

A Framework for a Financial Sustainability Index

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A Framework for a Financial Sustainability Index

Introduction

The Need for Financial Sustainability

After the onset of the Great Recession in 2008, local governments across the country faced some of the worst financial challenges since the 1930s. Some communities exacted drastic across the board budget cuts and wholesale layoffs. Others eliminated entire departments and contracted out vital services. Many cities found it necessary to claw back employee benefits packages negotiated during better times. A few cities failed to adjust and were forced into municipal bankruptcy.

Looking back at that difficult period, we can see that some localities were better able than others to address the crisis. In those communities, local leaders approached their finances with creative and innovative ideas. Some attempted to coordinate efforts among multiple actors to more efficiently and affordably provide services. Others refashioned institutions, core assumptions, and existing financial decision-making processes to meet pressing public service needs. These leaders possessed not only financial skills but also the insight to recognize the need to adopt leadership strategies and new institutional design principles to meet the new financial realities facing their communities.

Unfortunately, the challenge of financial sustainability is not likely to be resolved in the foreseeable future. We may not experience another financial crisis like the Great Recession in the near future, but long-term demographic changes and other trends make it unlikely that we can afford to be complacent about the need to balance financial resources and ongoing expenses.

The United States Government Accountability Office (GAO), for instance, stated that federal, state, and local government annual deficits would both continue and increase over time (GAO 2016). Central to the GAO's projection is an assumption that local governments' annual deficit would increase by an amount equal to one percent of the nation's GDP each year for the next several decades, owing primarily to the increasing cost of health care and retiree benefits. The GAO noted that for local governments to operate within their fiscal means, a five percent reduction in operating expenses or an equal increase in revenues would be required. Moreover, these sobering numbers only address operating costs and omit the substantial capital expenditures local governments are facing.

Additionally, the American Society of Civil Engineers (ASCE) recently estimated \$3.6 trillion dollars in infrastructure expenditures will be needed by 2020 (ASCE 2015). The ASCE's estimate includes not just local governments but all sectors of the economy that provide public infrastructure. However, if we consider only local governments, the costs are still substantial. We are adding an eighty-five percent shortfall each year to our infrastructure backlog, mostly at the local level. On the cost side of the ledger, substantial fiscal shortfalls are facing state and local governments, in addition to the well documented federal deficits.

While not widely discussed, the revenue side of the ledger is even more problematic. The population of the United States is aging and our working age population is proportionately growing at a slower rate. The work of Mark Pisano (2017) has quantified the age elasticity of income and taxes paid, noting the increases in both until age 55 and then a significant decline after 55. When members of the large baby boom generation began to reach age 55 in 2001, our growth in income as a nation began declining, as did the growth of taxes paid to all levels of government. This trend resulted in less total income being generated and less tax revenue for government.

This demographic change began at the turn of the millennium and will get substantially worse over the next several decades. With the increase in the retirement of the Baby Boomers and a substantial decrease in the growth of the working-age population over the next two decades, the revenue picture will continue to decline, together with a significant increase in fiscal shortfalls for all levels of government over the next several decades.

While the revenue contribution from individuals to government continues to grow, it will grow at a much slower rate in future years. The cumulative effect of more aging and proportionately fewer workers in the annual growth rate of tax payment to all levels of government from 2015 to 2035 will decline by 45.8 percent each year. This decline in revenues will not be recognized by government units federal, state, and local, unless there is an explicit inclusion of demographic change in revenue forecasts. In the same time period, growth in the rate of all sources of income of individuals will decline 24.7 percent per year as result of these same demographic dynamics. It is important to note that these annual reductions will be compounding reductions in revenue over the next several decades. Unless there is a change in the demographic factors causing these reductions, they will last well beyond the twenty-year period. If government officials are expecting to make up declines in tax revenues solely through increases in taxes, given the income growth declines, they are likely to run into strong political headwinds (Pisano 2017).

In addition to the demographic changes effecting future governmental revenues there are transformations in economic behavior that are altering and reducing the effectiveness of the current tax structures. Internet sales is altering the amount of sales tax collections; alternative fuels in transportation are reducing energy excise taxes; the reduction in national mobility of the population and difficulties in home purchases is reducing property tax collections. These and other changes portend a turbulent revenue picture for governments in the future.

Financial Sustainability for All Seasons

Though local governments will likely face serious financial pressures over the coming decades, the economy will still likely experience cyclical ups and downs such that local governments will experience years in which there are significant increases in revenue. Practicing financial sustainability in the years of plenty is just as important, or maybe even more important, because unsustainable decisions set the government up for a harder fall when the good times end.

A New Tool for Reaching Financial Sustainability

In order to navigate the challenges described above, local government leaders will need new and better systems of governance and decision-making. These new systems must help government meet its responsibilities of promoting the health, safety, and welfare of the community while doing so in a financially responsible and sustainable manner. This document provides a set of tools and techniques to help local government leaders to develop these systems of governance and decision-making. These tools and techniques address technical concerns that one might expect to find in a document about finances, but more importantly they also address the psychological and interpersonal aspects of governance that have a critical impact on how decisions are made.

Readers of this document will quickly see that solving a complex, far-reaching problem such as financial sustainability requires participation from a broad spectrum of potential stakeholders in the financial sustainability of local governments. Consequently, we encourage local government leaders to involve diverse groups of stakeholders in their efforts to achieve financial sustainability. Though this document is primarily intended for local government leaders with some degree of “expertise,” the framework, along with the accompanying Financial Sustainability Index, may be used to engage a broader group of stakeholders in the conversation about financial sustainability. The Financial Sustainability Index invites stakeholders to assess the local government’s governance and decision-making practices and compare those practices to the standards suggested within this document, the Framework for Financial Sustainability. When local government leaders have a strong working knowledge of the framework, they will be better equipped to lead others through a conversation about financial sustainability.

While the creation of this framework for financial sustainability is of recent origin, the ideas behind it have a long and proven track record. The theoretical underpinnings of the framework were inspired by Elinor Ostrom’s (1994) Nobel Prize-winning work on common-pool resource (CPR) governance and related work on financial management innovation and community building. The framework has two inter-related components: (1) *leadership strategies* that build capacity to respond to challenges arising from fiscal stress and (2) *institutional design principles* by which organizational leaders build the type of trust and reciprocal relationships needed to collaboratively address financial strain. The issue of trust is particularly important because effective local government leadership rests on the capacities of key elected officials and administrators to develop and implement a balanced, sustainable budget that provides measurable community benefits. Without adequate levels of trust, stakeholders will not willingly accept reductions when adopted budgets fail to sustain past

Who are the Stakeholders who should participate in Evaluating Financial Sustainability?

At a minimum, we recommend including stakeholders from inside of the government who have an important role in financial decision-making, such as department heads and elected officials. Ideally, you will also include stakeholders from outside the organization, especially those that have an important influence on the organization’s finances. Examples might include leaders of organized labor groups that represent public employees, influential citizen/civic groups, or representatives from influential overlapping jurisdictions.

levels of services, despite the fact that all members may be worse off if the jurisdiction faces longer-term budgetary shortfalls or other operational disruptions such as bankruptcy.

Clearly, local governments face a problem that requires successful collective action as they attempt to restructure institutions and their associated fiscal processes: self-serving decision-making can jeopardize optimal outcomes for everyone. During major economic downturns, and worse if the fiscal pressures and declines are gradual and continual, the inability to collaborate becomes especially serious as stakeholders (staff and program clientele) fight to preserve their share of budgets without regard for the impact on the jurisdiction's long-term fiscal health. The classic "tragedy of the commons" would be more likely, for example, if longer-term infrastructure maintenance is deferred in favor of meeting the demands for compensation increases from labor unions. However, our research on local government leadership indicates that the tragedy of the commons can be avoided if stakeholders have a credible basis for believing they will gain financially and operationally in the long run through their support of immediate belt-tightening (Tang 2014).

Ostrom (2005) argued that common-pool resource problems cannot be effectively resolved either by imposing one-size fits all strategies or through false "state" versus "market" dichotomies. Her findings suggest that communities possess an inherent capacity to develop solutions that are better suited to underlying ecological, socio-economic, and governance contexts. These findings provide a basis for local government practitioners to navigate and negotiate financial alternatives that are both sustainable and resilient in the face of sustained fiscal disruption. We found three specific reoccurring themes after reviewing successful examples of decision-makers working to overcome common-pool resource challenges:

What is the "Tragedy of the Commons"?

The tragedy of the commons is a situation within a shared resource system where individual users acting independently according to their own self-interest behave contrary to the common good of all users by depleting that resource through their individual actions. The concept and name are inspired by the effects of unregulated grazing on common land (then colloquially called "the commons") in the British Isles.

1. Establishing processes that allow participants to understand where they are in relation to a common-pool resource problem.
2. Providing a framework for participants to analyze the specific circumstances that may facilitate common-pool resource problem resolution.
3. Developing diagnostic tools that facilitate participants' identification of the major causative factors, coupled with a means for understanding how these factors may intersect with one another, as part of a collaborative move toward sustainable solutions.

If they are to successfully manage their communities' finances in the long-run, elected and appointed officials, financial officers, and their constituents must develop trust and nurture the reciprocal relationships required to create and enforce an appropriate set of operating processes and rules for financial decision making. Findings from experimental and field research can help identify the conditions for such cooperation.

CPR in Real Local Governments

An important part of this project is to link common-pool resource theory to the experiences of actual local governments. Throughout the descriptions of the leadership strategies and institutional design principles, we have provided examples of actual local governments that illustrate aspects of the common-pool resource framework.

After the descriptions of the leadership strategies and institutional design principles, we present a summary of more in-depth case study work done to support the development of the financial sustainability framework. In the appendices to this document, you can find the full text of the case studies described in this summary.

Please note that because financial sustainability requires a local government to exhibit most, if not all, aspects of the framework, a local government's inclusion in this document does not necessarily mean that the authors have determined that the government is "financially sustainable." It simply means that the government's experience helps contribute to our understanding of what it is to be financially sustainable.

How to Use this Document

Each of the Leadership Strategies and Institutional Design Principles that appear in this document have a mutually reinforcing relationship, such that a sustainable system is most likely to be achieved when an organization has implemented all the strategies and principles. Readers, in other words, should not consider the strategies and principles to be a menu to pick from, rather they should think about how each strategy and principle can be operationalized. However, each strategy and principle includes a number of implementation "tactics" that are more like a menu. Practitioners can adopt one or more of the tactics to implement these strategies and principles. We also invite readers to consider other tactics we have not listed that might be a different means to the same end.

In addition to this document, the project team has published a "Financial Sustainability Index," which presents a method for local governments to self-assess their conformance with the leadership strategies and institutional design principles described in this document.

Plan for Future Development of Financial Sustainability

GFOA will recruit a cadre of local governments to field test the framework for financial sustainability and the Financial Sustainability Index. The documents will then be refined as a result of this experience.

Leadership Strategies

To be effective, leaders must understand the interactive dynamics that lead to the formation or destruction of trust and reciprocity. This means that leaders cannot “order” stakeholders to behave in a sustainable way, rather they must inspire pride, loyalty, and enthusiasm among stakeholders so that followers will want to help make the organization financially sustainable (Haidt 2012). Experimental and field research has identified six situational features that characterize successful collective efforts in overcoming common-pool resource problems (Ostrom 2010). When combined with research in financial management and case studies of best practices, these findings can be restated in terms of six leadership strategies for public management professionals who seek to attain fiscal sustainability for local government:

- Create open communication among all participants.
- Help stakeholders to build trustworthy reputations.
- Convince stakeholders that there are high benefits from collective efforts.
- Ensure that key participants remain engaged.
- Build long-time horizons into fiscal planning.
- Maintain sanctioning capabilities to reinforce cooperative behavior.

For each of these strategies, we propose specific research-proven tactics for public officials and managers to consider for purposes of implementation.

Leadership Strategy #1: Create Open Communication between All Participants

Basis in Evidence

Common-pool resource problems often resemble the “Prisoner’s Dilemma,” which is a scenario used to test people’s tendency towards cooperation or self-interest. The classic version of this scenario is as follows. Two members of a criminal gang are arrested and imprisoned. Each prisoner is put into solitary confinement with no means of communicating with the other prisoner. The prosecutor for the case lacks sufficient evidence to convict both of them on the principal charge unless the prisoners each offer evidence against each other. The prosecutor asks each prisoner to offer evidence, with the following potential outcomes:

- A. If both prisoners offer evidence, the prosecutor can get each a **2 year** sentence.
- B. If one prisoner declines to offer evidence, but the other does, the one who offers evidence will appear innocent and can **go free**, while the other will appear guilty of committing the entire crime and serve a **3 year** sentence.
- C. If both prisoners decline to offer evidence, then the prosecutor can only successfully bring a lesser charge resulting in a **1 year** sentence for each.

Prisoner 2	Offer evidence	B: Prisoner 2 <i>goes free</i> , Prisoner 1 gets 3 years	A: Each get a 2 year sentence
	Do not offer evidence	C: 1 year sentence each	B: Prisoner 1 <i>goes free</i> , Prisoner 2 gets 3 years
	Do not offer evidence	Offer Evidence	
Prisoner 1			

If both prisoners cared only about their own personal well-being, we’d expect both of them to offer evidence to the prosecutor in an attempt to escape prison time at the expense of their fellow prisoner. However, to their disappointment, this would lead to outcome A, which makes both participants worse off. Nonetheless, when played in laboratory settings that mimic this “prisoner dilemma” scenario, more people refuse to offer evidence than would be expected by traditional economic theory, which holds that people will seek to maximize their self-interest. This shows that many people are willing to engage in collaboration. Even more encouraging is that when participants have the opportunity to communicate with one another, especially face-to-face, the likelihood of successful collective action increases. In other words, groups are more likely to make decisions in the best interests of the group, even if some participants might have realized better individual or personal outcomes by breaking with the group, when there is open communication by group members. With face-to-face communication, participants can assess one another’s trustworthiness by observing their facial expressions, tones of voice, and physical gestures (Cardenas et al. 2004; Hackett et al. 1994; Ostrom et al. 1994; Poteete et al. 2010).

Implications for Financial Decision-Making

- A. **Use teams with members of different backgrounds in financial decision-making.** If financial decision-making pits one group against another, this dynamic sets the stage for one group to view others as adversaries. In this situation, it is only natural for a group to seek to maximize its own share of resources at the expense of others. It is important,

therefore, to find ways for people to work together towards a common goal, even if they have to go outside of their normal group boundaries. For example, while a government needs a department structure to manage the day-to-day work of providing services, it also needs to find ways for people to work with one another across departmental boundaries. For instance, cross-departmental teams might be used more widely to make financial decisions.

- B. Lead public engagement with open communication in mind.** Members of the public often leave a typical local government meeting with a worse opinion of government than when they started. This dissatisfaction occurs if participants in the meeting do not feel their views were given an honest and fair hearing. Leaders of public organizations should work to provide effective, meaningful ways for the public to discuss issues with one another and with public officials. For example, the public should be engaged early enough in the decision-making process that their input can have a meaningful impact, and government should make an active effort to recruit the participation of the stakeholders who will be primarily impacted by the decision.
- C. Start from a shared understanding of the situation.** Before discussing a solution, the parties should seek a joint understanding of the problem. Reasonable people can disagree, but they are more likely to disagree on a solution when they don't share a common understanding of the problem.

Research-Proven Tactics for Public Officials/Managers

Using teams with members of different backgrounds in financial decision-making:

- **Take time to build the team and be mindful of critical team skills.** Because team members have different backgrounds, they may not be used to working together. Therefore, a team should build time into its schedule to develop the proper working relationships necessary for success. This time together, for example, might be used for setting ground-rules for how the team will operate, establishing roles for team members and making sure the team has clearly defined goals.¹ Most critically, team members need to make each other feel that it is safe to speak one's mind. It is necessary for team members to be sensitive to the feelings of others.²
- **Use teams to help conduct financial analysis.** Not only do teams have the potential to improve the quality of a financial analysis, they can also create a sense of ownership of the analysis so that it becomes a shared understanding of the government's condition. Effective analysis techniques include those that benefit from group input without succumbing to "group think" or political bias. Team analysis methods can lead to a more accurate picture of the situation than a process in which experts act alone. For example, a revenue forecast could be made by asking a diverse group of people with knowledge of the revenue source to independently and anonymously make a forecast. The group could then discuss the forecast, and then independently and anonymously revise their individual

¹ For more information on teambuilding techniques see: Gibb Dyer, Jeffrey Dyer, and William Dyer. 2013. *Team Building: Proven Strategies for Improving Team Performance*. Jossey-Bass.

