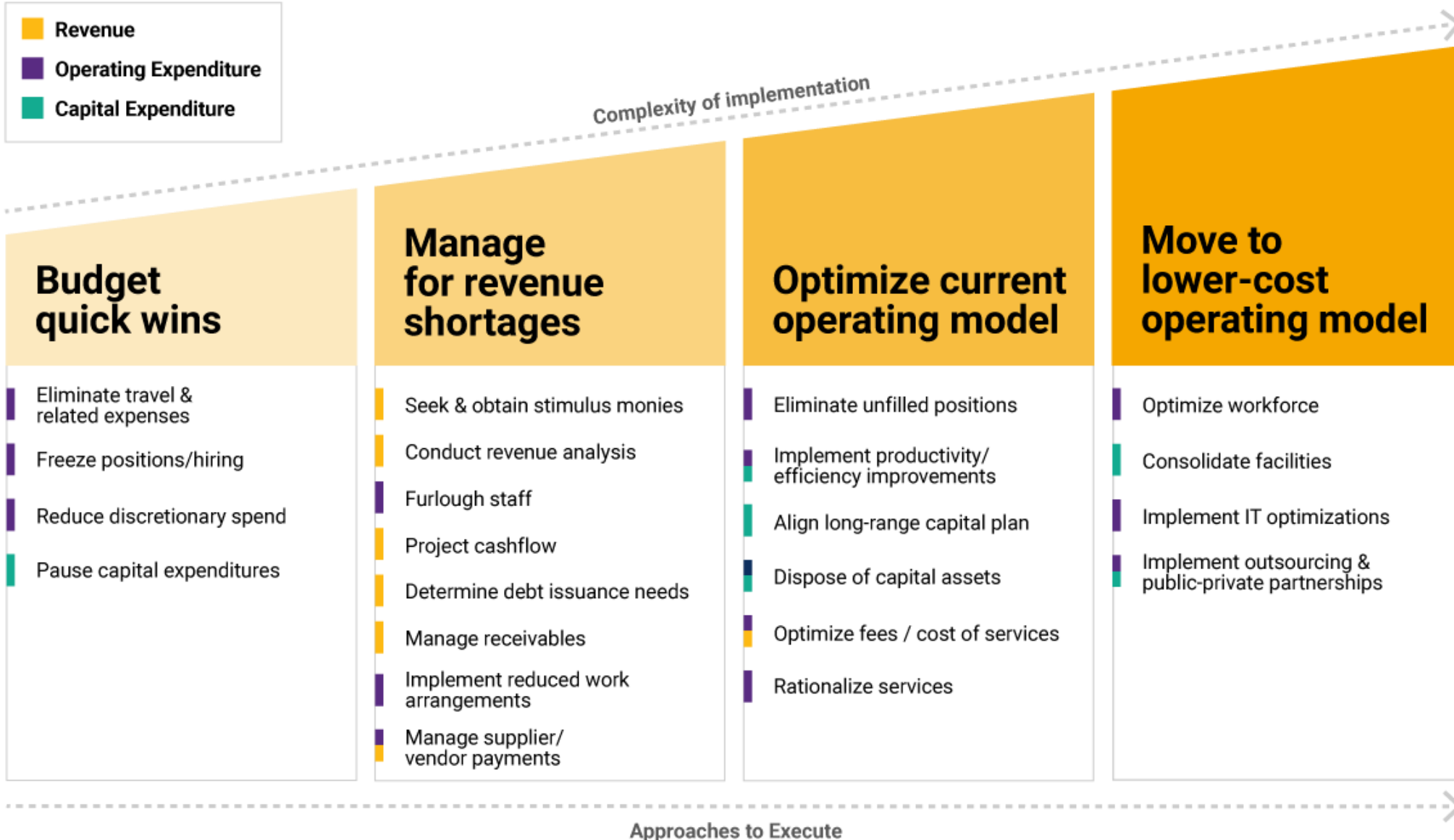


**Model Outflows**  
Expenditures + Other  
Obligations

# Cash flow model example

	January	February	March	April	May	June	July	August	September	October	November	December	Total
<b>Beginning Balance (Cash on Hand):</b>	\$500,000	\$620,000	\$495,000	\$300,000	\$310,000	\$70,000	\$335,000	\$330,000	\$137,500	(\$137,500)	(\$62,500)	\$337,500	\$500,000
<b>Inflows (Receipts)</b>													
Sales & Use Tax	250,000	225,000	175,000	210,000	180,000	210,000	215,000	225,000	230,000	210,000	220,000	225,000	2,575,000
Property Tax						450,000					525,000		975,000
Income Tax	200,000			200,000			200,000			200,000			800,000
Intergovernmental Transfers	50,000	25,000	10,000	40,000	10,000	5,000		10,000	25,000	40,000		15,000	230,000
Charges & Fees	10,000	10,000	10,000	10,000	15,000	15,000	15,000	15,000	10,000	10,000	10,000	10,000	140,000
Bond Proceeds					5,000								5,000
Other			10,000	5,000				2,500			20,000		37,500
<b>Total Inflows</b>	<b>510,000</b>	<b>260,000</b>	<b>205,000</b>	<b>465,000</b>	<b>210,000</b>	<b>680,000</b>	<b>430,000</b>	<b>252,500</b>	<b>265,000</b>	<b>460,000</b>	<b>775,000</b>	<b>250,000</b>	<b>4,762,500</b>
<b>Outflows (Disbursements)</b>													
Operations	325,000	320,000	330,000	315,000	320,000	350,000	345,000	360,000	325,000	320,000	310,000	325,000	3,945,000
Debt payments (P & I)				75,000					75,000				150,000
Insurance Benefits + Repayments	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	600,000
Capital Outlays			5,000		15,000		25,000						45,000
Assistance & Subsidies	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	180,000
Other								20,000					20,000
Potential Expenditures	0	0	0	0	50,000	0	0	0	75,000	0	0	0	125,000
<b>Total Outflows</b>	<b>390,000</b>	<b>385,000</b>	<b>400,000</b>	<b>455,000</b>	<b>450,000</b>	<b>415,000</b>	<b>435,000</b>	<b>445,000</b>	<b>540,000</b>	<b>385,000</b>	<b>375,000</b>	<b>390,000</b>	<b>5,065,000</b>
<b>End of Month Cash Balance</b>	<b>\$620,000</b>	<b>\$495,000</b>	<b>\$300,000</b>	<b>\$310,000</b>	<b>\$70,000</b>	<b>\$335,000</b>	<b>\$330,000</b>	<b>\$137,500</b>	<b>(\$137,500)</b>	<b>(\$62,500)</b>	<b>\$337,500</b>	<b>\$197,500</b>	<b>\$197,500</b>

# Strategies to manage public sector cash flow





# Introducing Crowe Financial Scenario Planner



**Powered by Microsoft Power BI**



**Excel-based import templates**



**Online, secure & fully hosted by Microsoft**



**Consulting and technical support available**

# Why consider Crowe Financial Scenario Planner?



**Based on your historical data**



**Accommodates your unique revenue & expenditure streams**



**Streamlines “what-if” planning**



**Includes easy to use Excel upload templates**



**Exportable dashboards to use in reports**



**Fully hosted and secure on Microsoft Power BI**

# The power of Crowe Financial Scenario Planner: Three easy steps to achieve results



Set-up model with user-friendly uploads and input screens



Make assumptions to your revenues and expenditures using filters



