RETHINKING BUDGETING

# DEFINING THE PROBLEM

The Missing Piece to
Local Government Planning

## ABOUT THE AUTHORS


- **Shayne Kavanagh** is the senior manager of research for GFOA and has been a leader in developing the practice and technique of long-term financial planning and policies for local government. He started GFOA's long-term financial planning and policy consulting offering in 2002 and has been working with governments on financial planning and policies ever since. Shayne has worked with many governments of different sizes and types on financial planning and policies across the United States and Canada.

- **Andrew Kleine** is a senior director, EY-Parthenon Government & Public Sector, Ernst & Young LLP.* He is the author of City on the Line: How Baltimore Transformed Its Budget to Beat the Great Recession and Deliver Outcomes (Rowman & Littlefield, 2018). Andrew's career has included leadership roles in both federal and local government, including as chief administrative officer for Montgomery County, Maryland; budget director for the City of Baltimore; and acting CFO for AmeriCorps. Andrew is a technical advisor for Bloomberg Philanthropies' City Budgeting for Equity and Recovery program.

  **The views reflected in this paper are those of the authors and do not necessarily reflect the views of Ernst & Young LLP or other member firms of the global EY organization.*


## ACKNOWLEDGMENTS


- **Tara Baker**, Treasurer, City of Guelph
- **Pam Eckhardt**, Elected Clerk, Bingham County, Idaho
- **Harpreet Hora**, Budget Manager, City of Roswell, Georgia
- **John Fishbein**, Senior Program Manager, GFOA
- **Don Kettl**, Sid Richardson Professor, LBJ School, University of Texas
- **Jake Kowalski**, Consultant/Analyst, GFOA
- **Katie Ludwig**, Senior Manager, GFOA
- **Chris Morrill**, Executive Director / CEO, GFOA
- **Mike Mucha**, Director, Deputy CEO, RCC Center, GFOA
- **Tony Vu**, Treasurer/CIO, University of Colorado
- **Tammy Waymire**, Professor, Middle Tennessee State University
- **Abbe Yacoben**, Deputy Finance Director/City Treasurer, City of Las Vegas

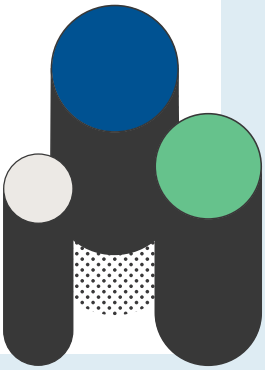

## ABOUT GFOA

The Government Finance Officers Association (GFOA) represents over 21,000 public finance officers throughout the United States and Canada. GFOA's mission is to advance excellence in government finance. GFOA views its role as a resource, educator, facilitator, and advocate for both its members and the governments they serve and provides best practice guidance, leadership, professional development, resources and tools, networking opportunities, award programs, and advisory services.

This paper is part of The Rethinking Budgeting initiative. You can meet the members of the Rethinking Budgeting initiative team here.

## ABOUT THE RETHINKING BUDGETING PROJECT

Local governments have long relied on incremental, line item budgeting where last year's budget becomes next year's budget with changes around the margin. Though this form of budgeting has its advantages and can be useful under circumstances of stability, it also has important disadvantages. The primary disadvantage is that it causes local governments to be slow to adapt to changing conditions. The premise of the "Rethinking Budgeting" initiative is that the public finance profession has an opportunity to update local government budgeting practices to take advantage of new ways of thinking, new technologies, and to better meet the changing needs of communities. The Rethinking Budgeting initiative will raise new and interesting ideas like those featured in this paper and will produce guidance for state and local policy makers on how to local government budget systems can be adapted to today's needs. We hope the ideas presented in this paper will spur conversation about the possibilities for rethinking budgeting. The Rethinking Revenue initiative is a collaborative effort between the Government Finance Officers Association (GFOA) and International City/County Management Association (ICMA).



> A problem not fully understood is unsolvable, and a problem that is fully understood is half solved."
>
> **—Charles Kettering, Inventor**

This famous quote from Charles Kettering holds great significance for local government planning and budgeting today. The traditional budget process is inadequate for dealing with the complex problems that local governments are asked to deal with, such as degradation of the natural environment, encouraging economic opportunity, re-evaluating how public safety is provided, racial disparities, drug addiction, and more.