² Research supporting this point is summarized by: Charles Duhigg. 2016. *Smarter, Faster, Better: The Secrets of Being Productive in Life and Business*. Random House.

forecasts. The final forecast would be arrived at by averaging together each individual forecast (Kavanagh 2016).

- **Use teams to help develop financial strategies.** A team approach can help improve the quality of and the commitment to strategies. The leader must use methods that get the best thinking from team members, while increasing their commitment to the process, but without falling prey to common dysfunctions of team decision-making. For example, conventional “brain storming” sessions have been shown to produce fewer and lower quality ideas than ideation methods that where participants first spend time individually contemplating potential new ideas and, afterwards, discuss ideas with a group (Girota et al. 2010). Finally, it should be noted that using groups to help develop financial strategies does not mean that a leader is abdicating responsibility. The leader can retain the ability to make the final call on a financial strategy, while still allowing team members sufficient input and autonomy to be authentically part of the decision-making process. For instance, a budget process might ask cross-departmental teams to recommend funding particular programs and activities to reach a community goal, but the chief executive and elected board would still have the final approval of the budget.

Lead public engagement with open communication in mind:

- **Look for opportunities to engage the public.** Citizen engagement can be messy, but it does not need to be. Even if it is unpleasant work, leaders of public organizations must nevertheless remain mindful of opportunities to positively engage the citizens in democratic governance. Most critically, leaders must seek to engage the public early enough in the decision-making process so their input can have a meaningful impact on the outcome. If citizens sense they are being asked to simply “bless” a decision that has already been made by a small group of insiders, the “engagement” process may actually increase public skepticism and cynicism about government. In addition to engaging the public at the right time, leaders must also bring the right people to the table. First and foremost, they must bring in a diverse set of participants that is representative of the people most affected by the issue under consideration. Getting engagement from a more diverse group can help develop a better definition of the problem, generate more creative ideas, and produce more support for the chosen solution. To engage populations that are normally harder for the city to reach, for example, immigrants or refugees, it might be beneficial to partner with community-based organizations with experience working with those hard to get populations.
- **When engaging the public, look to maximize empathy and understanding across groups.** Citizen surveys and on-line methods of engagement have become increasingly popular tools for encouraging citizen participation. For example, Twitter, Facebook and other social media tools can be used to inform citizens, get feedback, and invite members of the public to attend budget meetings. Online networking platforms have become increasingly valuable tools for engaging and mobilizing communities. Online and phone surveys can be useful in gauging public sentiments and priorities when it comes to making decisions on budgeting and financial issues. While these virtual methods of public participation have their benefits, they are less valuable when it comes to producing the empathy and trust across diverse constituencies necessary for reaching a high-quality collective decision. Hence, leaders must make judicious use of in-person engagement that

maximizes the opportunities for citizens to attend and for participants to engage with each other and public officials in one-on-one or, at least, small group settings.

- **Show the relationship between engagement and outcomes.** Participants in a decision-making process must believe that their participation will have some impact and be informed afterwards how their input was used in the final decision. Otherwise, they will not feel their time was well spent and the public legitimacy of the final budget decision may suffer. Participants do not have to feel they have “won” the decision. Rather, they must feel their input was given serious consideration, that they participated in a fair competition of ideas, and the result is a meaningful outcome. To accomplish these goals, meetings should close with a clear end-result produced by the deliberative process, and governments might even follow up with citizens after the meeting to let them know how the decision has progressed.

Start from a shared understanding of the problem:

- **Look at the big picture.** When discussing a problem, it is easy to become overly focused on the problem and lose sight of the broader context. Budgets represent complete systems for providing public services, however, problem solving in the budgetary process can get bogged down in looking at one part and participants may lose sight of relationships to other parts of the budget. For example, when the budget conversation focuses on individual spending line-items, it is very easy for participants to lose sight of the big picture. A more holistic perspective is needed to understand and solve the most pressing problems facing local governments. A budget process should feature a tight connection with a comprehensive strategic planning process so that participants can see what impact their decisions may have on the community. Budget presentations could also include information that helps participants in financial decision-making see the government’s financial position more holistically, instead of just revenues and expenditures as separate and distinct parts.
- **Reach a shared understanding of the problem.** Without a common agreement on the facts underlying a financial problem, it will be very difficult to gain agreement on a solution to the problem. Consequently, leaders must work with stakeholders to arrive at a common understanding of what the problem is before exploring solutions. For example, governments can engage in joint fact-finding efforts, in which representatives from all the relevant stakeholder groups investigate the underlying facts of the case before discussing solutions (Levenson 2015). Another option is to perform “root cause analysis,” which asks stakeholders to think about the root cause of problems before looking for solutions.
- **Give participants the opportunity to understand the perspectives and interests of others.** Conversations will be more productive when participants can understand the perspectives of other participants, even if they disagree with one another. People are more likely to “work through” conflicting views on complex problems when they are able to engage one another in well-facilitated, deliberative forums (Kadlec and Friedman 2009; Mathews 2016). Often, these forums involve the use of study guides or other materials that outline a number of policy options and identify the tradeoffs associated with each of them. As participants are able to examine their deeply held values and weigh the options and hear from others who may have opposing views, they are capable of finding common ground and moving forward, even when it comes to controversial issues such as abortion, social security, or health care reform.

The Leadership Strategy Put into Practice: Whittier Unified School District, California

The Whittier Unified School District was able to maintain its financial health during the Great Recession starting in 2008. Its success can be partly attributed to the district superintendent's ongoing commitment to open communication. Before the Great Recession, she had regularly communicated effectively with teachers, union representation, and the elected school board members, as well as the community. Her reputation was based on the reality of consistent outreach, and transparent discussions facilitated the building of trust needed to address the economic downturn's impact on the district's budget. As a result, cost containment suggestions emerged from a range of stakeholders who trusted that short-term cost reductions would not be detrimental to anyone's long term interests.

Leadership Strategy #2: Help stakeholders to build trustworthy reputations

Basis in Evidence

In a widely-used experiment called “The Trust Game,” person A is given an amount of money and is then allowed to give any amount of money he or she chooses to person B. Then the experimenter will triple the amount of money A chooses to give, and B will have the option of returning some of that money to A. Again, if participants cared only about their own well-being, we might expect A to refuse to share anything or for B to keep all the money they received. However, sharing was quite common, resulting in a higher net benefit for both participants. These positive results were further enhanced when each participant had a reason to trust the other party before the exchange of funds (e.g., the experimenter shared some personal information about each participant or participants knew each other before being asked to make this collective decision) (Ostrom 2005). Hence, even when participants have a monetary incentive to act selfishly, building trust makes it more likely they will act for the betterment of the collective well-being.

Implications for Financial Decision-Making

- A. Create the conditions for trust outside of decision-making processes.** When stakeholders trust each other, they are more willing to bear their share of the costs associated with good financial decisions. For example, if officials in a jurisdiction have developed a reputation for conserving financial resources, it is easier for them to negotiate pension issues with public employee unions. If officials have established reputations for being trustworthy, unions can be confident that short-term sacrifices by their members will not be used to benefit other interest groups instead of helping ensure the availability of resources in the future. However, just as we couldn’t expect a sports team to develop the trust between team members necessary to execute difficult plays during a game without first practicing, it is unrealistic to expect the members of a decision-making team to make difficult, collective decisions during the heat of the moment without some preparation. Leaders must prepare participants in decisions to trust each other *before* they ask them to act in the interests of collective well-being.
- B. Build trustworthy leadership.** During the decision-making processes, certain behaviors will enhance trust between the parties, while others will undermine or destroy it. For example, when people trust that it is safe to offer information that contradicts views held by a larger group, then teams will function better. Hence, leaders need to model the behaviors that create trust and encourage others in the organization to practice those same behaviors.

Research-Proven Tactics for Public Officials/Managers

Create the conditions for trust outside of decision-making processes:

- **Create opportunities for interaction and networking outside the decision-making process.** Good financial decision-making often requires the cooperation of different departments, agencies, and stakeholders from the community. If these individuals only

interact in the context of structured decision-making activities, it will be difficult for them to build the personal affinities that are prerequisite for trust. Examples of how to create opportunities for interaction and networking outside of the decision-making process include posting staff from one department to a temporary assignment in another department, using cross-functional teams to solve shared day-to-day operational problems, designing the physical workspace to encourage intermingling, or simply encouraging social events that mix people from different groups (Tett 2015).

- **Practice using simulation before making an actual decision** (Lerner 2014). Just as a sports team needs to practice together in order to build the trust necessary to function at peak performance during an actual game, a work team can benefit from practicing before an actual decision-making process. Simulation is one way to get this kind of practice. An example of simulation is a “budget game” where participants must work together to solve a hypothetical budgeting crisis. For instance, Budget Hold ‘Em™ is a card game for school districts that asks players to balance a budget by selecting different cost saving strategies and comparing them to the cost of educational strategies for improving student achievement. A game like Budget Hold ‘Em can help people get used to working together to solve difficult challenges in a lower stakes setting.

Build trustworthy leadership:

- **Be seen as someone who produces valuable results, is honest, and is dependable.** Most people overestimate how trustworthy others perceive them to be (Kramer 2009). Taking steps to build your own personal trustworthiness will encourage others to reciprocate with their own trust-enhancing behaviors. Trust can be built, but it takes effort (Boser 2014). Here are some ways leaders can enhance these traits:
 - **Produce valuable results.** When making a decision, engage in compromise and bargaining, so more people will feel the decision addresses their interests. Compromises actually speed up the implementation of decisions (Nutt 2005).
 - **Be honest.** Be transparent when decisions are made and be open with financial information. Avoid appearances of making decisions that benefit the leader at the expense of others. Require full disclosure of roles (i.e., conflicts of interest), assets, and income in any related organization or activity.
 - **Be dependable.** Follow through on decisions and commitments. If circumstances change, thereby requiring a change in course, explain why the change is required.
- **Establish a sense of “psychological safety” on teams.** Psychological safety is a shared belief, held by members of a team, that the group is a safe place for taking risks (Edmondson 1999). It is a sense of confidence that the team will not embarrass, reject, or punish someone for speaking up. It describes a team climate characterized by interpersonal trust and mutual respect. Leaders should model the behaviors that establish psychological safety and encourage others to practice them. For example, leaders should invite others to share information that might disconfirm the leader’s own views and then honestly consider how this disconfirming information might lead to a more accurate understanding of the issue under discussion.
- **Conduct conversations in a manner that encourages a successful outcome.** As a starting point, leaders should establish and follow protocols for how conversations will be conducted. For example, conversational “ground rules” might set expectations such as “seek to understand issues, rather than positions.” Going further, the leader should

consciously and deliberately practice skills for creating alignment and agreement, and for encouraging honest and open conversation about high-stakes, emotional, or risky topics. Finally, leaders can recognize and use overarching conversational structures that make it more likely participants will reach a successful outcome. An example of one such structure is below:

- **Discovery.** Start by understanding each other's positions and, critically, the issues underlying those positions.
- **Definition.** Jointly reach a shared understanding of facts surrounding a decision.
- **Deliberation.** Discuss the issues, searching for mutually beneficial compromise.
- **Determination.** Make a decision (Emerson and Nabatchi 2015).

The Leadership Strategy Put into Practice: City of Boulder, Colorado

When the State of Colorado legalized recreational marijuana sales in 2012, the City of Boulder had to decide how to forecast and budget for this new revenue. Some stakeholders were very enthusiastic about the potential of the new revenue source and encouraged the city to establish a number of new services that would be supported by the revenue. The city government had successfully worked through a severe revenue downturn associated with the 2001 and 2007 recessions, so other stakeholders were concerned that if the city overextended itself with the new revenue source, it could find itself right back in the financial distress it worked so hard to escape.

Boulder's Chief Financial Officer had to develop a decision-making process that would help everyone come to an agreement on how to handle the situation. An important part of the process was developing a sense of trust. First, the process built upon the work that the community had done to guide Boulder through the recessions. The process was framed as a continuation of the good things Boulder had already done, rather than striking out in an entirely new direction. Therefore, the trustworthy reputations that had already been established carried over. Second, the CFO was very transparent about both the assumptions used to make his forecast of marijuana revenues and the range of potential revenues, given both optimistic and conservative outlooks. As a result, everyone could trust the information that the decision would be based on. Finally, the public meetings to decide how to use this revenue were held separately from the main budget meetings. This separation gave everyone a chance to be heard and therefore trust that their concerns were not being ignored.

Leadership Strategy #3: Convince stakeholders that there can be benefits from collective efforts

Basis in Evidence

In a well-known experiment called a “public goods game,” multiple participants are asked to make a contribution from a private set of resources to a common-pool. The size of the pool is then multiplied by the experimenter and divided back out among the participants irrespective of the size of their initial contribution. The self-interested person would contribute nothing and collect from the common-pool, but the results of this experiment show that people will routinely contribute. However, participants become less willing to contribute to collective efforts if their contributions are unlikely to create significant benefits for themselves (such as if returns from the experimenter are lowered or if they can see that others are not contributing a similar amount). If participants are convinced they will gain more from the effort and/or if they believe their contributions can bring in outside resources, they are more willing to contribute (such as if the experimenter raises the size of the multiplier) (Blomquist 1992; Isaac et al. 1994; Janssen and Ahn 2006; Tang 1992). To encourage collective action, leaders should develop an open and transparent process such that participants can have an accurate assessment of what others care about and the likelihood of obtaining significant benefits for contributing (Poteete et al. 2010).

Lessons from “Stone Soup”

The essential wisdom behind this Leadership Principle has been known for hundreds of years as the Stone Soup parable. This story shows how travelers arriving at a hungry village are able to convince the villagers to contribute to a stew for the whole village by convincing them that the stew will be very nourishing if each villager makes a small contribution to the pot from their available food stock.

Implications for Financial Decision Making

- A. Establish an inspiring, collective vision of the future.** Leaders need to convince stakeholders that individual benefits come from collective action. However, it may be difficult for those benefits to accrue as financial resources, especially in times of financial scarcity. Fortunately, research shows that people are powerfully motivated by intrinsic rewards such as serving a purpose greater than themselves or achieving a challenging goal (Pink 2011). Research also shows that we tend to believe that others are more motivated by extrinsic rewards (e.g., money) than they actually are (Heath 1999). This can lead us to underestimate what others are willing to do for the collective good without monetary incentives. Hence, “benefits” do not have to include monetary rewards, but could encompass intrinsic rewards. Leaders need to set forth an inspiring vision for what collective decision-making can do for the organization and how it can get there to show stakeholders the greater purpose they can contribute to and benefit from.

Inspiration from the Sporting World

The United States ice hockey team's upset of the Soviet Union in the medal round of the 1980 Olympics was one of the greatest moments of U.S. sporting history. The pre-game speech of American coach Herb Brooks is one of the highpoints of the 2004 movie *Miracle*, which retold the story of this game. At the time, the U.S. team consisted entirely of amateur players, while the USSR team consisted of professionals. Coach Brooks did not inspire his players with talk of the fortunes they'd go on to as professional players if they beat the USSR. Rather, he appealed to their pride and their opportunity to fulfill their dream of being the best hockey team on the planet.

- B. Address the potential for incrementalism to reduce stakeholders' incentives to participate in collective decision-making.** There are a number of advantages of incrementalism in public financial decision-making, but an important drawback is that if stakeholders believe certain groups have a historical claim on resources, this belief could reduce motivation to participate in the collective decision-making process. This lack of motivation could ensure if "have nots" believe nothing will change, and "haves" fear they will lose something. Leaders need to emphasize that an organization's past does not necessarily determine its future, while at the same time appreciating the reasons public sector organizations typically hew to incremental approaches.