View model results on your pre-configured dashboards

Complex analysis in three simple steps.

## **Crowe Financial Scenario Planner**

powered by Microsoft Power BI®

# Set up your model with user-friendly input templates and screens

Crowe has taken the guess work out of building a scenario planning model

Use our input screens and upload templates to assist with estimating revenues and expenses

For example, model your sales tax revenues based on the industry mix within your community, using either NAICS or SIC classifications

NAICS Sector	NAICS Code	Estimated Historical Sales Tax Revenue %
Agriculture	11	2.00%
Mining, Quarrying, and Oil and Gas Extraction	21	3.00%
Utilities	22	8.00%
Construction	23	4.00%
Manufacturing	31-33	7.00%
Wholesale Trade	42	7.00%
Retail Trade	44-45	26.00%
Transportation and Warehousing	48-49	4.00%
Information	51	2.00%
Finance and Insurance	52	3.00%
Real Estate and Rental and Leasing	53	3.00%
Professional, Scientific, and Technical Services	54	2.00%
Management of Companies and Enterprises	55	5.00%
Administrative and Support and Waste Management and F	56	2.00%
Educational Services	61	3.00%
Health Care and Social Assistance	62	1.00%
Arts, Entertainment, and Recreation	71	1.00%
Accommodation and Food Services	72	5.00%
Other Services	81	5.00%
Public Administration	92	2.00%
Other	99	5.00%

# Set assumptions to conduct “what-if” planning

Use the already designed input screens to set potential impacts to baseline budgets

For example, due to stay-at-home orders and closures, set expected sales tax revenue for retail (NAICS 44-45) at 25% of planned (pre-COVID) budget

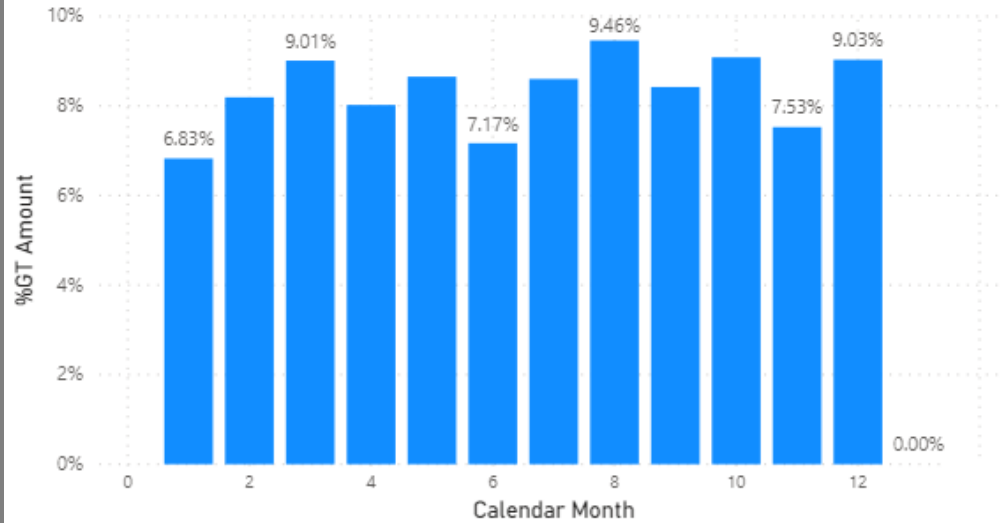
Crowe Financial Scenario Planner - Input: Anticipated Sales Tax Receipts																						Crowe	
Estimated expected sales tax collection based on original / planned budget by calendar or fiscal month period and industry sector.																							
Calendar Year	NAICS Sectors																				Total		
	11	21	22	23	31-33	42	44-45	48-49	51	52	53	54	55	56	61	62	71	72	81	92		99	
2020	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
5	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
6	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
7	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
9	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
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11	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
2021	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
4	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
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6	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
7	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
8	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
9	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
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12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
2022	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	