The traditional budget and planning process is ill-equipped to deal with these kinds of complex problems because complex problems tend to exhibit characteristics that confound traditional planning and budgeting. In this paper, we will show why complex problems frustrate traditional budgeting and planning. We will explain the benefits of taking the time to understand problems more deeply. We will outline the principles for designing a process to define problems more deeply. Finally, we will illustrate a process to define problems before solutions. Let's get started with what makes a problem "complex" and the challenges that poses to traditional budgeting and planning.

**Complex problems are often interconnected.** There are multiple interactive and possibly conflicting causal forces at play. For example, public safety is impacted not just by law enforcement practices but also by economic opportunity, the community's trust in law enforcement, public health issues, and more. The solutions to complex problems are rarely contained within a single department or within local government. Other public, nonprofit and private organizations will need to be part of the solution. Yet the traditional budgeting and planning process tends to budget strictly by department, with cross-departmental collaboration rare and collaboration with outside organizations almost nonexistent.

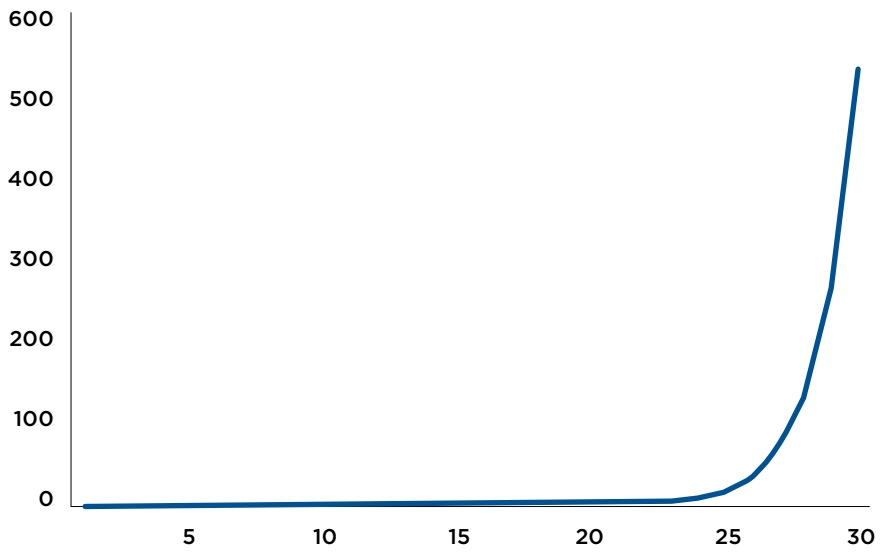
**Complex problems are often exponential, not linear.** Natural disasters like floods, fires and hurricanes are classic examples of an exponential risk. The potential damage increases at a nonlinear rate as the intensity of the event increases. This has obvious implications for a problem like global climate change, but exponential risk also applies to other problems. For example, the summer of 2020 saw widespread civil unrest that rose and spread quickly after the murder of George Floyd. Exponential risk is particularly dangerous because it catches us by surprise. For example, consider the following problem:

> *A lily pond starts with a single lily leaf. Each day the number of leaves will double: two leaves on the second day; four leaves on the third day; eight leaves on the fourth day; etc. If the pond is full on the 30th day, on which day is the pond half full?*

If you said 15 days or so, you are not alone; but you are also wrong. The pond is half full on day 29 (if it is half full, doubling it makes the pond 100% full on day 30). On day 15 only a small fraction of the pond is full. Exhibit 1 shows that at day 15, the number of lily pads doesn't even register compared to the explosive growth that occurs later on. This same "hockey stick" shape applies to damages from many types of natural and man-made risks. Man-made exponential risks are exacerbated by social media and other information technologies because these technologies catalyze the risk. For instance, the role of social media in catalyzing social unrest has been well documented.[1]

**EXHIBIT 1** | EXPONENTIAL GROWTH CURVE

The vertical axis is the number of lily pads, but it could be an impact (such as dollars of damage from an event of a given intensity).




The horizontal axis shows days, but it could represent any duration (e.g., time) or intensity of an event (e.g., wind speed of a hurricane).

The traditional budget and planning process is not well suited to deal with exponential risk because the traditional process is linear. The basic underlying assumption is that the future will look like the past and incremental adjustments are made in revenues and expenditures from year to year.[2] With exponential problems, the future looks like the past until the point at which it becomes radically different.

**Complex problems often involve rivalries.** There are often multiple competing interests that have to be addressed to make progress. The limitation of the traditional budget process is that conflicts are papered over by giving modest increases to participants and by not making big changes from year to year. The budget is often thought of by participants as a win-lose game. Also, the rivals involved in a complex problem often feel like they are in a win-lose game. It is hard to solve a win-lose game (the complex problem) with another win-lose game (the traditional budget).