Research-Proven Tactics for Public Officials/Managers

Establish an inspiring, collective vision of the future:

- **Find a balance between an aspirational vision and an achievable vision.** An aspirational vision that reaches for bold improvement is necessary to inspire members of an organization to look beyond the traditional ways of doing things. However, a vision that is too bold could incite panic and skepticism.
- **Consider a strengths-based approach to visioning and goal setting.** A strengths-based approach to establishing a vision and goals looks at what an organization is doing right, what skills could be enhanced, and what is compelling to those who have a stake in the organization's success. A traditional approach to visioning and goal-setting identifies weaknesses and gaps between the current state and the ideal state. This can be demoralizing for participants. By focusing on what is going well and how the organization can build on that, a strengths-based approach is more inspirational (Clifton et al. 2003). The Gallup Strength Center offers simple, inexpensive tools you can use to try a strength-based approach.
- **Create "collaborative competition"** (Lerner 2014). Competition, in public financial decision-making, often pits one group or person against another in a battle for limited resources. This kind of competition leads to destructive individualistic outcomes. On the other hand, competition can be a positive force when a team works together to compete against an outside force. This "collaborative competition" can be created by defining a clear, substantive objective for the participants to accomplish in competing against an outside force. For example, participants might be asked to develop a small number of

priority outcomes that the government should produce for its constituents. A complementary strategy is to use current events to build a narrative of the local government that provides a contrast with larger outside forces. Examples of outside forces might include reduced state funding or an unfunded federal mandate that is concerning to people in the community. In such cases, a budget process could be framed as one in which participants work together to “compete” against outside forces and overcome these problems.

Address the potential for incrementalism to reduce stakeholders’ incentives to participate in collective decision-making:

- **Use incremental approaches to reach long-term goals, including small wins.** Because incrementalism does not require people to absorb a great deal of change at once, it can be a good way for an organization to make progress. An inspiring, collective vision of the future can be developed over time in small incremental steps. One key to this approach is to identify “small wins,” accomplishments that take place on a shorter-term time horizon and mark progress towards the larger goal. “Small wins” allow the organization to focus on shorter-term objectives and can be sources of ready motivation.
- **Link collective decisions to resource allocations.** When budgets are simply allocated on a department-by-department basis and when the prestige of department executives (or even the level of compensation) correlates with the size of their departments, public managers may have an incentive to maximize their own budgets at the expense of others. Instead, consider how departments might make joint budget proposals to solve pressing public policy challenges.³ For example, cross-departmental teams might come up with joint proposals to advance a major strategic initiative.
- **Use non-incremental budgeting methods.** Incremental budgeting methods take last year’s spending levels as the base and adjust them up or down, at the margin, depending on changes in revenue in the next year. Incremental methods have the effect of cementing in place resource allocation decisions on the basis of historical precedents. When one group is seen to have a permanent claim on a set of resources, the willingness of stakeholders to engage in collective decision-making efforts may be reduced. In such cases, participants may either prefer to maintain their permanent claim (and not give it up) or believe others will give up their permanent claim, making collective decision-making pointless. Non-incremental budgeting methods are designed to help rethink historical precedents and devise resource allocations that best align with the current needs of the government. Examples of non-incremental methods are zero-base budgeting, target-based budgeting, or priority-based budgeting. In environments of declining resources, these methods can also help make budget cuts more strategic, purposeful, and directed. While cuts are never popular, if they are seen as purposeful and not capricious or reactionary, stakeholders may appreciate that the government is working towards a clear goal.

³ Inspired by conclusions reached in: Gillian Tett. 2015. *The Silo Effect: The Peril of Expertise and the Promise of Breaking Down Barriers*. Simon and Schuster.

The Leadership Strategy Put into Practice: City of Baltimore, Maryland

As a consequence of many years of urban decline, the City of Baltimore found itself, in 2011, adopting what many referred to as a “scorched earth” budget – a budget that made deep cuts in a number of services and that raised taxes and fees. Baltimore Mayor Stephanie Rawlings-Blake knew there had to be a way to engage stakeholders in making better decisions. The approach was a comprehensive long-term financial plan. The city council, dozens of city department and division managers and professionals, and members of the public were all engaged. At the center of this engagement strategy were three “Guidance Committees,” two of which were charged with providing policy direction on two of the city’s most important challenges, the cost of employee health benefits and the cost of pensions. The third committee provided direction on the ten-year plan as a whole.

The participants needed a sense of the importance of working together to address Baltimore’s financial challenges. To help create this sense, local officials produced a series of ten year forecast scenarios, which showed the city’s likely financial position under a number of different economic conditions. Even the most optimistic assumptions showed that local government needed to take decisive action to change its trajectory. The mayor said of these forecasts: “The forecast shows that the city needs to address its financial challenges before it’s too late, and somebody is coming in and making these choices for us.” Raising the specter of a takeover by the State of Maryland reinforced the need for stakeholders to work together to overcome the forces that were battering Baltimore.

Leadership Strategy #4: Ensure that key participants remain engaged⁴

Basis in Evidence

Common-pool resource research suggests that if participants can opt out of a decision-making process at relatively low costs and avoid being taken advantage of, this ability encourages other participants to be cooperative. If participants can simply choose to not play the game instead of being forced to go along with an unfair game, all participants are encouraged to play fairly. In the context of local government decision making, the option of local residents to relocate from the community is the ultimate force to ensure that local officials make decisions that are compatible with residents' preferences (Tiebout 1956). Yet, an enterprise or community can remain healthy only if most of its members are willing to stay on and seek to improve the entity from within, instead of seeking an exit at first sight of trouble (Hirschman 1970).

Thus, it is important for leaders to encourage key participants to remain engaged in the process of collective problem-solving. If participants are confident that they have ways of making their views heard and influencing decisions, they are more likely to remain engaged, even in tough times. At the same time, when the decision-making process is open and engaging, active participants may be inspired to be mindful of others' interests, recognizing that disregarding those interests may cause those people that have chosen not to participate to become active and seek to overturn the decision.

Implications for Financial Decision Making

- A. Provide opportunities for authentic engagement.** By inclination, many stakeholders will not wish to engage in local government decision-making on a routine basis. However, local governments should provide different opportunities for citizens to become authentically engaged and stay engaged. Leaders not only need to use meeting and communication formats that invite participation, they also need to demonstrate their personal commitment to making stakeholders part of decision-making.
- B. Build feelings of group loyalty.** Even when leaders do their best to build an engaging process, they will sometimes encounter situations that strain the cohesion of participants. Leaders can take steps to build the loyalty of participants so that they will stick with the group to make it through hard times.
- C. Recognize the silver lining when participants exit.** Ideally, participants will always stay engaged and loyal, but, practically speaking, this will not always be the case. Leaders should recognize that participant exit provides a valuable signal that all may not be well and make allowances for constructive exits by participants, while taking steps to address the problems that triggered these exits.

⁴ This is a modified version of the strategy originally proposed by Ostrom (2005)

Research-Proven Tactics for Public Officials/Managers

Provide opportunities for authentic engagement:

- **Inspire stakeholders to become authentically engaged.** Engagement is active involvement in shaping the decision and enacting agreed upon solutions. Authentic engagement is necessary for people to see the decision as fully legitimate. Legitimacy is required to get true commitment to decisions, and commitment will be needed to carry out decisions that are in the best interests of the community, but not necessarily the individual. Experience suggests that the process of public engagement is more authentic when the following criteria are observed:
 - A clear set of rules governs the decision-making process.
 - The rules apply equally to everyone.
 - There is a clear outcome. The participants can see that their input was taken into account and shaped the decision.
 - The process is framed in terms of participants' common interest. This includes a concrete goal to work towards, where the goal is representative of the common interest.

When these characteristics are met, stakeholders will be more likely to seek out involvement in the decision-making process. These rules apply equally to in-person or virtual forms of engagement.

- **Inspire stakeholders to stay authentically engaged.** Once stakeholders become engaged, they need to stay engaged. Keys to sustaining engagement include:
 - **Inspiring commitment.** Articulate an inspiring goal that motivates stakeholders to remain part of the process. Ideally the goal should speak to an individual's own interests, while also reinforcing that the individual has a shared interest with a larger community.
 - **Maintaining trust.** Continue to maintain and build upon the trust-enhancing techniques described elsewhere in this paper so that stakeholders trust their participation is worthwhile. One key to this is maintaining perceptions of fairness in the process.
 - **Mutual understanding.** Continue techniques for open and honest communication so that misunderstandings do not sabotage engagement.
 - **Perceived legitimacy.** Stakeholders must continue to believe that their participation will have an impact on the goal. For example, if decision-makers believe that their group has no power and/or that the results of their work will be ignored, then they will likely exit. Also, if a process is too time consuming it may also lose legitimacy.
- **Remain mindful of the ways meetings are structured.** Engaging the public invariably requires holding various meetings. The ways in which meetings are structured and conducted can have a powerful effect on the quality of a participant's experience and the outcomes. For example, a meeting structure that invites participants to simply start talking in response to a question also encourages a number of unhelpful group dynamics. One example would be if particularly talkative or loud people dominate the conversation. Research has identified a number of other less obvious pitfalls for meeting planners (Sustein 2014). Leaders should be mindful of these consequences and design meetings in ways that will encourage the best outcome. Fundamental design principles include stating

an explicit objective for each meeting and developing an agenda that walks the participants through the steps necessary to meet the meeting objectives. Beyond the fundamentals, leaders should design meetings in a way that gives everyone a chance to participate in the conversation. This could include, for example, asking junior participants to speak before more senior participants (so that they don't feel compelled to simply agree with what senior participants have already said), assigning specific roles to participants that give them a reason to give input, and simply facilitating meetings in such a way that everyone is given equal time to talk (i.e., no one dominates and less talkative participants are asked to share their views).

Build feelings of group loyalty:

- **Model collective commitment.** Leaders can show participants what loyalty and collective commitment look like by taking actions that benefit the group. For instance, the leader might give up some resource that is personally important to the leader and redirect it to something important to the group. Even more simply, the leader can use terminology that projects a collective vision (e.g., the use of “we” rather than “I”). The larger objective is to demonstrate that the participants have a shared fate.
- **Emphasize the similarity of group members.** Efforts to increase the diversity of the participants in decision-making can have the side-effect of emphasizing the differences between participants. People are less likely to feel loyalty towards those they see as different from themselves. These perceived differences can be reduced by emphasizing shared goals (rather than individual or sub-unit goals), mutual interdependencies, and other common interests or values.
- **Counteract “cheaters.”** In any group decision-making process, there will often be an opportunity for some individuals to gain personal benefit at the expense of the group. Of course, this will reduce the total resource of the group, but more importantly, other group members may perceive this kind of “cheating” as reason to reduce their own loyalty to the group. This is because the presence of a cheater may lead other participants to believe they are being taken advantage of. This might occur when a stakeholder seeks to subvert or do an “end run” around a financial decision-making process in order to get what they want. Leaders must recognize this behavior when it occurs and then uphold the integrity of the process.

Recognize the silver lining when participants exit:

- **Create the conditions for professional staff to give their best advice, but also make sure they can easily leave, if they feel it necessary.** Elected officials hire professional managers to give them their best professional advice. However, a professional's advice is sometimes at odds with elected officials' preferred course of action. Ideally, a government will maintain an atmosphere that accepts dissenting views from professional staff, and professional staff members will consider it their obligation to give their best advice, even if it is unpopular and costs them their position. However, the reality is that fear of losing their job could prevent some professional staff from contradicting the wishes of elected officials. Therefore, leaders should take steps to create conditions that maximize the chances that professionals feel safe and give their best advice. They can start by establishing clear decision-making rules before a decision is made. In this way, staff may feel empowered to point out to officials where a proposed course of action

violates a decision-making rule. Further, in order to avoid feeling compelled to go along with unsustainable decisions, professional staff members ought to have job options outside of the local jurisdiction. Knowing that staff has the option to exit helps level the playing field between appointed and elected officials. This can be done by hiring professional staff who are sufficiently qualified to find other jobs and by encouraging staff to remain active in professional networks. Finally, a contract that provides some measure of security to staff leaders (e.g., multi-year contract, severance pay) may help relieve at least some of the temptation to bend to political pressures in order to keep their jobs. This practice is common with appointed chief executive positions, such as city and county managers and superintendents.

- **Think about ways in which constituents “exit” and monitor exit activity.** The exiting of constituents is a clear indication that local government is not providing good value to the public, so local governments should identify and monitor exit activity. “Exiting” does not have to be as extreme as moving out of the jurisdiction. For example, a school district might monitor the extent to which families within their borders avail themselves of alternatives (e.g., private schools, home schools, transfer to other districts, etc.). Another option might be to monitor a “net promoter score” on citizen surveys. Commonly used in private industry, a net promoter score asks respondents to rate the extent of their willingness to recommend a product or service to a friend or family member. Whether a citizen is willing or unwilling to recommend the community to others is a good indicator of the value being provided and the potential for an actual exit.

The Leadership Strategy Put into Practice: Fort Collins, Colorado

The City of Fort Collins, Colorado has an organizational culture that assumes active public engagement in all important policies and initiatives, including budgeting and priority setting for new capital improvement projects. Before pursuing any major proposal or policy change, city staff members develop an “engagement plan” to determine the extent of and vehicle for engagement. A “Fort Collins Guide to Civic Engagement” outlines the steps associated with developing an engagement plan and lists a variety of participatory methods, including “study circles,” “charrettes,” and “citizen juries.” The tradition of strong public engagement goes back to the 1970s when members of the public were encouraged to help the city set priorities for the use of any new sales tax revenues. More recently, the city adopted a “budgeting for outcomes” strategy with seven “BFO” teams. Each team has a resident who participates alongside staff. The teams focus on specific strategic initiative areas and make “bids” for funding to the “buyers” on the city council. Citizens also participate in budget discussions in large-scale town meetings or via an online city portal. This menu of options enables individual citizens to determine their own level of engagement. Recommendations are forwarded to the city council, which has the final say in adopting a two-year budget. “It is a community expectation that we will do robust civic engagement,” said one staff member. “Council rarely, if ever, makes decisions of any real impact without a significant engagement process.”

Leadership Strategy #5: Build long-time horizons into fiscal planning

Basis in Evidence

In experimental settings, participants tend to contribute more to common efforts in games with multiple, successive rounds than they do in single-round games. In repeated experimental games (like the ones we've described elsewhere in this paper), participants tend not to adopt a fixed strategy in playing the games; instead they adjust their strategies in each round according to the aggregate contributions from others and their effect on individual payoffs. Participants also tend to contribute less to the common effort if they know that they are playing a single round or a last round. Overall, participants who are playing common-pool resource games on a long-term basis are more likely to develop cooperative strategies to attain better collective outcomes than those who are playing a single round or an endgame (Ostrom et al. 1994; Poteete et al. 2010).

Because participants are more likely to contribute to a collective effort if they believe that more can be gained by participating on a long-term basis than a short-term one, leaders must help participants remain mindful of the long-term consequences of their decisions.

Old Wisdom about Sustainability: Seven Generations Ahead

The Great Law of the Iroquois tribe of Native Americans holds that decision-makers should consider whether the decisions they make today would benefit their children seven generations into the future.

Implications for Financial Decision Making

- A. Develop strong long-term perspectives in decision-making.** Financial planning and budgeting may quickly produce unsustainable outcomes if stakeholders only focus on the short-term. Local governments need to develop mechanisms that concretely measure the longer-term impact of annual budget decisions, including those related to labor agreements and infrastructure maintenance. A leading example is long-term forecasting that shows the impact of decisions many years into the future.
- B. Develop mechanisms to look beyond short-term pressures.** Because local governments appropriate funds annually, there is a natural bias towards the short-term. Additionally, people are often naturally inclined to adopt short-term thinking. Consequently, it is not enough to simply introduce a long-term perspective into planning and budgeting. Local government leaders must also acknowledge short-term pressures and find ways to prevent short-term considerations from overpowering long-term considerations.