# Interactive dashboards

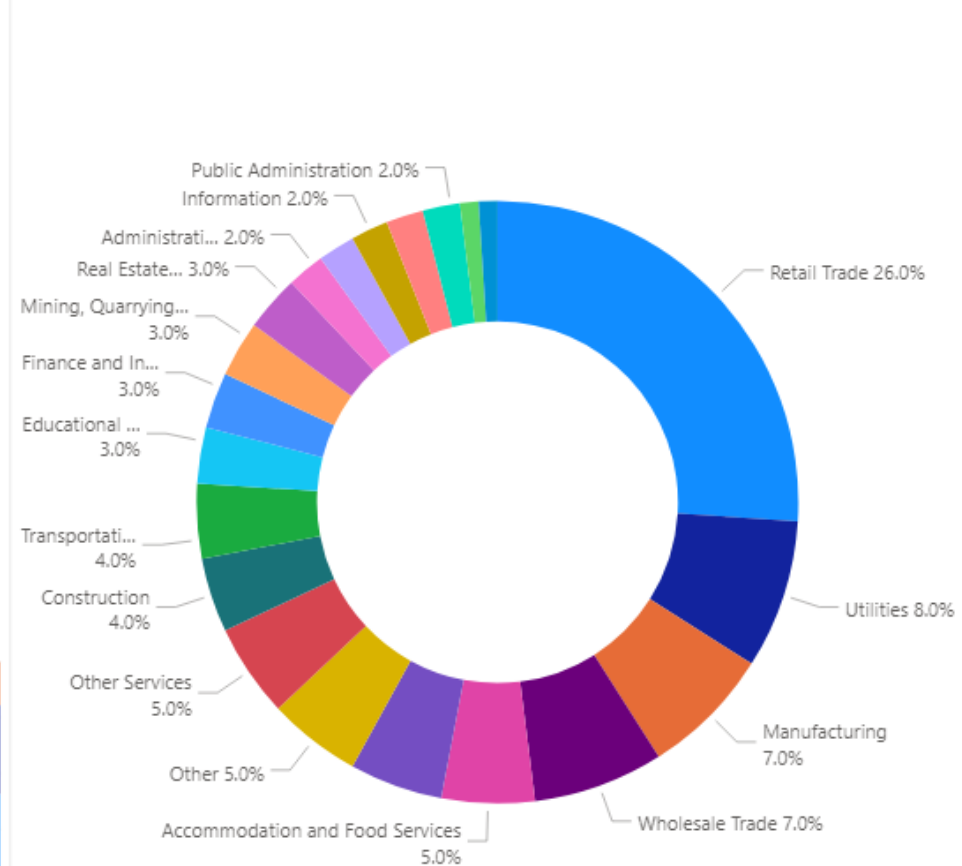
## Crowe Financial Scenario Planner



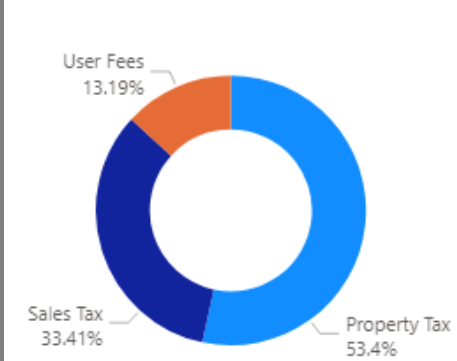
Average Share of Revenue by Calendar Month



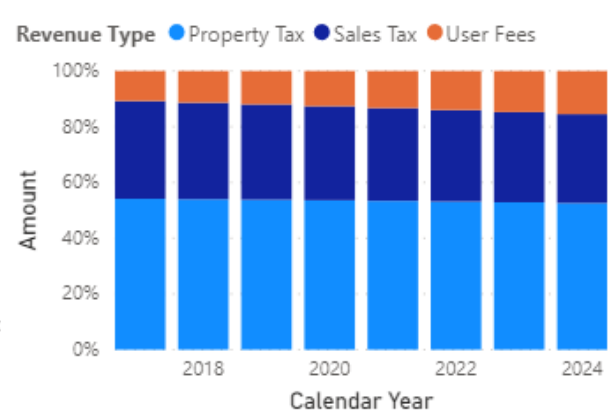
Average Share of Historical Sales Tax Activity by NAICS Industry Sector