However, the rivalries involved in complex problems are not best understood in simple terms like "person A vs. person B." Rather, there are "mental models" that characterize rivalries found in public finance. A mental model is a representation of how something works.[3] Mental models help us understand the problem by uncovering blind spots we may have and revealing the forces underlying the problem.

The Government Finance Officers Association (GFOA) has found that a mental model with major implications for public finance is the "tragedy of the commons."[4] This is an economic parable in which a group of farmers has common ownership of a grazing area. The individual farmer has the incentive to send his animals to the common grazing area as often as possible. This is because the additional cost to use the grazing area is zero (it is commonly owned), and if he doesn't send his animals, the other farmers' animals still graze, thus depriving the individual farmer's herd of potential food. All farmers face the same incentive and, hence, all send their animals to the common grazing area. The result is that the common area is eventually overgrazed and becomes barren.

A local government budget has similarities to the commonly owned grazing area. A government and its financial resources are commonly owned by all stakeholders. Each stakeholder has an incentive to extract resources from the public budget. Stakeholders often find themselves in "competition" with each other to get resources; therefore, they try to get as much as possible lest they lose the resources. The long-term result could look much like the commonly owned grazing area and "the tragedy of the commons."

"A tragedy of the commons" situation can apply in budgeting, capital investments, public pensions, and more. Recognizing when a "tragedy of the commons" is occurring allows you to apply the appropriate solutions. GFOA's "**Financial Foundations for Thriving Communities**" is a potential solution to this based on Nobel Prize-winning research.[5]

Another common mental model is the "arms race," where one side invests resources to outdo the other. Eventually, the cost of the resources is immense, but no advantage is gained.[6] An example is local economic development incentives. Research suggests that around 75% of such incentives are ineffective,[7] but local governments feel the need to keep offering such incentives to keep up with their neighbors (who also feel the need to keep up). Regionalization of economic development activities would be an example of a solution to this "arms race."

The traditional local government budgeting and planning process is not designed to enable a government to "fully understand" problems, much less the mental models underlying the problem. It is deadline-driven, incremental, risk-averse, and political. As a result, local governments tend to perpetuate status quo programs that haven't evolved to solve present and future problems, or they jump to new solutions that address the symptoms of problems instead of the root causes.

The remedy is to make the time and space to consider and understand problems more deeply.

Stakeholders often find themselves in "competition" with each other to get resources; therefore, they try to get as much as possible lest they lose the resources.

# How Do You Design a Method to Define Problems More Clearly?

One of the organizing principles of GFOA's **Rethinking Budgeting initiative** is that finance officers need to be chefs, not cooks. Rather than following predetermined recipes (cooks), an effective finance officer understands how to develop a solution that meets the needs of their stakeholders, using the right ingredients (chefs). In this spirit, we will start by describing the design principles of a method to define problems more clearly. Then we will illustrate how these principles can come together in an applied method.

### THE SIX DESIGN PRINCIPLES

1. **Reject zero-sum thinking**
2. **Provide procedural justice**
3. **Create psychological safety**
4. **Recognize and mitigate cognitive biases**
5. **Go beyond positions and understand interests**
6. **Introduce constraints**

## 1 Reject zero-sum thinking

The first design principle is to reject zero-sum thinking, where for someone to "win," someone else must "lose." Zero-sum thinking characterizes the "tragedy of the commons" and rivalrous problems. There are many ways to reject zero-sum thinking. A good start is to avoid framing the past as a "failure" or something that must be repudiated. Many stakeholders hold a stake in the past. They may have a sense of pride or identity associated with history, tradition, etc. In other words, for the future to "win," the past doesn't need to "lose." Instead, frame the past as laying the foundation for the future, or highlight changing circumstances that require adaptation.

Another strategy to avoid zero-sum thinking is to embrace "rapid incrementalism." Public policy is rarely like building a bridge, where there is a clear end product (the bridge) with a well-defined construction method. Even where local governments know the outcome they want to achieve (e.g., reduce street-level violence), the path to get there is far from clear and on-the-ground realities present obstacles. Rapid incrementalism takes small steps toward the goal, assesses how the plan is working, adapts as needed, and then takes another step forward.* Rapid incrementalism helps bring everyone along because change happens in bite-sized pieces with various levels of involvement and/or acknowledgement. This means no one feels they are experiencing a sudden and significant loss or are being left out of the process.