Research-Proven Tactics for Public Officials/Managers

Develop strong long-term perspectives in decision-making:

- **Demand effective long-term forecasts.** Leaders should demand long-term revenue forecast models that take into account relevant variables that drive revenue growth, such as population and land use trends. Leaders should also demand long-term expenditure projections that are inclusive of all major cost commitments that the government is subject to, including capital investments, operation and maintenance of assets, and post-retirement benefits costs (e.g., pensions). The forecasts should not speculate on future service levels but should instead assume the continuation of the current level of service into the future. When compared with revenue forecasts, this type of forecasting reveals if the current level of service is sustainable. Finally, the forecasts should extend far enough in the future that decision-makers can see if the organization is truly financially sustainable. Usually, this means long-term forecasts should be a minimum of ten years and perhaps might even look further ahead (i.e., up to 20 years).
- **Help decision-makers deal with uncertainty.** Uncertainty is an inescapable feature of forecasting, and the degree of uncertainty increases with the forecast's time horizon. Leaders must use techniques that help decision-makers gain more comfort with uncertainty so that they can use long-term forecasts effectively. Research has found, for example, that simulated experiences can be a highly effective way of communicating uncertainty and risk (Hogarth et al. 2015). Interactive simulation helps people better appreciate the role of uncertainty in complex situations by allowing them to manipulate key variables and observe the result graphically. Simulation provides them with both an awareness of uncertainty and a capacity to account for it, which leads to better decisions. For example, research has shown that simulation has led to better decision-making for financial problems such as individual retirement planning and accurately perceiving the risk-return profile of investments (Hogarth and Soyer 2015). Another technique for dealing with uncertainty is scenario analysis. In essence, scenario analysis presents decision-makers with three to four vivid scenarios that describe markedly different, yet plausible, versions of the future. The purpose of scenario analysis is to help decision-makers broaden their thinking about how the future might turn out and thereby develop plans and strategies that are more adaptable to conditions that are different from what they expect to occur (Chermack 2011). Scenario analysis in its fully realized form is akin to a comprehensive, strategic planning process. However, local governments can use streamlined approaches as well.

Develop mechanisms to look beyond short-term pressures:

- **Articulate decision-making principles.** Financial policies, such as how much financial reserves should be maintained or the maximum amount of debt that can be incurred, provide precise and technical guidance on how to manage an organization's finances. Principles are more fundamental. They are philosophical rules about how the government should conduct its decision-making. Principles make important complements to financial policies because policies will never cover every situation a government might encounter. Furthermore, policies provide rational approaches to financial management, whereas short-term thinking is often driven by emotional considerations. Principles articulate the passions and values that underlie good financial management. For example, one school

district articulated a principle of “Don’t try to be all things to all people.” This helped them focus their limited financial resources on a few of the highest value programs, rather than over-extending themselves across a larger number of programs. One city had a history of spending money on new facilities while current facilities and infrastructure were in poor shape. To counteract this tendency, the city adopted a principle to “maintain what you have before you build something new.” Using principles like this, decision-makers can test their choices against the principles to ensure that short-term pressures are not getting the best of the government’s long-term interests.⁵

- **Develop routine tactics for bringing the long-term view into focus.** Because people don’t naturally consider the long-term view adequately in decisions, public managers need tools to regularly remind decision-makers about the long-term. For example, the 10/10/10 technique asks decision-makers to take a step back and consider the short, mid and long-term implications of their decision:⁶ how will they feel about it 10 minutes from now? 10 months from now? 10 years from now? The 10/10/10 analysis works because it asks the decision-maker to explicitly recognize the short-term and emotional reasons behind a decision and compare them to long-term considerations.⁷

The Leadership Strategy Put into Practice: City of Irvine, California

The City of Irvine was facing a major decline in its sales tax revenues as a result of the Great Recession. In order to work through the resulting financial stress, the city manager initiated a three-year “bridge plan” that would show how to make strategic cuts in its expenditures and use its accumulated financial reserves to make an orderly transition to a new financial structure. The plan featured long-term forecasts of six years to see if the city’s trajectory was sustainable. The plan also included scenarios to show how a deepening recession or an early economic recovery might affect the city’s financial recovery plan. In this way, local financial managers and officials would know how the adjustments made to allow for the recession would perform under circumstances that were different from those they expected for multiple years into the future.

⁵ GFOA has been researching the potential principles since the 2012 GFOA publication *Financial Policies*. Since then, experiences from multiple government agencies and the experiences of other researches suggests that principles are potentially very powerful – in particular, see: Chip Heath and Dan Heath. 2013. *Decisive: How to Make Better Choices in Life and in Work*. New York, NY: Crown Business.

⁶ 10/10/10 analysis was originated in: Suzy Welch, *10-10-10: A Life-Transforming Idea*. New York, NY: Scribner, 2009; and was put in the context of a complete decision-making system in: Chip Heath and Dan Heath, *Decisive: How to Make Better Choices in Life and Work*. New York: Crown Business, 2013).

⁷ For the application of 10/10/10 to local government, see: Dawn-Marie Buckland. 2105. “Making the Right Decision the First Time”. *Government Finance Review* (April).

Leadership Strategy #6: Maintain capabilities to reinforce cooperative behavior

Basis in Evidence

Effective capabilities to reward people who cooperate and sanction those who don't help ensure that participants consistently participate in the decision-making system and prevent them from taking advantage of others by refusing to cooperate, while still realizing personal gain. Noticeable successes of a few non-cooperators may convince others not to cooperate as well, while notable successes of those that do cooperate may have the opposite effect. For these reasons, it is important to maintain a system that can effectively identify and reward or sanction those who do or do not cooperate.

In experimental settings, sanctioning can be imposed from outside the participant group. These externally imposed sanctions can facilitate cooperation, but they may not be sufficiently sensitive to rapidly changing on-the-ground situations. Reward and sanctioning systems developed and enforced by participants themselves tend to be more effective than those imposed on them by an external authority (Ostrom et al. 1992; Poteete et al. 2010; Reeson and Tisdell 2008).

For any reward or sanctioning system to work, it is important that participants share common understandings on the ground rules on when rewards or sanctions are to be handed out. Equally important is credible leadership in fair enforcement such that participants are confident that no favoritism exists (Robertson and Tang 1995).

Implications for Financial Decision Making

Fool Me Once, Shame on You. Fool Me Twice, Shame on Me.

Many experimental games described in this paper found instances where people did not engage in collective behavior. However, researchers have found a competing explanation to that of pure selfishness. When player A observes that player B is extracting resources from the collective system beyond their contribution, A may regard B as cheating. Not wishing to be taken advantage of further, A reduces his or her commitment to the system. In extreme cases, A might even undermine the entire system in order to punish B even if A loses resources in the process.

- A. Participants within the system should reinforce the importance of cooperating.** The best way to ensure on-going cooperation is for the participants inside the decision-making system to reinforce the importance of cooperating themselves. Participants are closest to the decision-making process so are in the best place to recognize instances of good or bad behavior from other participants and apply positive or negative reinforcement. For example, people generally prefer to be seen as good members of the group. If it can be demonstrated that most members of the group exhibit sustainable behaviors, other members are encouraged to do the same.

- B. External reinforcement can be helpful, but is secondary.** While secondary in importance to the efforts of participants within the system to reinforce cooperation, external actors can have a role as well. Bond-rating agencies, state agencies, the media, or even the courts can provide a check against unsustainable decision-making, and the voters can exercise accountability.

Research-Proven Tactics for Public Officials/Managers

Participants within the system should reinforce the importance of cooperating:

- **Develop an organizational culture that supports good decisions.** Organizational culture refers to the beliefs and values that animate day-to-day behavior of the members of an organization. When these values and beliefs are aligned with sustainable financial decision-making, people that break these norms will be subjected to informal sanctions from other members of the organization (e.g., being ostracized). These informal sanctions are often just as meaningful as formal sanctions. For example, a department head that submits inflated budget requests might draw the ire of his or her peers.
- **Respect the process.** Once a decision-making process is established, leaders must not countenance attempts to subvert the process or otherwise do an “end run” to advance their own interests. For example, leaks to the media on budgetary matters are often counterproductive and can easily fuel unfounded reactions in the community. Following the leadership strategies and institutional design principles for open and fair decision-making can help ensure people respect the process.
- **Show that others are doing the right thing.** Social influence can be more effective in influencing people than rewards, threats, or any amount of admonition (Nisbett 2015). Leaders should take steps to publicly recognize when the majority of actors are making financially sustainable choices. When people know how others are behaving they are more likely to change their own behavior to match the majority. Stories that illustrate these sustainable choices can be particularly powerful.

External reinforcement can be helpful, but is secondary:

- **Be transparent.** Making available easily accessible and understandable information on the financial condition of the government makes it easier for interested stakeholders to ascertain the true financial condition of the organization and apply pressure for improvement. Popular financial reporting methods and programs like the GFOA’s Award for Excellence in Budget Presentation can help improve transparency of financial condition.
- **Make use of third-party assessments of financial management.** An honest, outside assessment of the organization’s financial management practices can serve as positive or negative reinforcement for better decision-making. The downside of these assessments is that the feedback they provide is often not specifically connected to any particular financial decision and comes long after the decision is made. For example, some communities are proud of a high bond rating and use the specter of a lower rating as negative reinforcement against unsustainable decisions, however, the bond rating agency does not provide timely, specific feedback on the organization’s financial decisions.

The Leadership Strategy Put into Practice: The Town of Gilbert, Arizona

The Town of Gilbert, Arizona, grew extremely rapidly over the course of a decade. Knowing that high growth can lead to financial challenges if not managed properly and wishing to place a low tax burden on residents, Gilbert's leadership appreciates the importance of financial sustainability. For example, the town has adopted a strategic vision of being "The Best-in-Class: All Lines of Service" as an expression of its desire to be very cost-effective. This kind of aspiration is not necessarily unique to Gilbert, but it is widely and strongly supported by staff and members of the Gilbert Town Council. They know that if they want to be the best, it will take a coherent, long-term financial strategy to get there. Hence, decision-makers in Gilbert reflexively and intuitively inquire about whether decisions will make Gilbert "The Best in Class," including the financial condition one would associate with being the best in class. This means that if someone suggests a course of action that would make Gilbert less financially sustainable and therefore something less than "Best in Class," that suggestion is more likely to be rebuked than it would be in other governments.

Institutional Design Principles

Institutional design principles facilitate the coordination of relevant stakeholders within geographical boundaries. These principles provide the situational context in which the leadership strategies operate. Ostrom's (2005) research suggests that it is futile to attempt to pinpoint only *one specific set of institutional rules* that can invariably lead to successful common-pool resource governance. A more viable approach is to focus on broad "design principles" that may inform choices of rules under diverse circumstances. Based on her extensive research on common-pool resource governance, she proposed eight institutional design principles. Yet design principles may also risk being treated as rigid blueprints for imposing uniform rules on divergent circumstances. Thus, Ostrom proposed that the design principles be translated "into a series of *questions* that could be asked when thinking about improving the sustainability of a common-pool resource system" (Ostrom 2005, 271).

As local government professionals know, fiscal decisions represent more than a response to static or internal budgetary control problems: rather, they reflect dynamic processes and coordinated efforts among a range of actors over time. Ostrom's eight questions on institutional design provide a set of *self-assessing questions* that can assist local leaders in tailoring institutional rules according to the specific context of their respective jurisdiction. The eight design principles are as follows:

1. Well-defined boundaries
2. Proportional equivalence between benefits and costs
3. Collective choice arrangements
4. Monitoring
5. Graduated sanctions and credible rewards
6. Conflict-resolution mechanisms
7. Minimal recognition of rights
8. Nested enterprises (Ostrom 2005, 271)

We highlight the diagnostic questions associated with these principles and suggest research-proven institutional designs for elected officials and staff to consider in support of the principles.

Institutional Design Principle #1: Well-defined boundaries

Having well-defined boundaries around the resource system (e.g., a fishing ground or a public budget) and the community of users (e.g., fishers or public officials and constituents) encourages authorized users to take into account the impact of one another's appropriation actions. If boundaries are arbitrarily imposed, they may be incompatible with local circumstances or considered illegitimate by local users. Boundaries defined and enforced by local users themselves tend to be more conducive to sustainable use. Yet some resource systems have inherently fluid boundaries; reaching sustainable use involves ad hoc negotiations among concerned parties (Cox et al. 2010). For local users, this principle can be translated into the question, "**How can we better define the boundaries of this resource, and of the individuals who are using it?**" (Ostrom 2005, 271)

Boundaries in the Natural World

Some natural resources have fluid boundaries. It is, for example, difficult to define the boundary of a fishery that involves different species of migratory fish. In Sahelian Africa, different groups may share overlapping parcels of grazing lands based on ad hoc negotiations; the boundaries between different groups of pastoralists are inherently fuzzy (Niamir-Fuller 1998). Similarly, the boundaries in public budgeting are not always so clear.

Implications for Designing Financial Institutions

- A. Define decision-rights.** Financial decision-making is not just about who has a share of resources but also about who has control (or entitlement) over which portion of them. It is, for example, important that the elected board, working with the chief executive, maintain control of the entire budget, including contractual financial partnerships, allowing flexibility to adjust expenditures according to revenue projections and jurisdictional needs. This type of control enables the board and the chief executive to negotiate credibly with different stakeholders when adjustments are required. Another consideration is the pressure legislators feel to maximize resource allocations for their district and the need for financial sustainability of the jurisdiction as a whole.
- B. Define temporal boundaries for financial decisions.** "Boundaries" often is taken to mean a physical boundary. However, the beginning and end of a local government's fiscal year often imposes arbitrary temporal boundary on the thinking of decision-makers. Because local governments legally appropriate and authorize spending annually, the de facto, default boundary of decisions is often a single year. However, many decisions that today's elected officials make will have unambiguous and significant financial impacts on future generations of local leaders and citizens. For example, if the elected body of a jurisdiction approves new debt and pension obligations as part of its annual budget, the impact of these decisions may be relatively minor in the current year but could have much larger impacts many years later.

Research-Proven Institutional Design Tactics

Define decision-rights:

- **Use policies to define decision-rights and design a governance structure to support the policies.** Financial policies define the boundaries and guidelines for financial

decision-making (Kavanagh 2012). For example, a financial policy on fund balances defines how much the government will endeavor to set aside as a hedge against risk. The governing board should adopt financial policies across the full array of financial management topics, including budgeting, accounting, debt, investment, and more. These policies should define who has decision rights and responsibilities for carrying out the policy. The government should then design the governance structure necessary to implement the policy. In some cases, this may be as simple as designating a responsible position or subunit for developing procedures and controls to carry out the policy. In other cases, a more extensive governance structure might be called for. To illustrate, a policy might designate a role for a special sub-committee of the board, where the committee provides an extra level of accountability, but without placing undue limits on the staff's flexibility to carry out day-to-day management. The key is to clarify where the center of decision making occurs (the elected board and the chief executive officer); define the budgetary process; reinforce the role of other stakeholders (residents, media, nonprofits, etc.); and identify specific issues over which elected officials want an enhanced level of oversight and precisely how that oversight will occur.

- **Adopt continuous improvement methods for financial processes.** Financial decisions are made through a process of some kind. The quality of that process will have a strong influence on the quality of the decisions that are made. Therefore, governments should seek to optimize the quality of their financial processes. Process improvement methods that make small improvements over time will often be the best approach. These methods call for first understanding the current process, then identifying high-leverage improvement opportunities by using best-practices in process design, and then implementing the changes and monitoring the results. “Lean” and “Six Sigma” are examples of continuous improvement methods that local governments have used to improve financial processes.
- **Consider alternative systems of voting.** In cities where councilmembers are elected by district, individual officeholders may be tempted to focus more on the interests of the district than the big picture or the community as a whole. At-large elections (or a combination of at-large and district elections) of council members is one way of avoiding this problem. However, at-large elections by plurality (winner-take-all) vote may lead to under-representation of historically excluded or marginalized communities. One way of avoiding this quandary is to implement some form of proportional or semi-proportional representation. Two semi-proportional voting methods that have been adopted by city councils and school boards in the south and southwest are “cumulative voting” and “limited voting.” In a cumulative voting system, voters are able to cast multiple votes, allowing minority voters to concentrate their votes and elect members. With a limited voting system, voters are allowed to vote for fewer seats than those that are up for election, thus preventing majority groups from achieving a monopoly of seats. For example, by 2004, more than two dozen cities and counties in Alabama were using cumulative or limited voting systems, which led to a higher level of African-American representation in most of those communities.