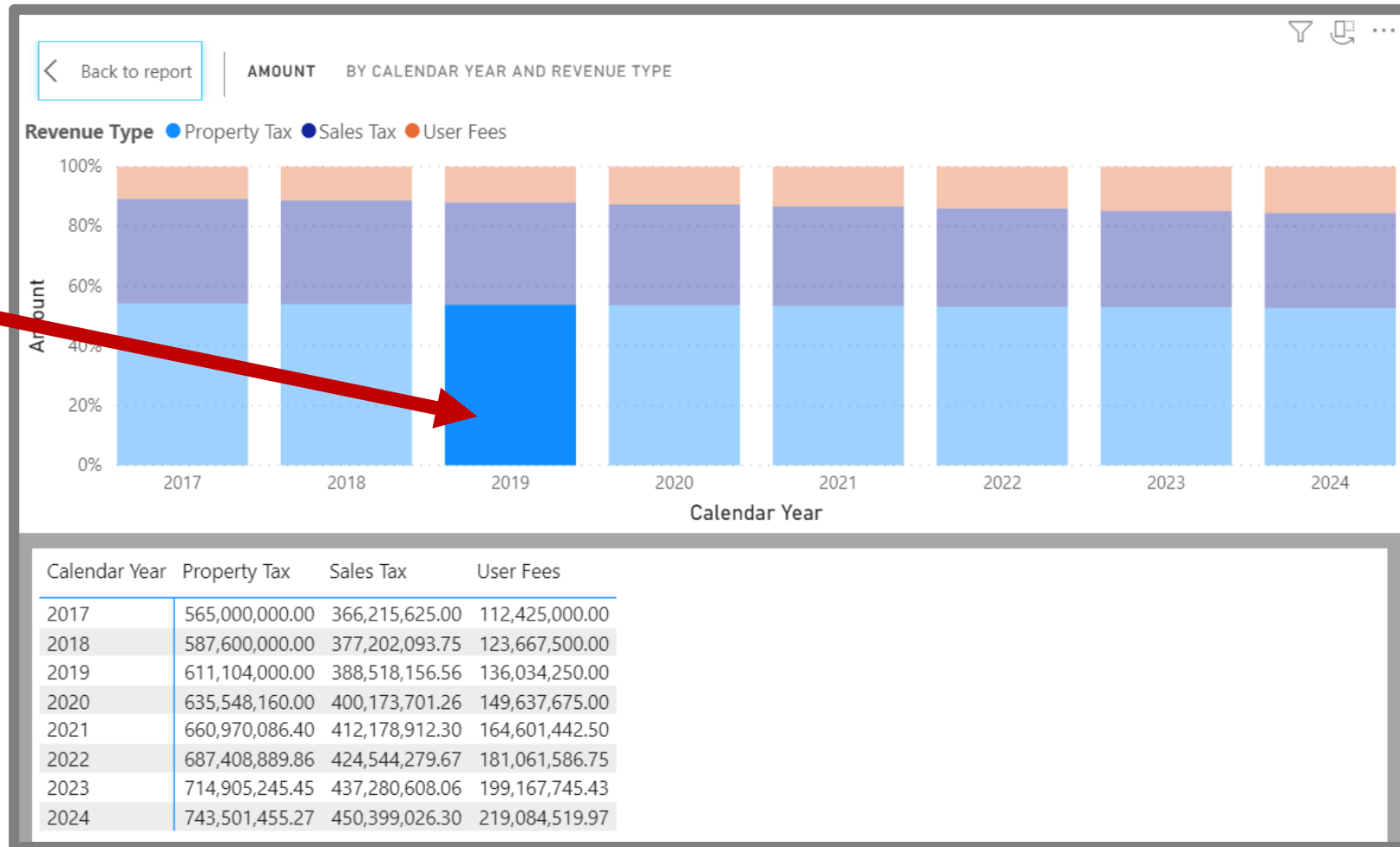
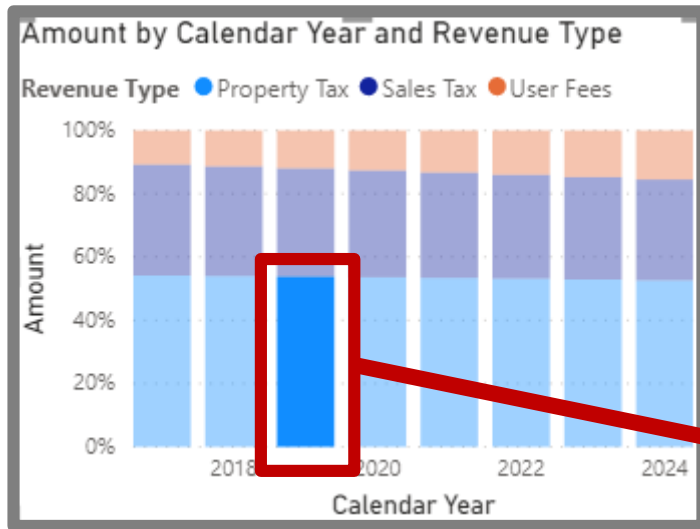
Amount by Revenue Type