Finally, look for ways to create win-win outcomes. GFOA's "**Financial Foundations for Thriving Communities**" is a comprehensive approach that offers methods for addressing the tragedy of the commons and the win-lose dynamic inherent in it. There are also techniques for encouraging win-win outcomes, such as polarity management.[8]

*Rapid incrementalism is associated with planning methods that are popular in the technology industry, like Agile.

One of the organizing principles of GFOA's Rethinking Budgeting initiative is that finance officers need to be chefs, not cooks.

## 2 Provide procedural justice

It is not always possible to avoid someone feeling a loss, which leads us to the second design principle: Provide procedural justice. Procedural justice is the sense that the process used to reach a decision was fair. Are the decision-makers doing their best to be objective and neutral? Is it clear how the process works? Are participants treated with dignity, and do they have a voice? Providing procedural justice is critical because people are more willing to accept a decision or action that goes against their self-interest when they perceive that the process that led to the decision was fair and there is a level of transparency concerning the process.[9] Providing procedural justice helps stakeholders work through rivalrous problems by making people more willing to accept compromises to their preferred outcome. You can consult GFOA's **"What's Fair?"** series and **Part 1**, in particular, for details on how procedural justice can be applied to a financial decision-making process.

## 3 Create psychological safety

The third design principle is to create psychological safety. Psychological safety is a shared belief, held by members of a team, that the group is a safe place for taking risks. It is a sense of confidence that the team will not embarrass, reject or punish someone for speaking up and presenting an alternative idea. It describes a team climate characterized by interpersonal trust and mutual respect.[10] Creating and maintaining psychological safety is necessary for challenging deeply held beliefs, assumptions, and taken-for-granted ways of operating that perpetuate rivalrous mental models. Promoting psychological safety reduces the destructive conflict associated with rivalrous relationships and makes participants comfortable with bringing new perspectives to the problem, challenging prevailing viewpoints, and feeling secure in offering an "out-of-the-box" suggestion. The Rethinking Budgeting initiative describes **how to build psychological safety and pairs it with accountability**.

## 4 Recognize and mitigate cognitive biases

The fourth design principle is to recognize and mitigate cognitive biases. Most people do not think through decisions rationally and comprehensively. Rather, most people use various mental shortcuts to make decisions. Often, these shortcuts are harmless and even helpful. But sometimes, they have unintended consequences. When these shortcuts fail, they are called "cognitive biases" and can negatively impact all types of decisions, including budget decisions. If we know these biases, we can plan mitigations.

There are many types of cognitive biases, but two that are especially salient to this discussion are the overconfidence bias and the confirmation bias. Overconfidence bias means a person thinks they know more about a complex problem than they actually do. Confirmation bias means that a person tends to pay more attention to information that supports what they already believe to be true about a complex problem and pay less attention to information that disconfirms what they think.

The Rethinking Budgeting initiative describes how to **mitigate cognitive biases in decision-making**, including "taking the outside view." This means bringing new perspectives to problem definition. New perspectives can come from the introduction of new data about a problem or in the inclusion of people with different perspectives, such as community members, members of external organizations (e.g., nonprofits, local businesses), or even people within the local government who haven't been at the table.

Besides bringing different perspectives to the problem, outside people and organizations may be able to contribute resources to the eventual solution, thereby serving as resource multipliers. The outside view helps overcome the linear thinking and linear resource growth that prevents local governments from successfully confronting exponential challenges.

## 5 Go beyond positions and understand interests

The fifth design principle is to find ways to go beyond positions and understand interests. For example, an interest would be to reduce street-level violence. A position would be to increase the number of police officers on the street. People can have different positions even though they have a similar underlying interest. These positions can conflict and may be mutually exclusive. If people's underlying interests are understood, it often becomes possible to find consensus solutions.

In local government, many conflicts are over values. **Moral Foundations Theory** tells us that all people have the same six moral foundations (building blocks from which they form their moral worldview). We all have access to these foundations, but we build on them in personalized ways and to different degrees, ultimately, developing our moral values and viewpoints. Understanding common moral foundations makes it easier for people to respond empathetically to differing opinions.

Understanding common moral foundations makes it easier for people to respond empathetically to differing opinions.