Define temporal boundaries for financial decisions:

- **Adopt policies to support long-term planning and structural balance.** The governing board should adopt policies that explicitly state the board's intent to pursue long-term

structural balance as a clear goal. The policies should state why structural balance is important and provide a definition of structural balance. The policies should also outline, in broad terms, how the government will reach and maintain structural balance. For example, a policy could direct that a government regularly make long-term forecasts and use long-term forecasts to determine if the government's finances are structurally balanced over a multi-year time period.

- **Create staffing and analytical capacity for very long-term forecasting.** Many local governments develop long-term forecasts that show the government's financial position five or so years into the future. However, it often takes much longer to manifest the full impact of the policies and demographic trends that affect a local government's financial sustainability. Developing a much longer-range forecast (i.e., ten to twenty years into the future) to account for these forces requires a distinct set of skills that many local governments lack. For example, local governments need the capacity to build models that account for the impact of demographic changes and land-use changes on revenues. However, as a forecast looks further out into the future, it necessarily becomes more speculative. Hence, local governments also need the skills for decision-making under uncertainty, such as integrating probabilistic analysis into forecasting and using scenarios to stimulate thinking about how to respond to different possible futures.
- **Adopt a consolidated long-term financial plan and budget.** Governments often have multiple funding sources (e.g., grants, earmarked funds, government service agency agreements) that support their mission, in addition to general operating revenues. Although some funds are subject to special restrictions, the long-term financial planning and budget process should consider all funds in order to develop a financial plan that is comprehensive. Any special restrictions on funding should still be honored, but a consolidated financial plan and budget prevents special restrictions from becoming impregnable organizational silos that result in, at best, lost opportunities for integrated, complementary spending plans and, at worst, wasteful duplication of services. Such a plan makes it clear that all funds are considered within the boundaries of the government's financial long-term thinking (Levenson 2012).

Principles Put into Practice: Newcastle County, Delaware

Newcastle County, Delaware, was facing a \$100 million revenue shortfall. As part of a countywide reorganization to achieve fiscal solvency, county staff comprehensively examined policies and procedures. The county established a subcommittee to draft policies for consistency with programs, and senior managers, departments, and legislators provided recommendations to enhance policies. A number of important policies were adopted, including policies to:

- Maintain user fees at levels sufficient to cover ongoing costs
- Maximize the return on idle funds through the use of outside investment managers, with the objective of outperforming Treasury bill rates
- Promote aggressive revenue collection, with the goal of reducing outstanding accounts receivable by 7.7 percent

By taking a collaborative approach to developing policies in these areas and others, the county was able to clarify and crystallize the boundaries of how it would approach financial

management. Everyone now knew what acceptable and unacceptable behavior was, which led to enacting strategies to harmonize fees with service levels, resulting in \$18 million in new revenues over three years. Over the same period, investment proceeds exceeded projections by \$14 million. Aggressive revenue collection brought in an additional \$6 million over four years. When combined with other major restructuring efforts, Newcastle County realized a revenue surplus and a triple-A bond rating.

Institutional Design Principle #2: Proportional equivalence between benefits and costs

When benefits from the resource system are proportional to the distribution of costs, users are more likely to contribute to the system's sustainability. We have suggested in an earlier section of this paper that when people perceive that they are not getting a fair return on their contributions to a collective system, they are more likely to reduce their commitment to that system.

With respect to local governments, proportional equivalence between benefits and costs must be premised on the recognition that multiple, and potentially competing, responsibilities are placed on local governments. First is the "civic" responsibility, by which each jurisdiction must provide basic services for maintaining the health, safety, and welfare of the community, regardless of an individual resident's ability for payment. Second is a "corporate" responsibility, by which each jurisdiction must ensure basic services are provided at prices that are fair to current and future residents. Third is a "fiduciary" duty, by which each jurisdiction must ensure that current and future expenditures are justified by benefit-cost calculations and supported by reliable revenue streams.⁸ Fair rules for distributing benefits and costs also contribute to the building of trust among users (Ostrom 2005).

Yet what is considered as "fair" in benefit and cost distribution is not always straightforward. Local governments have to divide resources among diverse stakeholders. In some cases, an equal distribution by which each group gets the same amount might be called for. In other cases, it might be appropriate to distribute resources proportionally, so that each group gets resources commensurate with its contribution to the system. Finally, a need-based distribution is sometimes necessary to achieve equity in outcomes for different stakeholders. These different perspectives on what might be fair and appropriate can provide a wide range of strong opinions from stakeholders, so it is critical to think about what is "fair" when considering the distribution of benefits and costs.

Hence, this principle can be translated into the question, "**How can we clarify the relationship between the benefits received and the contributions to the costs of sustaining this system?**" (Ostrom 2005, 271)

Implications for Designing Financial Institutions

- A. Create a more explicit linkage between where revenues come from and what they pay for.** Local governments have historically funded most services through general tax dollars generated from across the community. However, in an environment of increasing resource scarcity, a more explicit linkage between what citizens pay for and what they get in return is needed to help citizens see the value that their contributions to local government produce. This concept is not totally alien to local government. There is a long tradition of charging fees to individual constituents for services that directly benefit them, such as fees to participate in recreation programs, parking fees, etc. Local governments might have opportunities to build on this tradition by thinking about new

⁸ Please note that this discussion goes beyond resource use and deviates from the general format of focusing on resource use, as is the case in all other principles.

and additional ways to make a link between revenue and the precise services that they fund. This could include more user fees as well as other revenue tools such as special service/special assessment areas.

- B. Explicitly consider the cost-effectiveness of public services in decision-making.** The services a local government offers must deliver the most benefit for each dollar spent (where the definition of benefit is dependent on particular characteristics of the service and the demands of the community). Without this standard in place, it becomes more plausible for stakeholder groups to extract disproportionate benefits for their members at the expense of the common treasury. This principle applies equally to operational programs as it does to large capital projects and land-use decisions, with the added consideration of the multi-year lifecycle of capital assets and land use decisions. These decisions must consider not just the costs of initial construction and acquisition, but the long-term costs the community incurs to operate, maintain and serve new infrastructure and development.
- C. Devise rules that provide for flexibility in “crisis” situations.** Financial policies and practices that serve the organization well during normal times might seem hopelessly inflexible or even irrelevant during a financial crisis. A financial crisis is often not conducive to making the best decisions; by identifying sources of flexibility before a crisis occurs, the organization can preserve the legitimacy of financial policies, while also promoting better decision-making. Further, by describing the boundaries within which the government will act when a financial crisis does occur, stakeholders will have their expectations shaped in advance of the crisis. This reduces any sense of “surprise” with respect to the strategy the government will pursue. Surprise may be equated with capriciousness by some stakeholders thereby reducing their support for the plan.⁹

Research-Proven Institutional Design for Elected Officials

Create an explicit link between where revenues come from and what they pay for:

- **Provide a certain level of basic public services for the health, safety, and welfare of the community but clarify the relationship between benefits and costs.** Local governments have a duty to promote the basic health, safety, and welfare of the community by providing public services, especially where private parties will not offer the required services. Each community will need to decide what level of service this baseline entails. Regardless, there are certain practices that all local governments can follow to clarify the relationship between the benefits received and the contributions to the costs of sustaining this system. For example, a comprehensive user fee policy asks policy makers to explicitly consider the amount of general-tax subsidy they will provide for each service and where they will look to user fees to fund the program. Governments should also examine the cost-effectiveness of the methods it uses to provide basic services. Finally, government can take steps to keep the public informed of what services it does provide and the benefit they produce.

⁹ This is consistent with the literature on procedural justice, which is described elsewhere in this document in more detail.

- **For services beyond basic health, safety, and welfare, look for ways to connect revenues with costs.** Stakeholders often pressure government to provide services beyond those necessary for basic health, safety, and welfare. This can quickly erode financial sustainability as different stakeholder groups compete for resources in the form of new services, from the common financial pool. This can be especially dangerous to financial sustainability when the linkage between the taxes that citizens pay and how they are used is opaque. Hence, local governments should explicitly connect these services to the revenues that pay for them. User fees are the most obvious method of doing so, but there are other methods, for instance, special service areas / special assessments, that charge an extra tax to properties in a geographic area that receives a greater level of service or a voter approved supplemental tax levy dedicated to a particular purpose.
- **Use value capture financing methods.** Value capture financing mechanisms compensate a government for public policy decisions such as zoning and permitting and the cost of constructing new infrastructure by extracting funding from the beneficiaries of that development. Changes in public policy on land and development along with investments in infrastructure and environmental enhancement and mitigation increase the assessed valuation of the property. These increases can be captured through tax increments collected over time and by other up front instruments such as developer fees, impact fees, joint development agreements, or special assessments. Local governments can make smart, strategic use of these tools to preserve general tax revenues to assign the cost of new infrastructure to those that most benefit from it. You can learn more about value capture financing mechanisms in Appendix 1 to this document.

Eat for Education in Roanoke

The City of Roanoke, Virginia, found itself short of funding for its schools in an anti-tax climate. In response, the city proposed a two percentage point increase in the city's meal tax, the proceeds of which would go for public education. The tax would sunset after two years, helping to ensure that the city's tax base was not locked into inflexible revenue and spending arrangements.

Explicitly consider the cost-effectiveness of public services in decision-making:

- **Develop a program inventory.** A traditional line item budget emphasizes control over expenditure categories like salaries and commodities that the government buys. A program inventory reveals, comprehensively, the full scope of services that the government provides. The inventory is the foundation for other institutional designs that encourage fully informed decision-making about the costs (including longer-term operating, capital, maintenance and replacement costs) and benefits of spending proposals.
- **Develop a performance budget.** The premise of performance budgeting is to focus public officials on requesting and allocating resources according to the benefits that a given program or service will produce. Ideally, a performance budget will be connected to a strategic plan that sets forth organization-wide goals. Research has shown that performance budgeting: 1) has a positive effect on the public accountability of budgetary decisions; 2) impacts the budget process and structure; 3) improves communication

during the budget process; and 4) can contribute to an improved financial condition.¹⁰ Though research to date has not shown that these benefits are large, more examples of performance budgeting's positive benefits may accumulate over time.¹¹ In the meantime, governments should be patient with the development of a performance budgeting system and consider using other ways of bringing a cost-versus-benefit perspective into financial decision-making.

- **Adopt a policy for evidence-based decision-making and cost-benefit analysis.** Evidence-based decision-making is the use of rigorous evaluations of program effectiveness to support decisions about program funding. Cost-benefit analysis is the systematic comparison of the cost of a program to its benefit. When you merge evidence-based, outcome-based decision-making with cost-benefit analysis, you get a true picture of cost-effectiveness. Governments can support the use of these forms of analysis by adopting a policy that requires their use and the development of the analytical tools needed to implement these policies. Determining the definition of “benefit” for public services is not usually straightforward and will often rely, at least to some degree, on value judgments. Therefore, a policy should not be too prescriptive on how benefits are defined but should require governments to take a thoughtful and deliberative approach to defining benefit as a prerequisite to evaluating cost-effectiveness.

Devise rules that provide for flexibility in “crisis” situations:

- **Build flexibility into financial policies.** Finance policies help define the “rules of the game” for financial management. Financial policies, however, cannot just emphasize making public officials accountable to the letter of the policy – they must also provide sufficient flexibility for officials to respond to the unexpected. For example, a policy on fund balance might describe the general conditions under which reserves can be used and then provide for some degree of flexibility on the timeframe under which the reserves must be replenished.
- **Adopt a “financial crisis” policy.** Just as governments have contingency plans for emergencies caused by financial disasters, they should have plans for how to respond to a financial disaster. These plans do not necessarily have to detail specific cost reductions, etc., but should provide enough structure so that the organization is not just reacting to the circumstances that it faces.

Principles Put into Practice: City of Cincinnati, Ohio

Confronted with flat or declining revenues, spiraling health-care and pension costs, persistent structural imbalances, and a \$34 million deficit, the City of Cincinnati needed to change its incremental method of budgeting (which automatically makes this year's budget the basis for next year's spending plan). It chose a method known as priority-based budgeting, which asks

¹⁰ The first three items are taken from: Elaine Yi Lu, Zachary Mohr, and Alfred Tat-Kei Ho. 2015. “Taking Stock: Assessing and Improving Performance Budgeting Theory and Practice”. *Public Performance & Management Review* (38): 426–458. The last item is from: Yi Lu and Katherine Willoughby. 2012. “Performance Budgeting in the States: An Assessment”. *IBM Center for the Business of Government* (Fall/Winter).

¹¹ Both points in this paragraph are from: Yilin Hou, Robin S. Lunsford, Katy C. Sides, and Kelsey A. Jones. 2011. State Performance-Based Budgeting in Boom and Bust Years: An Analytical Framework and Survey of the States. *Public Administration Review* (May/June).

decision-makers to choose between different programs based on their potential to help the city meet its overarching service goals. A primary goal for the city was to engage a large and diverse segment of the community, creating an open and transparent window into every program and service offered, a thorough description of each service, and complete openness as to the cost of each program. Cincinnati's elected officials believed that the very legitimacy of their plan to identify \$34 million worth of savings depended on an authentic attempt to offer citizens a clear perspective on how resources were currently allocated. Ultimately, the city identified more than 500 programs, totaling \$972 million. To achieve its objective of transparency, the city posted its program inventory, complete with program costs, on its website and in its budget document. The response from citizens was resoundingly positive; they appreciated this unprecedented level of transparency.

Institutional Design Principle #3: Collective-choice arrangements

When most of the local users are authorized and empowered to participate in making and modifying rules, they are more likely to develop rules that fit local circumstances than if the rules are imposed by an outside authority or if they are decided by a small group of local elites (Ostrom 2005). For example, there have been many studies showing that governments in developing countries in the 1950s to the 1970s were obsessed with the idea of government ownership of natural resources. Believing that government ownership could better protect the resources, these countries nationalized many natural resources such as forests and announced laws and regulations that specified how the resource was used and managed. These laws and regulations were made by authorities far away from the local scene, so they were often ill-suited to local needs and circumstances. Since local users did not believe they had a say in how the resource was to be shared among them, individual users were likely to adopt the “use it, or lose it” strategy, which led to its rapid depletion.

For the best use of any kind of collective resource, local users should genuinely participate in the processes for making collective choice so that they can be confident in having a say about how the resource is to be used and managed (Cox et al. 2010). Hence, this principle can be translated into the question, “**How can we enhance the participation of those involved in making key decisions about this system?**” (Ostrom 2005, 271)

Collective Choice with Wolves

Wolves can do significant damage to the livestock of ranchers. At the same time, conservationists want to protect what is left of wildlife. To find a balance between these two groups, the State of Washington created a Wolf Advisory Group (WAG) comprising ranchers, hunters, and conservationists. WAG has developed its own guidelines to maintain the delicate balance between environmentalism and ranching. As a result of the two year collaborative efforts around this issue, Washington State has experienced only about 4-5 percent of the livestock/wolf recorded kills in 2015 than neighboring states such as Idaho, Wyoming, and Montana. As one participant in WAG put it, “people are more willing to go above and beyond if they don’t feel above and beyond is being imposed on them” (Weise 2016).

Implications for Designing Financial Institutions

- A. Connect financial planning to other planning processes.** Community members often become engaged in planning processes that are not explicitly about finances. They might become engaged in general or specific plans for communities, the planning about neighborhood parks, reviewing a proposed development, or planning service levels for programs. In many cases, the most productive way to enhance participation of the community in financial decision-making might be to strengthen the connection between financial decision-making and the choices the community makes in other planning processes. Fiscal realities and context, specifically the economic activity and the economic implications of demographics, need to be included in these planning efforts, which requires modifications of the approach generally taken in planning.

B. Develop the capacity to strategically use public engagement to solve problems.

Problem resolution typically rests upon getting insights from those closest to the problem. A structured process for engaging the public aggregates the inputs from many stakeholders. This process may help reach a common understanding of the situation the local government is in and the options for moving forward.