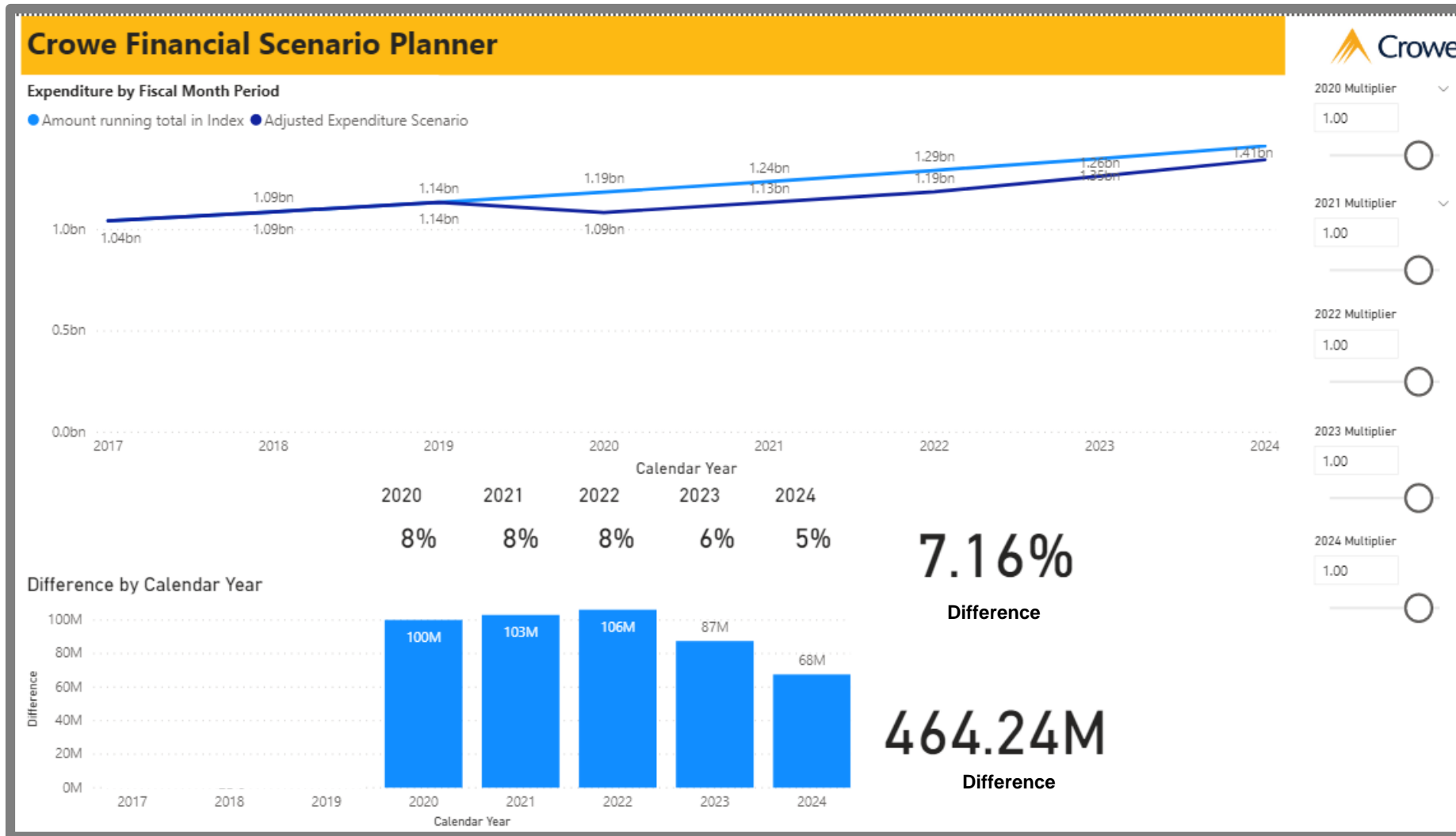
Amount by Calendar Year and Revenue Type