### Information Technology Opens New Possibilities to go Beyond Positions[11]

One of the premises of the Rethinking Budgeting initiative is that information technology provides ways to reach better decisions that were not available years ago. For example, technology could be used to ascertain the preferences of participants in a decision-making process and then compare hundreds or thousands of possible decisions to see which come closest to satisfying the preferences of the highest number of people. This allows the decision to move away from win-lose methods like simple majority votes, which produce outcomes more like "A" below and move toward consensus-finding like "B" below. Though there are fewer fervent supporters in "B," there are more supporters overall and no one who is opposed. This consensus makes it more likely the decision will have a smooth implementation.

**"A" (Polarized)**


**"B" (Consensus)**


Let's go back to our example of street-level violence. Everyone could agree that reducing gun-related homicides is a laudable goal. However, one person might favor gun control as a strategy while another person might see access to firearms as essential to self-defense. If they recognize their shared goal of reducing gun-related homicides, it becomes possible to look beyond their different perspective on gun control and perhaps agree on other strategies to reduce gun-related homicides (e.g., community violence prevention models).

## 6 Introduce constraints

This sixth and final design principle is to introduce constraints. Constraints put boundaries on the discussion. Without constraints, the participants in a conversation about a problem face a blank canvas. A blank canvas can be paralyzing because participants can be overwhelmed with possible choices. To illustrate a constraint, a meeting might be limited to defining the problem of street-level violence, specifically, as opposed to trying to define "public safety" more broadly or "community violence" (which could include domestic violence, which may or may not share common characteristics with street-level violence). Or it might be limited to street-level violence in a particular neighborhood rather than the entire city.

Taken together, these design principles address the issues we introduced in the first part of this paper—for example, rejecting zero-sum thinking and providing procedural justice; creating psychological safety; and going beyond positions and understanding interests to address the rivalrous relationships found in mental models like the tragedy of the commons and arms races. Recognizing and mitigating cognitive biases, including bringing in an outside view, helps solve nonlinear (exponential) problems.

Let's see how the six design principles could be put into practice using Turn the Curve planning as an illustration.

# Turning Curves

Good budgeting starts with good planning. Good planning starts with clearly and properly defining a problem. Turn the Curve is a planning method that is rooted in Kettering's philosophy ("A problem fully understood is half solved.") and incorporates all the design principles we've discussed.

Turn the Curve planning is the brainchild of Mark Friedman, whose book *Trying Hard Is Not Good Enough* was inspired by his observation that public and nonprofit organizations were "pouring billions of dollars into social programs that claimed to be successful, and could demonstrate significant benefits, but overall social conditions for children and families were getting worse."

Turn the Curve planning is done by answering five questions, as shown in Exhibit 2. Let's take a look at each question and how it aligns with our design principles for defining and solving problems.

**EXHIBIT 2** | **TURN THE CURVE PLANNING**


*Source: Clear Impact*

## How are we doing on the data?

Turn the Curve is about figuring out how to change the direction or trajectory of a trend in a result we care about. Turn the Curve planning is typically done by teams of people who share a common desire for better results and performance. The result could be a communitywide indicator like the infant mortality rate, or a service performance measure like the percent of tree maintenance requests completed on time.

Making data the focal point of planning meets two of our design principles. First, it helps go beyond positions and understand interests. Whatever their political philosophies or policy preferences, the members of a Turn the Curve team are working from the same set of data and share a common objective: to improve a community outcome or the performance of a service. Second, it introduces constraints. Indicators and performance measures represent specific issues or problems to solve. They bound a disciplined thought exercise, not a free-form bull session.

## What is the story behind the curve?

Understanding the factors that have impacted the historical trend of an indicator—both positively and negatively—is what we mean by "defining the problem." Although digging into the past may unearth failures of policy and execution, the root causes of community outcomes and service performance usually go deeper. The purpose here is not to look backward and assign blame, it is to learn from experience and lay the groundwork for turning the future curve of the indicator in a better direction.

The story behind the curve preempts zero-sum thinking because it identifies an array of opportunities for change, increasing the odds of finding solutions and avoiding rivalrous tradeoffs. For example, a city using Turn the Curve planning to improve housing affordability generated more than 100 factors underlying the growing share of households experiencing excessive housing burden. The factors grouped into eight categories:

1. **Restrictive zoning and building codes**
2. **Housing supply shortage**
3. **High cost of construction**
4. **Gentrification**
5. **Limited access to credit**
6. **Poverty**
7. **Lack of financial education**
8. **Weak fair housing and tenant's rights enforcement**

From this broad and deep understanding of housing affordability, the city was able to craft a plan that attacked the problem, not particular interests or stakeholders.