Research-Proven Institutional Design for Elected Officials

Connect financial planning to other planning processes:

- **Make a tight link between the strategic plan, long-term financial planning, and the budget.** The strategic plan describes the organization's service goals. Hence, it provides direction on the resources that will be needed for the organization to achieve its mission. The long-term financial plan provides insight into the organization's long-term financial health and injects financial realities into strategic planning. Organizations should form a tight connection between strategic and financial planning in order to arrive at a holistic picture of the long-term financial condition in light of the resources necessary for achieving the government's purpose. For example, the clear service goals described in a strategic plan motivate multiple departments and organizations within the jurisdiction to participate in integrative approaches to achieve the goals, and these approaches would be reflected in the financial plan and budget. This creates synergies and efficiencies and possible new ways of operating. In difficult financial periods, focusing the budget on achieving a finite number of specific goals can help the government remain effective and still be economical with its use of resources.
- **Integrate other plans with financial planning processes.** Local governments develop many different types of plans to help establish direction. Examples include general land use plans, facility plans, and others. These plans are often established using citizen participation. These plans can be important inputs into the budgeting process because they provide tangible, quantifiable goals, objectives, and performance milestones and can be translated into financial allocations. These plans can also provide jurisdictions with a policy framework for possible revenue sources that can be used in the budgeting process. For example, a land use plan might help reveal where the government might use value capture to finance (e.g., tax increment finance) land developments.

Develop the capacity to strategically use public engagement to solve problems:

- **Build public engagement into the decision-making process so that it becomes a regular feature of decision-making.** High quality public engagement often begins as an ad hoc response to a specific issue facing a local government. However, it can be institutionalized as part of regular decision-making processes. For example, it could be built into the budgeting process or the process for making a new capital investment. Of course, state legislation often requires that local governments provide opportunities for citizen input into the budgetary process. Though state legislators mean well, public hearings, public notices in the local newspaper, and similar techniques are not up to the task of creating effective public engagement (NCL 2013). A first step is to understand exactly what the law requires. It could be that the law allows for more flexibility than local officials might have thought. Second, effective public engagement can be built around the legislative requirements. For example, a public hearing might be required to

approve a budget. The traditional public hearing could still be held, but it could be preceded by much better forums for real engagement. Hence, by the time of the hearing the approval of the budget is just a final confirmation of all the authentically collective decisions that have been made earlier.

- **Develop the capacity for effective virtual and in-person citizen engagement.** Traditional approaches to public engagement often have the effect of *decreasing* public trust and confidence in government. Hence, local governments must put effort into creating the capacity for truly effective public engagement. There are a number of tactics for doing this, such as: hiring specialized staff whose sole purpose is to improve public engagement and establishing support for public engagement as a job qualification for department heads or other positions that are important to the success of public engagement; establishing policies supporting public participation; and/or adopting a public participation ordinance (NCL 2013). Virtual methods of public engagement, like social media, surveys, or on-line forums can also help public officials gain a better sense of citizens' views.
- **Develop capacity for representative citizen engagement.** When participants include everyone impacted by an issue, it leads to the best chance for a solution that everyone can support. Governments should develop the capacity to engage a diverse set of stakeholder groups. For example, governments might create institutionalized relationships with community groups that are effective at engaging neighborhoods whose residents are not as easily reached through more conventional government methods.

Principles Put into Practice: The County of San Bernardino

The County of San Bernardino was facing the same financial plight (but for different reasons) as the City of San Bernardino, which filed for bankruptcy during the Great Recession. The county was facing massive long-term fiscal deficits. The county hired the city manager from Ontario to be a new CEO, and he used the same business planning approach to addressing the county's fiscal issues. Among the first steps was the establishment of a Countywide Vision that involved all the cities through the local council-of-governments (San Bernardino Associated Governments) and public agencies in the county along with the business interests and other stakeholders. The San Bernardino County Board of Supervisors then used the Countywide Vision to guide the establishment of the county's goals and objectives and the development of the county budget. The results of this process were shared service arrangements developed between the county and the cities. Service delivery duplication was eliminated and costs reduced for all parties. Input was provided to rearrange organizational roles and responsibilities within the county. Priorities for public expenditure needs were identified and incorporated into the budget process. A highly charged public and political conflict was made transparent, enabling leadership to find a pathway to make decisions and steer a positive direction. The decision-making process included all of the stakeholders within the community. Prior to this time, these activities operated in organizational silos and were not involved in any way in the fiscal and budgeting process. Leadership at the executive level integrated operations within the county to increase public participation, develop partnership arrangements and, at the same time, improve the budgeting process (Pisano and Callahan 2013).

Institutional Design Principle #4: Monitoring

Effective monitoring discourages users from breaking the rules. For example, experiments have found that people are more apt to cheat on a test if the lights are dimmed or even if the subjects are simply allowed to wear dark glasses while taking the test (Zhong et al. 2010). Conversely, they cheat less when there is a cartoon picture of an eye nearby (Shariff and Norenzayan 2007). The point is that people are more prone to dishonest and self-interested behavior when they believe they cannot be seen and their reputations are not on the line.

Monitoring arrangements that involve local community members are more effective than those relying on monitors from outside, as the former help ensure the resource is being monitored continuously (Ostrom 2005; Cox 2010). For local users, this principle can be translated into the question, “**Who is monitoring this system and do they face appropriate incentives given the challenge of monitoring?**” (Ostrom 2005, 271)

Implications for Designing Financial Institutions

- A. Develop a system of internal monitoring.** Local government financial management has often relied on external monitoring, like that provided by bond rating agencies or an external auditor, to provide some assurances of financial probity. Though these forms of monitoring can be helpful, they have limitations. Most importantly, there is often a long lag between when the local government makes a decision and when feedback is received. This makes it difficult for course corrections to be made. Given that a completely reliable system of external monitoring may be impossible to find, local governments should develop their own capacity for creating regularly available and credible information about local government financial performance.
- B. Develop shared fiscal fluency.** Monitoring the financial condition of local government requires that all involved parties have some shared understanding of financial terminology and concepts. This does not mean that everyone has to be a financial “expert” to participate in monitoring financial conditions, but it does mean establishing a baseline level of financial literacy and using shared, mutually understandable terminology.

Research-Proven Institutional Design for Elected Officials

Develop a system of internal monitoring:

- **Create habitual monitoring activities.** Governments can ingrain the use of financial information in decision-making through activities such as:
 - Make “financial sustainability” (or something similar) one of the governing board’s official goals, on par with service goals such as citizen safety or economic opportunity. The board should maintain a limited number of goals in order to promote focus.
 - Regularly review the board’s financial policies. The review can be particularly effective if the organization notes where it is in and out of compliance with its

own policies. Those areas that are out of compliance become opportunities for improvement.

- Regularly review how actual expenditures are performing against actual revenues. Then, compare this to budgeted spending plans in order to provide context for making tactical adjustments.
- Identify and report on indicators of financial performance throughout the year to provide advance warning of impending shortfalls. For example, measures of cash position and indebtedness could be used as “snapshot” indicators of financial position.
- **Create transparency within government.** “Transparency,” as it is commonly used in government finance, usually refers to transparency of the government’s financial position to the public in a comprehensive annual financial report or similar mechanism. However, to discourage self-interested behavior within government, institutions should also provide transparency on how decisions are made and who gets what resources. For example, internal service charges are often used to charge operating departments for the use of a collective resource, like facilities or information technology infrastructure. If the formulas used to arrive at these charges are opaque, departments are more likely to resent the charges and may even seek to obtain services from outside providers (e.g., a private IT firm), thereby degrading the collective resource (e.g., reducing economies of scale for the entire government). Conversely, an internal charge system that is transparent as to how charges are made is more likely to be accepted because it gives users the ability to understand how charges work and, where necessary, to challenge how charges are allocated.
- **Develop outcome-based performance standards.** Explaining what happens as a result of expenditures, integration of program activities, and partnerships can be the most effective of all monitoring activities. If this is developed through integrated collective-choice discussions, the difficulty of developing outcomes can be overcome.

The Importance of Staying Active in Professional Associations

Professional associations create a network of peers across local governments, where the professional norms promulgated by these associations become a standard against which monitoring can take place. Further, members of the association usually wish to maintain their reputation among their peers in the association, providing additional motivation to follow the agreed upon professional standards.

Develop shared fiscal fluency:

- **Supplement traditional budget processes with other perspectives on financial health.** Traditional budgeting formats are characterized by an emphasis on: control of spending through detailed line items; inputs into public services (i.e., staffing, materials, etc.) rather than outcomes; and incremental decision-making wherein the government starts the budget with last year’s expenditures and adjusts them up or down at the margins as may be required, given assumed revenue growth or contraction. Governments can supplement the traditional approach with new perspectives. A budget built around

programs, for example, encourages planning. Non-incremental approaches like zero-base budgeting, target-based budgeting, or priority-based budgeting can help organizations reconsider the relevance and affordability of traditional spending patterns. Governments that use non-traditional budgeting techniques also tend to make better use of forecasting information (Forester 1991).

- **Take steps to develop common understanding of financial information.** Joint study sessions where participants jointly review data and then discuss the implications can build a basis for collective action. The first goal of such a session to make sure everyone has a common understanding of what the data means. After that, participants have a much better chance on agreeing on the actions that should be taken based on the data.
- **Acknowledge and address perceptions of political bias in financial forecasts.** It is important to address perceptions of political bias so that all policy-makers will be comfortable making decisions based on the forecast. For example, in state governments, “consensus forecasting” is a widely recognized best practice for enabling the governor, lawmakers, and other parties to agree on a single revenue estimate for budgeting.¹² Essentially, a consensus forecast asks representatives from both branches of government to work together to come to a single forecast that both can agree upon. Sometimes other non-partisan participants, such as academics from a state university or business leaders, will be invited to be part of the consensus forecasting process. Typically, each party will come to the table with a separate forecast and, through consensus-building, the parties will arrive at a single forecast. Local governments might be able to borrow some of the ideas behind consensus forecasting. While the legislative branches of most local governments do not have the professional staff support necessary to produce their own forecasts, it might be possible to include representatives of the legislative branch in the forecasting process to the degree necessary to forge agreement on an estimate that everyone can support. It might also be possible to closely integrate credible, non-partisan third-party experts into the forecasting process in order to give legislative branch members the confidence that the forecast is not biased.

Principles Put into Practice: City of Tempe, Arizona

The City of Tempe, Arizona, supports its use of financial forecasts through the following habitual activities:

- One of the city’s five official “Strategic Priorities” is “Fiscal Sustainability and Vitality.” This helps keep long-range financial thinking, and financial forecasts, on the mind of the city’s decision-makers.
- There is regular review of the city’s financial policies. The City Council actively uses the policies to guide decisions. The policies require the use of forecasts to make decisions.
- Staff present the forecast twice per year, timed to coincide with points in the budget process where the information is most immediately relevant. For example, the forecast is

¹² Consensus forecasting has been recommended to state officials by: The Nelson A. Rockefeller Institute of Government; The Pew Charitable Trusts; The Volcker Alliance; and the Center on Budget and Policy Priorities, among others. See: The Pew Charitable Trusts and Nelson A. Rockefeller Institute of Government. 2015. *Managing Volatile Tax Collections in State Revenue Forecasts*, The Volcker Alliance. 2015. *Truth and Integrity in State Budgeting.*, and Elizabeth McNichol, Vincent Palacios, and Nicholas Johnson. 2014. “Budgeting for the Future.” *Center on Budget and Policy Priorities*.

published in February at the early stages of the budget development process to determine how much the city can spend on services without violating its financial policy of maintaining a fund balance of at least 20 percent of annual revenues during the next five years.

- Quarterly reviews, with the city management team, of actual revenues against the forecast are led by the city's budget staff.
- Staff compile a monthly report of leading indicators of the city's most important tax revenues.

Institutional Design Principle #5: Graduated sanctions and credible rewards

Sanctions deter participants from breaking the rules. Effective sanctioning ensures that no participants can routinely or flagrantly break the rules without suffering the consequences. To be fair, sanctions must be graduated such that the penalties are proportional to the severity of infractions. For first-time, small infractions, a verbal warning may be sufficient; more tangible penalties are needed for repeated, large infractions (Ostrom 2005). For local users, this principle can be translated into the question, **“How can sanctions be arranged such that someone who makes an error or a small rule infraction is sufficiently warned so as to ensure longer-term compliance without our trying to impose unrealistic sanctions?”** (Ostrom 2005, 271). In addition to sanctions, rewards can be arranged for those who contribute to maintenance and enforcing rules for resource use. For local users, this principle can be translated into the question, **“How can rewards be arranged such that those who are eligible for them can trust that they are reliably and fairly distributed?”** (Ostrom 2005, 271)

Sanctions and Traffic Controls

Traffic enforcement illustrates the ideal role of sanctions. The vast majority of people observe traffic rules because of social norms. However, without sanctions for flagrant or repeat violators, the traffic system would likely descend into chaos.

Implications for Designing Financial Institutions

- A. Recognize the role of sanctions and credible rewards in financial decision-making.** Without a system of sanctions and rewards, it is hard to encourage behaviors that produce sustainable outcomes. Sanctions can include an array of incentives designed to influence behavior. The most severe sanctions would include things like an official being removed from office or a downgrade from a rating agency. However, sanctions will work best when they are graduated – a light touch at first, with greater intensity as a party increasingly deviates from the established and agreed upon rules. Rewards will work best when they are credible.
- B. Consider the role of “nudges” in public management.** Government has traditionally relied on heavy-handed methods of enforcing compliance with policies such as fines, citations, etc. A “nudge” by contrast is any aspect of the decision-making environment that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye-level on the shelf from which people choose their food counts as a nudge. Banning junk food does not (Thalher and Sunstein 2008). Just as the foregoing example makes it easier for people to make healthier dietary choices when shopping for groceries, public officials can consider subtle alterations in the decision-making environment for public finance that make it easier to make financially sustainable choices.

Research-Proven Institutional Design for Elected Officials

Recognize the role of sanctions and credible rewards in financial decision-making:

- **Break the connection between budget size and the reward system.** Public managers are often compensated based on the size of the organizational unit they manage, often measured in number of people or the size of the budget. This approach provides managers with a direct incentive to increase the size of their unit, an incentive which often is not compatible with financial sustainability. Public agencies should not only break the connection between the extrinsic rewards given to public employees (e.g., salary, promotion), but also the intrinsic rewards which are often just as, if not more, important (e.g., prestige).
- **Connect rewards to adaptive behaviors.** If the reward system is not to be connected to measures of unit size, then it must be connected to something else. Governments should consider making a connection between rewards (either intrinsic or extrinsic) and the types of behaviors that provide financial sustainability and value for the public. For example, it could reward results such as value delivered to the public, or it could reward processes that are thought to create value, such as engaging in learning, continuous improvement, and teamwork.¹³

Consider the role of “nudges” in public management:

- **Remove barriers to doing the right thing.** In some cases, the financial decision-making system may actually incentivize bad behavior. A common example of this kind of dysfunction is the “use-it-or-lose-it” phenomenon that occurs with end-of-year surpluses: knowing that any unspent budget will lapse and that underspending might even lead to a lower allocation in the next year encourages managers to spend out their budget even if the spending is not really needed for their operations. So, before deploying sanctions, make sure the decision-system is not actually encouraging the unsustainable behaviors that you are trying to prevent (Nisbett 2015). For example, departments may build contingency into their budget in order to guard against the impact of unexpected expenditures. If every department does this, the entire government can accumulate a large and unnecessary level of “fat” in the budget. One way to give departments permission to forego their individual contingency would be to create an explicit, centralized capacity to help departments deal with unexpected expenditures during the year. By pooling risk across departments, the centralized contingency can be significantly smaller than the sum of individual department contingencies.
- **Institutionalize an identity that supports good decision-making.** An “identity” is how people see themselves. A person’s identity exerts a strong influence on how a person makes decisions because people tend to make decisions that are consistent with their identity. Hence, local governments should seek to institutionalize identities that support good financial decision-making. An identity can often be drawn from some aspect of the organization’s history that people are proud or otherwise feel positively about. It is also possible to create an identity. For example, the Town of Gilbert, Arizona, adopted a vision to be “the best in class, all lines of service.” There was a high level of commitment

¹³ For more information, the design of reward systems in results-based management systems see: James E. Swiss. 2005. “A Framework for Assessing Incentives in Results-Based Management.” *Public Administration Review*. 65 (5).

to this vision such that members of the organization adopted it as an identity. Part of this identity requires making the financial choices that allow Gilbert to become and stay the best.