# Interactive dashboards

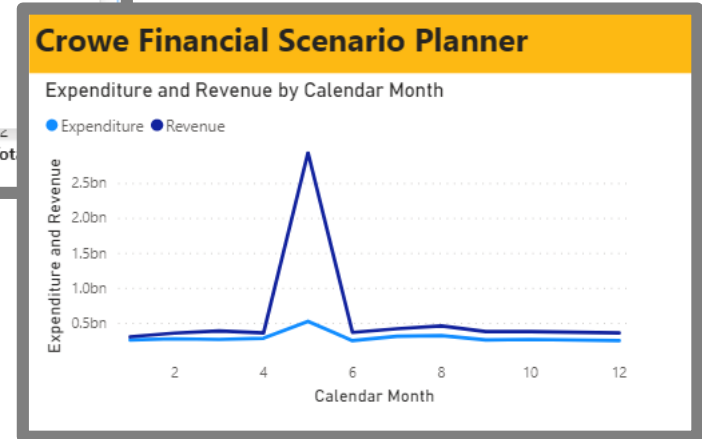
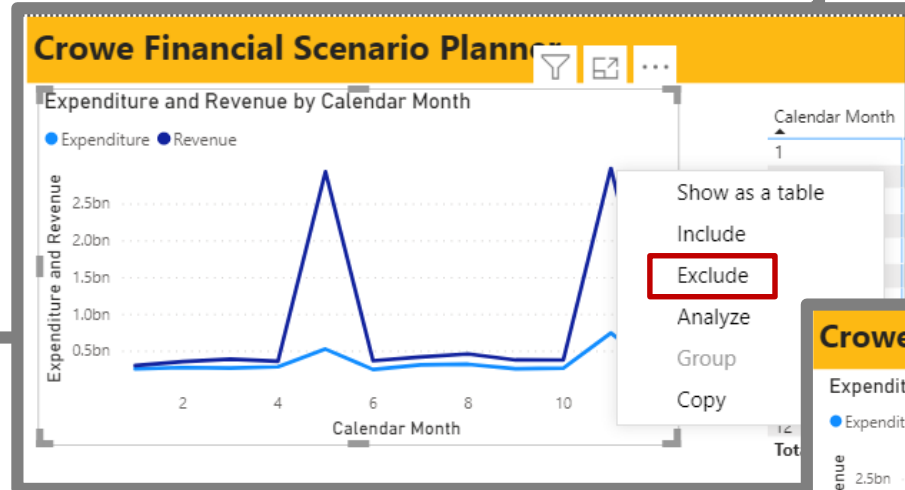
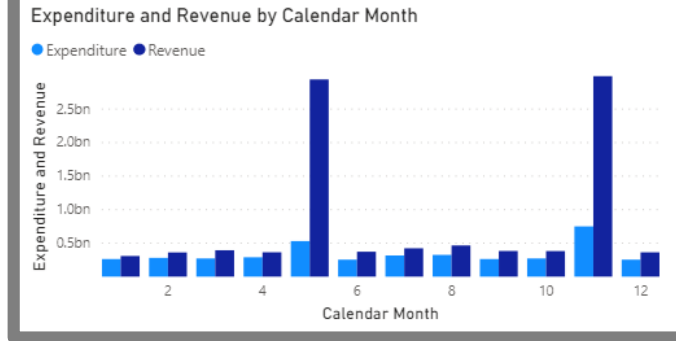
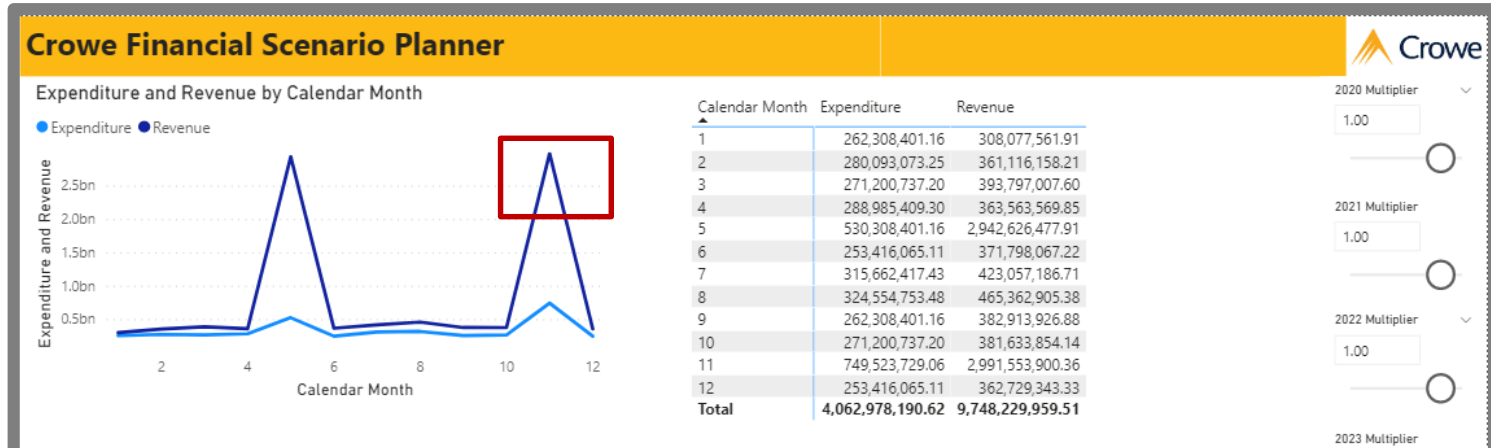


# Interactive dashboards





# Interactive dashboards



# Questions

# More from Crowe: Crowe Debt Manager

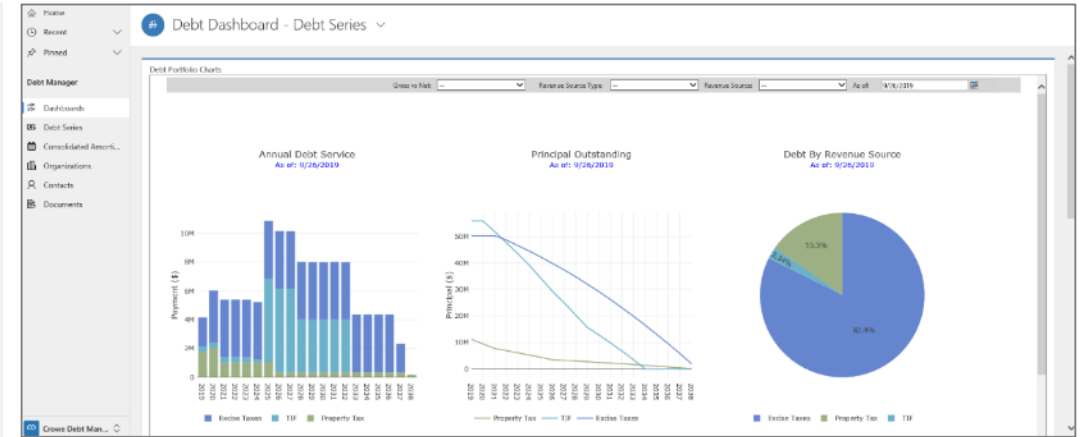
Stay on top of your debt portfolio with a secure, web-based system