## Who are the partners who have a role to play in turning the curve?

Turn the Curve planning is ideally about what the community will do working together, not just what local government will do. Local government cannot achieve the results communities want and need on its own. Further, it is easy for government officials to lose touch with realities on the ground and form assumptions and opinions that blind them to the most effective solutions.

Bringing diverse voices and perspectives to the table—in particular, those of people and organizations closest to the problem—combats cognitive biases and expands solution sets. Inclusive planning also helps to achieve procedural justice. Turn the Curve planning is structured and collaborative. It is not an exercise in gathering input for use in a black box decision process. Stakeholders have voice in shaping Turn the Curve planning. They participate in generating, evaluating, and prioritizing solutions.

### What works to turn the curve?

The factors influencing the indicator trend identified in the story behind the curve inform the development of solutions. For example, a city examining racial disparities in homeownership found implicit bias among sellers, real estate agents, and appraisers to be a significant barrier to Black homebuyers. This realization led the Turn the Curve planning team to propose several strategies: providing free legal services to first-time homebuyers, strengthening enforcement of fair housing laws, and analyzing appraisal and assessment data to identify and correct systemic bias.

The "what works" solutions that emerge from Turn the Curve planning are products of a planning process that follows all of the design principles for defining problems and are ready-made to fit into an outcome-based budgeting framework.

### What is our action plan to turn the curve?

Turn the Curve planning ultimately produces a well-informed action plan, the execution of which becomes the focus of accountability. For frontline managers and staff, an action plan shifts attention from the result or outcome (the shape of the indicator or performance measure curve) to the process (carrying out the steps in the plan). At this level of the government structure, process accountability feels safer than outcome accountability because process is more controllable. Leadership's concern is whether the action plan is producing the desired result, and good leaders will use indicator data to inform ongoing inquiry, not interrogation.

## Conclusion

When a government takes the time to fully understand the problem it needs to address, it opens up new possibilities. The complex problems that governments must deal with often have interrelated causes, change at an exponential (not linear) rate, and involve rivalries between different interests. Fully understanding the problem allows planners to recognize these characteristics and devise a strategy to deal with them. Further, investigating problems more deeply works against the despair and sense of learned helplessness that can afflict local governments when it comes to complex problems. Many people have experienced the exhilaration of hope that comes from participating in a good planning process that deeply examines important issues.

Of course, many of these same people have experienced the disappointment of hopes unfulfilled by a lackluster implementation of the plan. This is not a reason to give up on deep examination of problems but rather an argument for better planning. In this paper, we suggested six design principles to characterize a good planning process. We also showed Turn the Curve planning as a way to put these principles into place and take your plan to action. From here, consider picking a challenging problem your government is faced with and seeing if Turn the Curve planning or another process that follows the design principles we described can help you understand that problem more fully and take action.

## ENDNOTES

[1] Tufekci, Zeynep (2017). *Twitter and tear gas: The power and fragility of networked protest.* Yale University Press.

[2] Wucker, Michele (April 6, 2021). *You are what you risk: The new art and science of navigating an uncertain world.* Pegasus Books.

[3] Parrish, Shane; Beaubien, Rhiannon (2019). *The great mental models volume 1: General thinking concepts.* Latticework Publishing Inc.

[4] Kavanagh, Shayne C.; Reitano, Vincent (2020). *Financial foundations for thriving communities.* Government Finance Officers Association.

[5] The Nobel Prize was won by Elinor Ostrom in 2009 for her work on common pool resource theory.

[6] Parrish, Shane; Beaubien, Rhiannon (2020). *The great mental models volume 2: Physics, chemistry and biology.* Latticework Publishing Inc.

[7] Bartik, Timothy J. (2019). *Making sense of incentives: Taming business incentives to promote prosperity.* W.E. Upjohn Institute.

[8] Johnson, Barry. (2014). *Polarity management: Identifying and managing unsolvable problems.* HRD Press, Inc.

[9] Research on this point is discussed in more depth in: Kavanagh, Shayne C.; Reitano, Vincent (2020). *Financial foundations for thriving communities.* Government Finance Officers Association.

[10] Definition from: Edmondson, Amy C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2): 350–83. In: Duhigg, Charles (2016). *Smarter faster better: The transformative power of real productivity.* Random House Publishing Group.

[11] Graphic courtesy of Ethelo Decisions Inc.

Government Finance Officers Association

203 N. LaSalle Street, Suite 2700
Chicago, IL 60601
312-977-9700 | **gfoa.org**