- **Provide evidence of others making sustainable choices as part of decision-making processes.** Benchmarking information or commonly accepted “best practices” can be used to demonstrate that financially sustainable decisions are widely practiced by other governments. This makes it easier for decision-makers inside of government to make similar choices.

Principles Put into Practice: San Bernardino County, California

San Bernardino County’s long-range strategic plan (as described in Principle 3) was prepared simultaneously with its budget. An important step the county undertook was to report out its financial progress to all the members of its planning and budgeting process. This feedback served as positive reinforcement to all the parties involved in making changes to collective service arrangements and improvements. Information and transparency, in other words, served as a positive reinforcement among the parties to sustain fiscal progress.

Institutional Design Principle #6: Conflict resolution mechanisms

Decisions regarding the use of a government's fiscal resources are subject to dispute. Access to rapid and low-cost conflict-resolution mechanisms helps prevent unnecessary escalation of conflicts, which may undermine general trust in the system (Ostrom 2005). For local users, this principle can be translated into the question, "**What local and regional mechanisms exist to resolve conflicts arising over the use of this resource?**" (Ostrom 2005, 271)

Sustainability and the Sports World

In the major sports leagues in the United States, only one out of about thirty teams wins the championship. Yet, the play sustains itself season after season. One of the most important reasons for this is that the competition is viewed as fair. This means that even if a team doesn't win, its fans believe it has a fair chance next year. If fans were to perceive that the game was rigged, the league would probably collapse. As a result, professional sports leagues devote considerable time and resources to hearing and settling disputes about the game and its rules.

Implications for Designing Financial Institutions

- A. Make sure decision-processes are perceived as just.** The best way to resolve conflict is to prevent it from happening. Research shows that if participants in a decision-making process believe that the process was fair, they are more likely to support the decision, even if the decision is not in their own interest (Cropanzano et al. 2007).
- B. Develop conflict resolution structures for financial disagreements.** Sometimes disagreements will run deeper and be more intractable than good interpersonal skills can handle. In these cases, having structured mechanisms to help parties resolve disagreements constructively can help the organization move forward.

Research-Proven Institutional Design for Elected Officials

Make sure decision-processes are perceived as just:

- **Base decisions on information that is perceived to be accurate.** Of course, people will feel better about a decision that is based on accurate information. However, there may be widely varying opinions on the accuracy of information. Hence, governments may need to develop processes to help ensure that information is perceived as accurate. For example, "joint fact-finding" is a process by which stakeholders with diverging interests work together to research relevant facts before making a decision (Levenson 2015).
- **Apply a transparent and consistent set of decision-making criteria to everyone equally.** Governments should establish agreed-upon decision-making principles or values that all parties establish at the outset and agree to abide by. Principles or values set the tone for how the government will make decisions. An example of such a principle is "maintain what we have before building new," which can help decision-makers be mindful of avoiding over-expanding the stock of capital assets.

- **Give all effected stakeholders the opportunity for input.** One way for stakeholders to give input is to help define the options that will be considered for solving a particular problem. They can also help decide how those options should be evaluated. Though procedural justice doesn't necessarily require collective decision-making, it doesn't necessarily eschew it either. In fact, research shows that allowing parties to bargain to reach a final decision can increase commitment to the decision (Nutt 2005). Hence, processes that allow parties to participate in bargaining over a decision might be worthwhile in some cases.
- **Mistakes are recognized and corrected.** A government should have a means of evaluating how a decision is working out and correcting mistakes. A good example of this is pilot projects, in which a new strategy is tried out on a smaller scale first. In cases where a pilot is not possible, a process to monitor the implementation of a decision and take actions to smooth out the hitches could be put in place.

Develop conflict resolution structures for financial disagreements:

- **Provide formal training on constructive interpersonal communication skills and practice those skills.** Research shows that when members of an organization are skilled at interpersonal communication, they make budget adjustments far more intelligently when faced with financial distress (Patterson et al. 2011). If people have the skills to constructively raise and discuss controversial issues, rather than letting them fester until they become a crisis, then it is much more likely that a mutually agreeable solution can be found.
- **Establish a place where people can take disputes to get help.** Even people skilled in interpersonal communication may encounter disagreements that they cannot easily resolve on their own. As a first step in the process, the conflicting parties should have access to informal assistance with solving problems in a way that focuses on the parties underlying interests, rather than on their initial "bargaining positions." If that does not work, the parties can be given access to a more formal procedure, with the option to go back to the informal procedure if and when sufficient progress is made.

Institutional Design Principles Put into Practice: Los Angeles County, California

Los Angeles County was facing a fiscal crisis that was so severe its major financing firm refused to renew its line of credit and called the board into an emergency conference call during a board meeting. This resulted in the board taking total ownership of the fiscal situation, brought in a new management team, and started an open, transparent process that dramatically changed the fiscal management of the county. The board and the management team undertook the following:

- The Chief Administrative Officer (CAO) conducted a process to assess openly and fairly the condition of the county. The objective of this process was to clearly spell out the fiscal condition the county was facing so that the differences on the board could be resolved. Up to that point, department heads had their own budget positions, which they conveyed to the individual board members they reported to, which led to conflicts on the board.
- New communication processes between the board, the CAO, and the department heads were established so that the differences among the department heads could be resolved.

The CAO served as the only line of communication between the parties, and all units complied with the changed communication process. This communication process was created to eliminate leaks to the press that were used to debate the budget process in the media, further eroding the fiscal solvency of the county.

- A change in the culture from an inward oriented to an outward constituency view was instituted, providing all with a sense of fairness and openness.
- Salary and benefit reductions were made part of the negotiations with the bargaining units and the reductions were achieved, because the parties trusted that when better economic times arose they would be treated fairly. This was made possible by the rebuilding of trust between the board and COA.
- The county achieved fiscal sustainability during a severe recession. The recession in LA in the 1990s was even more severe than the Great Recession.

Institutional Design Principle #7: Minimum recognition of rights

Local users, in general, are better able to figure out how to allocate benefits and responsibilities among themselves. It is, however, more difficult for local participants to uphold their local rules if they are not recognized by external government authorities, as disgruntled participants may seek the help of external authorities to invalidate these local rules. Or, when external authorities seek to impose uniform rules on communities with divergent circumstances, these efforts may lead to unsustainable use of the resource (Ostrom 2005). In these cases, leaders of local communities may need to enter into collective negotiation with external authorities and search for mutually-beneficial solutions for preserving their self-governing rights while acknowledging the priorities and interests of the external authorities (Tang and Tang 2000). For local users, this principle can be translated into the question: **“In what ways can local appropriators develop effective mechanisms for preserving local resources that will be accepted by external authorities?”** (Ostrom 2005, 271)

Implications for Designing Financial Institutions

- A. Proactively address unfunded mandates.** Local governments will be in the best position to craft the strategies that will best support their own long-term financial sustainability. However, state and federal government policies often create fiscal stresses for local governments. Chief among these policies are “unfunded mandates,” which create obligations for local governments without the revenue to support them. Local governments should proactively look for ways to mitigate unfunded mandates.
- B. Strategically manage grants.** Grants also impose obligations on local governments and though there is some supporting revenue stream, the revenue stream is often not sufficient to cover the full cost of the grant. Hence, local governments need to put systems in place to ensure that grants don’t commit the government to unsustainable cost obligations.
- C. Consider if you should change the rules of the game for intergovernmental relationships.** In some cases, local governments may have the opportunity to fundamentally alter the nature of their relationship with the state government through mechanisms like home rule, charter changes, referendums, etc. These changes could strengthen a local government’s hand, giving it more latitude to improve its financial position. However, with increased power also comes the potential for local government to make bigger missteps.

Research-Proven Institutional Design for Elected Officials

Proactively address unfunded mandates:

- **Review what state and federal “mandates” (and other obligations) actually say.** Local governments regularly commit to certain expenditures in a well-intentioned attempt to comply with mandates from the state and federal governments. However, in some cases the activities that local government funds go significantly above and beyond what is actually called for by the letter of the law. Yet the expenditures persist because they are given the blanket justification of being “mandated.” Local governments should

periodically review the exact wording of the mandate against the services that the local government is providing to ensure that the local government isn't unwittingly constraining its own spending rights (Hess 2013). This same practice of verifying the actual wording of an obligation against the perception of what the obligation is can apply to other areas as well, such as labor contracts. Local governments should catalogue mandates and the actual legal requirement so that it can be reviewed against the activities local governments are actually doing, as needed.

- **Develop an entrepreneurial spirit in seeking adjustments to mandates.** When it comes to working with the state and/or federal government, local governments often limit themselves to simply seeking information from state/federal government on program requirements, funding, etc. However, more entrepreneurially-minded local officials seek latitude in the implementation of a mandate or other requirements (e.g., waiver, increased flexibility, etc.). Often what separates local governments that are successful in getting latitude on a mandate is just a mindset that it is possible to get latitude by taking the initiative.¹⁴ For example, local governments might work within a council of governments to identify mandates of common concern and then pursue a united strategy for adjustment to the mandate. They might also place pressure on the state government to adopt reporting standards that require the state to identify the mandates it places on local governments and the cost of those mandates to local government. Increased transparency might help reduce the state government's proclivity for unfunded mandates.
- **Develop policies that promote financial flexibility.** Where unfunded mandates introduce uncertainty into resource availability, local governments can adopt policies that encourage financial flexibility. This might include, for example, changing the cost structure of a service so that cost can be varied according to resource availability. For example, rather than paying a contractor a fixed annual fee for a predetermined level of service, a government might enter into a contract where service levels and costs can be varied up or down as needed. Another possibility would be to identify one-time expenditures in the budget that can be safely deferred until the point in the year when funding uncertainties have been resolved.
- **Use unfunded mandates as an opportunity to review how a service is provided.** Local governments can use unfunded mandates as an opportunity to think about how it might provide service differently. For example, suppose a government is faced with a mandate that raises the cost to provide a given service. Rather than deciding between just providing a lower level of service to the public or increasing the budget for that program, a local government might use the mandate as catalyst for considering other ways to provide the service, such as making the process more efficient, partnering with other governments, etc. A formal policy that requires such a re-thinking of how services are provided can help institutionalize this practice.

Strategically manage grants:

- **Adopt a policy on grants.** If mandates are a stick that state and federal governments can wield to make local governments support a particular policy, then grants are the carrot – and both can harm local financial sustainability. If the grant incentivizes a local

¹⁴ Based on personal interview with Michael McGuire, an author of *Collaborative Public Management: New Strategies for Local Government*.

government to get into areas of service it would not otherwise enter, then it has the potential to waste public resources. In the short-term, this might take the form of matching funds a local government needs to offer. In the longer term, a grant funded program might be absorbed into the local government's regular budget after the grant ends simply due to inertia. A policy on grants should direct that the grants that a government applies for are consistent with the government's strategic priorities. This means that the government might refuse grants that have a long-term negative impact on the budget. If and when a grant is accepted, a policy should address the possibility that the grant will end, leaving the government to decide whether to continue the program.

Principles Put into Practice: Counties in Southern California

The State of California, faced with a United States Department of Justice Order to relieve prison overcrowding, designated that many inmates in state prison be sent to county jails. A difficult and contentious discussion between the state and county governments began on how this was to be done and what the fiscal responsibility of the state would be. First, there was a negotiation of the provisions of this mandate, between the state government and counties. Since budgetary limits on the state was part of the cause of the DOJ order, the resolution of the issue was an agreement that in part resources would be transferred but also there would be a modification of sentencing laws so that more effective release arrangements could be worked out within counties. By coordinating local programs with release dates of prisoners, a more effective arrangement could be worked out and a cost savings could still be realized by the state. Second, a number of counties used this mandate as an opportunity to fundamentally re-examine how they managed criminal justice. These counties worked to drastically reduce the recidivism rate of prisoners so that the county governments could better handle their new responsibilities (Pew-MacArthur Results First Initiative 2015).

Institutional Design Principle #8: Networked enterprises

Collective-action problems are not always solvable within the boundaries of a single jurisdiction. Multiple organizations (public, private, and non-profit) may be needed to address collective-action problems at different scales (i.e., a system of “networked enterprises”). For instance, in a large water rights system, individual farmer organizations may exist at the branch level and a larger federation may exist at the system level (Ostrom 2005). Networked enterprises may also exist in the form of co-management between a user group and a government entity (Cox et al. 2010). In some situations, negotiations and collaboration among communities in the region and across sectors and levels of government are needed. As a fundamental part of institutional design, governments need to consider how they develop and maintain relationships with outside organizations that can help government meet public service demands at a sustainable cost.

For local users, this principle can be translated into the question, “**How can we create a polycentric system in which collective units at different scales and across different sectors and levels can work together to preserve local resources?**” (Ostrom 2005, 271)

Implications for Designing Financial Institutions

- A. Look for opportunities for intergovernmental collaboration.** Local jurisdictions do not exist in isolation; rather, they are intricately connected to a wide variety of collective entities, including different levels of government, as well as the private and nonprofit sectors. Even likening this environment to a multi-dimensional contour map does not adequately capture the dynamic and adaptive features that underpin effective fiscal sustainability. Rather, the connectedness inherent in fiscal sustainability has many moving parts that require solutions that can change over time. Hence, local governments must be intentional about managing those relationships that are most crucial to financial health. These relationships will be different for each local government and might change over time. For example, a school district might have important relationships with overlapping cities, whose land use policies greatly impact its tax base. Or, local institutions of higher education might be important partners in helping high school students become college-ready.

- B. Develop organizational structures that connect resources with the service providers that create the best value.** Too much centralization can lead to lack of responsiveness to local and changing conditions. Too much decentralization can work against a coordinated response to large, strategic issues. Hence, local governments should seek to develop organizational structures that provide centralized leadership and coordination for those issues that demand it, but also have decentralized features that allow for responsiveness and agility and for the movement of resources to where it will create the best value.

Research-Proven Institutional Design for Elected Officials

Look for opportunities for intergovernmental collaboration:

- **Develop a process for regularly scanning the environment to identify problems that require a collaborative approach.** Collaboration between a local government and other

organizations usually requires the presence of an issue that the local government can't solve by itself. Collaboration costs time and energy, so the presence of a severe problem is needed to convene representatives from different organizations and inspire them to cooperate. A regular process for analyzing the forces that could impair financial sustainability and defining problems that require collaboration is a building block for collaboration.

- **Be involved in intergovernmental organizations that can provide the framework for collaboration.** Once a convening issue is identified, the collaboration must be managed. This starts by getting the right players together. The complexity of getting the right people together has both a geographical and source-of-funding dimension. Fiscal resources for several decades have been derived from our intergovernmental system, which has created a set of ongoing institutional arrangements in our metropolitan and rural regions. Examples include regional councils of governments, regional economic development districts, and non-profit regional planning agencies or civic groups. These institutions can be helpful in assisting co-operative efforts that are occurring in the same regions in which funding sources are local: among local governmental entities, between sectors- public, non-profit and even private (the fastest growing sources of revenues coming from these inter-sectorial arrangements). In the past, these arrangements have focused on planning and coordination. As government continues to operate in tight fiscal conditions, using these forums as a convening for fiscal discussions can be useful and can reduce the cost for conducting this work. Next, work teams must be formed, rules for working together formulated, meetings organized, etc. All of these can be made easier if they are done under the auspices of an existing structure.
- **Nurture civic organizations in the community.** In many communities, the vitality of civic organizations has declined considerably. As a result, a government may find that it doesn't have any strong civic organizations to partner with when the need arises. Some governments may need to consciously nurture civic organizations. This might include, for example, helping them with grant seeking or providing training on how to manage a mission-driven organization. Ideally, this nurturing will take place with the goal of making civic organizations independent from the local government.