Be responsive, with access to dashboards and other analytics

Remain compliant with continuing disclosures, arbitrage and other key dates

Store and retrieve all documents associated with each obligation

Interested in learning more? Contact Alicia Antonetti-Tricker at [alicia.antonetti@crowe.com](mailto:alicia.antonetti@crowe.com) or Tim Berry at [tim.berry@crowe.com](mailto:tim.berry@crowe.com).



The screenshot shows the 'General Information' page for 'General Obligation Bonds, Series 2019'. The page includes a description of the bonds and a table of key financial metrics.

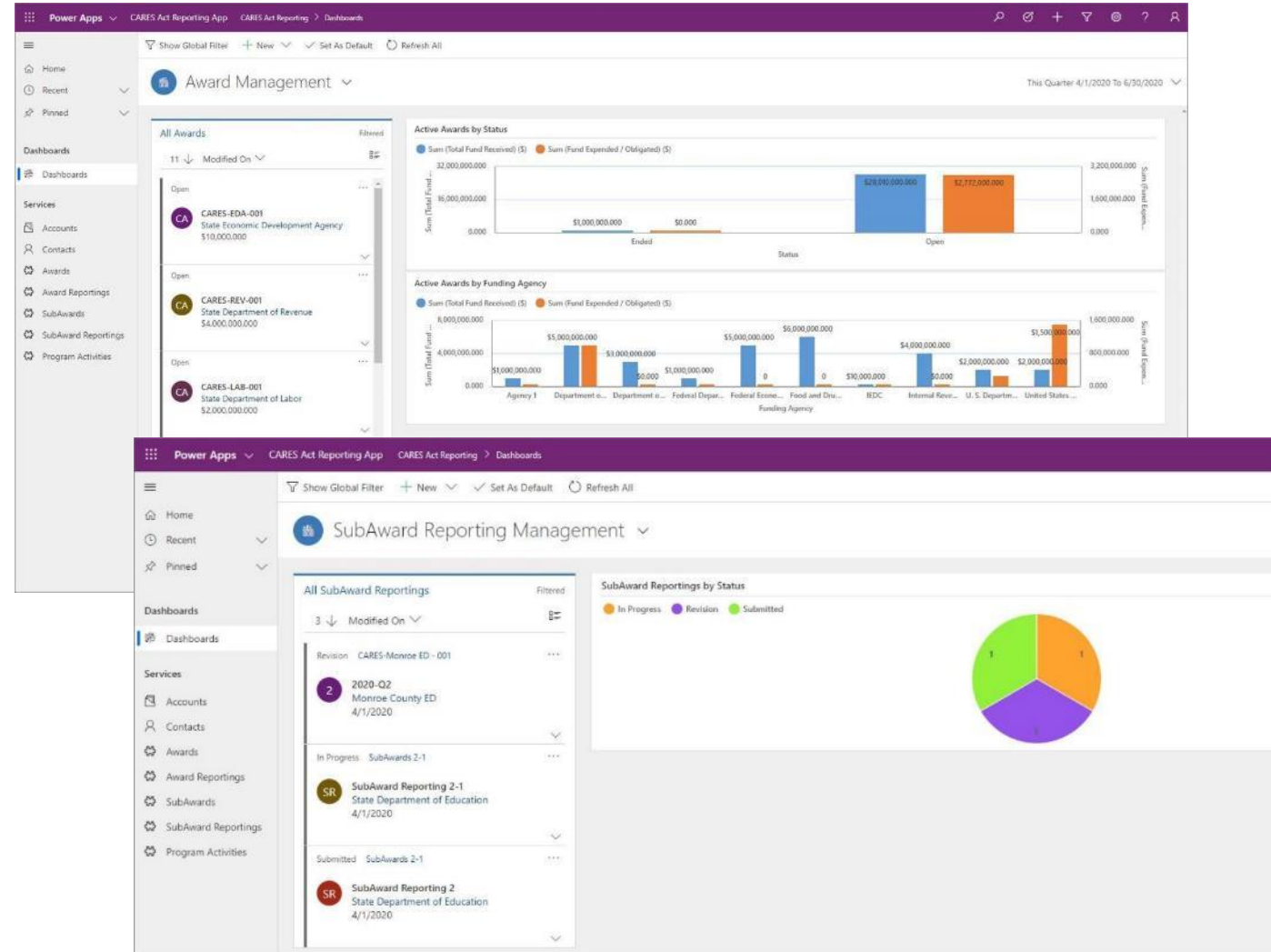
Field	Value	Field	Value
Debt Series Name	General Obligation Bonds, Series 2019	Original Issuance Amount	\$5,545,000.00
Issuer	Sample City	Current Principal Balance	\$4,800,000.00
Description of Purpose	The Bonds are being issued by the City for the purpose of (i) financing the construction of a community center at the corner of Test Avenue and Sample Street in the City, (ii) providing payment of preliminary expenses, (iii) funding a debt service reserve fund, and (iv) paying costs of selling and issuing the Bonds.	Next Payment Amount	\$175,885.81
Debt Series Type	Bond	Next Payment Date	1/15/2020
Issued Date	5/2/2019	Base OUSP	1.250%
Delivery Date	5/15/2019	Interest Type	Fixed
Final Maturity Date	1/15/2038	Obligor Debtor?	No
Base OUSP	1.250%	Callable	Yes
Obligor Debtor?	No	Callable Type	Specified Date
Callable	Yes	Sale Method	Open Market - Competitive
Callable Type	Specified Date	Tax Exempt	Yes
Call Date	1/15/2028	Approval Document Number	2019-001

# More from Crowe: CARES Act Reporting Tool

The requirement to begin reporting your CARES Act expenditures began as early as this month.

Crowe has built a low cost reporting solution which consolidates your subrecipient information and automatically uploads to USASpending.gov.

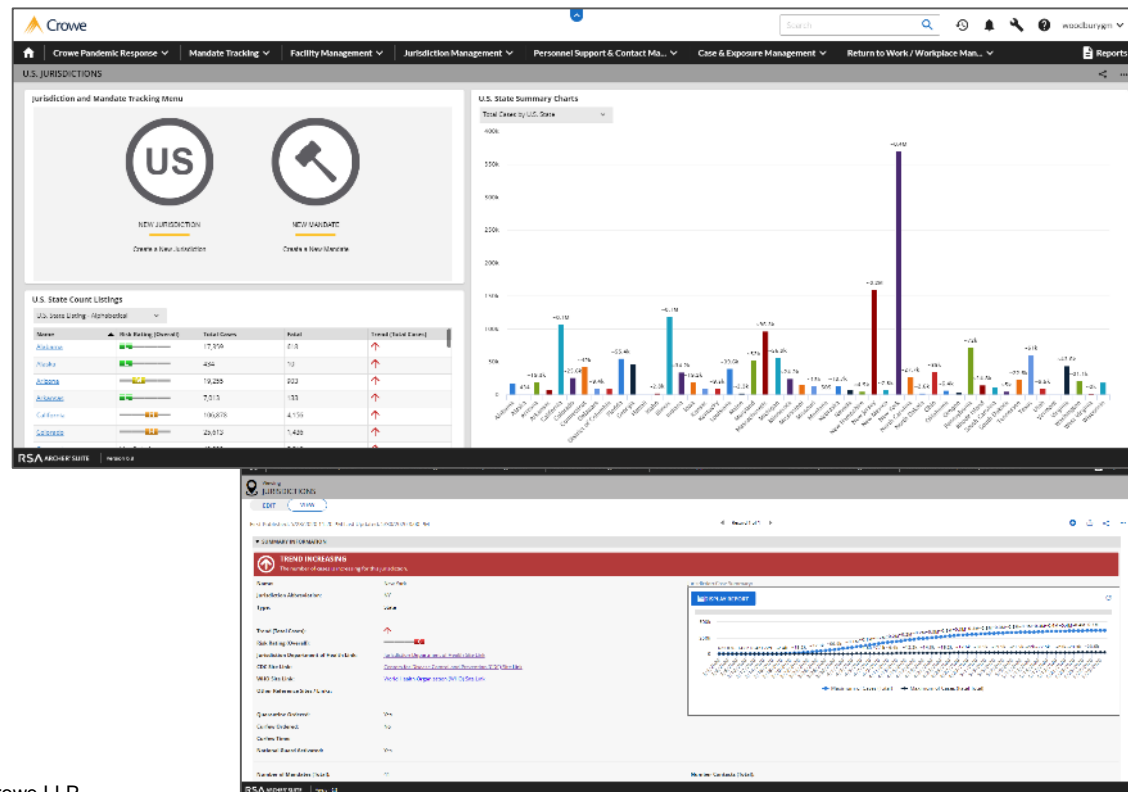
Interested in learning more? Contact Bob Dobis at [bob.dobis@crowe.com](mailto:bob.dobis@crowe.com).



# More from Crowe: Pandemic Response & Recovery App

## Every Organization Faces the Same Critical Questions

*And the answers change every day – making it difficult to risk assess and prioritize your response actions.*



What mandates and closures exist in the jurisdictions that affect employees, partners, customers, contractors, suppliers, and facilities?



Where is each employee? How are they affected by mandates? Who is exempt? What do they need to prove their exemption for safe passage?



How are employees doing? What do they need from us to stay safe and productive?



Who in our ecosystem has been exposed or has contracted the virus?



Are we in compliance with applicable regulations? What do we need to report to state, local, and federal government health departments?



How is the pandemic affecting our business? How do we need to adapt workforce structures, policies, supply chains, or customer relationships? When and how do we “return”?

Interested in learning more? Contact Paul Lionikis at [paul.lionikis@crowe.com](mailto:paul.lionikis@crowe.com).

**Thank you!**