Develop organizational structures that connect resources with the service providers and create the best value:

- **Take advantage of technologies that allow government to reap the benefits of both centralization and decentralization simultaneously.** Centralization offers greater organization-wide coordination and economies of scale. Decentralization allows greater responsiveness to local conditions. Technologies offer the possibility of having both at the same time (Fountain 2001). For example, governments could compile centralized databases and, through an open data policy, partner with developers outside of government who have the skills and proximity to community challenges to create useful applications. In another example, "back office" services such as accounts payable, contract writing, etc. can be processed more efficiently by a specialized, central unit. At the same time, close enough contact to "customer" departments can be maintained to ensure the service is timely and responsive to local needs.
- **Follow a process for collaborative governance** (Donahue and Zeckhauser 2011). Collaborating with outside entities to provide services to the public has great potential to

produce better outcomes for government and to direct new resources to public services. However, developing cost-beneficial collaborative relationships is difficult, so they will be most successful when guided by a process that accounts for proven techniques in making collaboration work. Broadly speaking, such a process has four steps. First is to analyze what the government is seeking to achieve with collaboration. The goal must be defined concretely enough that it can serve as a yardstick for determining if collaborative relationships have potential and are ultimately fruitful. The analysis must also assess who the potential collaborative partners might be. Potential partners must have strong alignment with the government's goals for collaboration to work. The next step is to work with partners to assign responsibility. The next step is to design the specifics of what each party will be expected to do for their assigned responsibility, including how performance will be monitored and rewarded and length of the relationship. Through the assignment and design tasks, a government seeks to align more closely the goals of government and collaborators. Finally, as the work of service provision proceeds government must monitor performance and adjust the arrangement according to experience.

- **Build internal capacity for collaboration** (Donahue and Zeckhauser 2011). Most government agencies are accustomed to providing services using staff employed directly by the government or, perhaps, using conventional outsourcing relationships. Collaborative arrangements are more complicated because of the more complex risk-reward trade-offs it entails. Hence, governments must build capacities to engage in collaboration. For example, a government must have the capacity to make a realistic assessment of its own capabilities, so it knows where it most needs to supplement with collaborators. It needs to judge which potential collaborators offer the best value and what government is giving up by relinquishing discretion to collaborators (which might require revising traditional procurement rules and processes, for example). Governments must also be able to understand the competing incentives of collaborators and how to mitigate the risks to the public interest raised by these incentives. When an arrangement is in place, governments must be able to monitor and adjust the relationship as necessary.

Institutional Design Principles Put into Practice: Denver, Colorado

Denver's four major cultural institutions, the Denver Art Museum, Denver Zoo, Denver Botanic Gardens, and Denver Museum of Nature and Science, lost state funding as a result of the state's budget troubles. The city government was not able to make up the gap, so a new funding strategy was needed. Fund raising and higher fees were not sufficient to make up the gap – in fact, higher fees had the effect of reducing attendance. The strategy was to form a joint regional sales taxing district that extended beyond the boundaries of Denver to encompass neighboring counties where many of the institution's patrons came from. The four major institutions worked together with other, smaller cultural institutions within the proposed boundaries of the district to get enabling legislation passed and then to mount a public campaign to get voter approval to implement the district and the tax. Voters approved the district by a three to one margin, thus providing the funding needed to support cultural institutions. The district has been reauthorized twice by the voters since its inception.

Case Studies in Financial Sustainability

Case studies were the building blocks of the Fiscal Sustainability Index, starting with the eleven case studies in Southern California conducted by the researchers from the University of Southern California, the University of San Francisco, and the National Civic League. The researchers and their advisors tested the common-pool resource (CPR) work of Elinor Ostrom as a way to integrate the cases and provide more explanatory power to the findings.

To further test the validity of the CPR approach, an article was submitted to the *Public Administration Review (PAR)*, the peer reviewed research journal for the field. It was accepted for publication and was awarded the best article by practitioners for 2015.

More case studies, conducted by researchers from the Government Finance Officers Association and George Mason University, were used to further develop the financial sustainability framework. A new team of advisors was constituted to review the interpretations. Going forward, the common-pool framework for financial sustainability can be applied to new jurisdictions, not only to evaluate the financial sustainability of those jurisdictions, but to gain additional insights into the framework itself. Over time these insights can be used to refine and improve our knowledge of what it takes for local governments to be financially sustainable.

The project team for this document accessed 21 fiscal sustainability-related case studies. Of the 21, we have selected five to show in this document, which we believe best illustrate the common-pool framework and which illustrate the use of the leadership strategies and institutional design principles across a range of U.S. jurisdictions in order to adapt to fiscal challenges and related changes in community cultural, demographic, economic, and social environments. These five organizations are:

- The City of Baltimore, Maryland
- The Town of Gilbert, Arizona
- The City of Irvine, California
- The County of San Bernardino, California
- Whittier Union High School District, California

The following pages present summaries of each of the five cases and also highlight direct connections to the corresponding Leadership Strategies (LS) and Institutional Design Principles (IDP). The full text of the cases are available in Appendices 2 through 6 of this document. Additional case studies are available from the National Civic League and the Government Finance Officers Association.

The City of Baltimore, Maryland – Case Summary

(Full text of case available as Appendix 2)

Beginning in 2011, Baltimore, Maryland found itself facing annual multi-million dollar financial shortfalls equal to about 17 percent of its discretionary resources. After initially trying to use budget reductions as a means for closing financial gaps, including eliminating 240 positions; increasing hotel, energy, and telecom taxes; and reducing capital projects, maintenance, and recreational programs, the city's mayor and budget director decided there had to be a better way to solve this crisis. Since one of the key causes of Baltimore's woes was a steadily shrinking population base, the city embarked on a comprehensive long-term financial planning process christened "Change to Grow," with the intent of adding 10,000 new families to Baltimore over a period of ten years.

The collaborative process used to develop longer-term fiscal strategies required that city departments and members of the public work together with the assistance of an external coordinating consultant. In particular, three "guidance committees" were formed. The membership of these committees crossed many stakeholder groups and the committees had substantive roles in decision-making. Two committees were charged with providing policy direction on two of the city's most important challenges, the cost of employee health benefits and pensions. The third committee provided direction on the ten-year plan as a whole

When municipalities develop a long-term financial plan, they often focus on a three-year or five-year time horizon. However, the mayor and the finance team knew that the city's biggest challenges, like declining population, a stagnating tax base, deteriorating capital infrastructure, and growing liabilities for employee pensions could not be adequately addressed over a five-year window. They thought that a ten-year time horizon was needed to effect meaningful change. Further, a longer-time horizon would allow the city to better assess the potential of strategies that might not make a big difference within a few years, but could have major positive impacts down the road. A ten-year window would also deemphasize the long-term plan as a response to the city's recent severe financial crises and emphasize the plan as a means of long-term transformation of the city's fiscal fortunes.

Scenario planning incorporated new algorithms and econometric regressions to forecast taxes and leveraged expert judgment from the city's lobbyist and other officials to estimate state-shared revenues, which were coupled with simple revenue extrapolations and judgments where appropriate. This data was blended with information from third parties including regional academic economists, State of Maryland projections and data from federal agencies tasked with economic analysis. Baseline, pessimistic and optimistic scenarios were created with an eye toward understanding what plausible versions of the future might look like. A combination of public, nonprofit, and private sector participants were asked to use this information as the basis for answering various "what if" questions.

This comprehensive approach allowed all stakeholders to understand how factors such as pension and healthcare costs and a declining tax base would impact Baltimore over a multiple year period and under different economic conditions. Having this data provided to the collective decision-making body – elected officials, union leaders, city employees, the larger community,

media as well as special interest groups – provided the foundation for the tough conversations needed to change the city’s financial trajectory. For example, the cost of employee and retiree health benefits was a serious concern for the city because of both its overall size and its high rate of growth. The city’s previous efforts to contain these costs mostly involved making marginal changes to cost-sharing ratios with plan participants, and most of these changes affected only retirees, such as dividing potential pharmaceutical purchases into pricing tiers in order to steer participants towards generic and preferred brands. After the scenario analysis, the participants in “Change to Grow” were willing to consider changes that affected active employees and that required negotiations with employee unions due to the scale of the change proposed. For instance, a 20 percent co-pay for drugs was proposed for *all* plan participants – this was a doubling of the co-pay for retirees and an entirely new cost for active employees. They also approved a variety of other strategies to make Baltimore more economically dynamic and to make city government more efficient, such as infrastructure investments, tax reform, and making city services more efficient.

This case illustrates how Baltimore elected officials were able to leverage their new-found financial knowledge to build community confidence and trust in their leadership. As a result, collective public support was generated to reduce costs and expand the general municipal tax base through strategic economic development initiatives.

Connections to the Financial Sustainability Framework

LS #1 – Create open communication among all participants. Baltimore’s Mayor actively led the financial planning process and used a variety of methods to communicate the city’s financial condition to stakeholders. For example, long-term forecasts were made publicly available and Baltimore actively engaged with the local media to distribute financial information.

LS #3 – Convince stakeholder there can be benefits from collective efforts. They called the plan “Change to Grow,” which was based on a goal of adding 10,000 new families to Baltimore in 10 years. This would revitalize the city and cast the planning effort in a positive light, not just as a way to survive the latest crisis.

LS #4 – Ensure that key participant remain engaged. “Change to Grow” was a highly collaborative endeavor. The City Council, dozens of city department and division managers and professionals, and members of the public were all engaged. At the center of this engagement strategy were the “Guidance Committees,” who were substantive participants in decision-making.

LS #5 – Build long-term horizons into fiscal planning. The city took a ten-year perspective on its plan so that it could adequately address the city’s biggest challenges, like declining population, a stagnating tax base, deteriorating capital infrastructure, and growing liabilities for employee pensions.

IDP #2 – Proportional equivalence between benefits and costs. Baltimore took a balanced approach improving its revenue income and controlling its costs. It did not over-burden the public or any particular stakeholder group.

IDP #3 – Collective choice arrangements. A broad cross-section of stakeholders participated in making the hard financial decisions. Also, pursuing a broad range of strategies to improve financial health broadened the relevance of the financial planning process.

IDP #4 – Monitoring and decision making. Scenario analysis helped stakeholders who were not financial experts get a better sense of Baltimore’s financial situation and, therefore, be informed participants in decision-making.

IDP #8 – Networked enterprises. Building a financial plan incorporated representatives from academia and the non-profit and private sectors. This resulted in a higher quality plan with a larger base of support.

Town of Gilbert, Arizona – Case Summary

(Full text of case available as Appendix 3)

The issue of deteriorating roads and bridges typically evokes images of post-industrial cities. However, even new, fast-growing communities in the southwestern U.S. find themselves in a quandary as they attempt to balance growth-induced infrastructure demands against the maintenance-of-existing systems, without having either financially subsidize the other.

Forward-thinking elected and appointed leaders attempt to head off this challenge by careful advance planning and forecasting. Within the Town of Gilbert, Arizona, its identity of being a “best-in-class, all lines of service” organization was threatened by the specter of unmet infrastructure maintenance and renewal needs, which was punctuated by a water main break that closed the main thoroughfare of the Town’s upscale Heritage District for 24 hours.

Council and management knew that infrastructure maintenance and renewal was a challenge that could only be met through careful planning and forecasting. To that end, “Long- and Short-Term Balanced Financial Plans” and “Proactively Address Infrastructure Needs” were included as two of only six Strategic Initiatives adopted by the Council. The town undertook an intra-agency examination of how the town managed its assets, including conversations about costs versus values of its infrastructure and a ground-breaking set of discussions about the level of service Gilbert would find acceptable for its assets.

Careful consideration of the town’s financial sustainability was important because much of Gilbert’s infrastructure was built using revenues from impact fees – one-time charges paid by new development to cover the costs to the town of creating the capacity for new police, fire protection, parks and recreation, traffic signals, and utility systems needed to serve the new residents and businesses. As Gilbert reaches build out, between 2030 and 2040, there will be far less of this revenue available. However, at the same time, Gilbert’s sales tax revenues have increased and are expected to increase into the future due to the economic activity created by new residents and businesses. Consequently, the forecasts and financial strategy would need to be mindful of this changing composition of Gilbert’s revenue portfolio and its implications for infrastructure financing.

Long-term financial forecasts and “what-if” scenario analyses were used to analyze and evaluate resource requests. Since Gilbert also employs a zero-based budgeting process, where every three years departments are required to re-justify all of their baseline levels of service, elected and appointed officials were able to evaluate new maintenance programs against other possible use of funds as well as consider if the levels of service that were being provided were still what was necessary to meet the public’s expectations.

A major impact of Gilbert’s expanded planning process was to establish better links between asset maintenance, replacement needs, and forecasted revenues, essential ingredients in determining the long-term sustainability of funding sources compared to infrastructure requirements. The forecasting process that Gilbert developed allowed all of its management staff to project how to strategically align the resources necessary for timely and consistent infrastructure maintenance. Further, it provided them with incentives to collaborate on a plan that had the capacity to balance community infrastructure needs against the fiscal realities faced by the Gilbert municipal government.

Connections to the Financial Sustainability Framework

LS #3 – Convince stakeholders there can be benefits from collective efforts. Gilbert used a zero-base budgeting process to guide collective decisions about the best way to use resources going forward. This way, Gilbert did not remain trapped by the way resources had been allocated historically.

LS #5 – Build long-term horizons into fiscal planning. The town built long-term forecasting models, including using “what-if” analysis to help decision-makers visualize the impact of different possible choices.

LS #6 – Maintain capabilities to reinforce cooperative behavior. Gilbert had cultivated an identity of being the “best in class, all lines of service.” This identity required making financially prudent choices. Hence, members of the organization were naturally motivated to behave in a manner consistent with this identity and make financially sustainable choices themselves.

IDP #2 – Proportional equivalence between benefits and costs. Gilbert focused discussions about infrastructure on the value it would produce for constituents, instead of just how much infrastructure costs. The level of service that constituents required was also integral to the planning conversation.

IDP #3 – Collective choice arrangements. Stakeholders from a number of functions within city government participated in developing the plan, including representatives from the Manager’s Office, Office of Management and Budget, Information Technology, Parks and Recreation, and Public Works.

IDP #4 - Monitoring and decision-making. “Long- and Short-Term Balanced Financial Plans” and “Proactively Address Infrastructure Needs” were included as two of only six Strategic Initiatives adopted by the Council. Hence, these topics were highly visible and the town’s action (or inaction) to move them forward would be highly conspicuous and, hence, easily monitored.

The City of Irvine, California – Case Summary

(Full text of case available as Appendix 4)

A 1959 master plan for a city of 50,000 surrounding the new University of California at Irvine served as the foundation for the creation of the City of Irvine, California. This initial master plan called for a full spectrum of residential, commercial, industrial, and recreation land uses, which came to fruition during the 1960s and 1970s. This fortuitous beginning imparted an identity to the city as a place and people who developed long-term, strategic plans and followed them to create a holistic and well-functioning community. The enactment of this vision has allowed Irvine to provide direct financial support to its public school; emphasize excellence in police hiring, leadership, and community relations; maintenance of open sightlines in the layout of new public, business, and residential spaces; promote youth programs; and prevent graffiti and other visible signs of deterioration. As a result, the City of Irvine with over 240,000 residents has recorded the lowest levels of violent crime rates of any city with over 100,000 residents annually since 2004.

What its internal staff discovered in the wake of the 2008 recession was that its history as a high-growth city had caused Irvine to rely upon quantitative, linear regression financial forecasting models that over-emphasized growth-driven variables. While the organization had the foresight to create reserves that could allow it to ride out the short-term implications of this error, a longer-term strategy was needed. Toward that end, Irvine's leadership developed a "Three Year Bridge Plan" that incorporated four principles including no tax increases, no layoffs, no pay raises, and no material reductions to core services. This stated set of policies gave elected officials and the public confidence that the city's budget would not be balanced at the expense of the public's interests, while assuring staff they would be able to keep their jobs while the city contended with the financial challenges presented by the recession.

Irvine was successful in fulfilling the four promises of the Bridge Plan through a combination of eliminating positions through attrition, consolidating duplicative activities, deferring specific non-operating expenditures, economizing on activities that were not core to the city's mission, and judicious use of its reserves during the most difficult periods. The plan was supported by a rigorous short-term forecasting and monitoring process to ensure the city remained on track. The agility shown by city staff in responding to falling revenues enhanced the credibility of the Bridge Plan and emphasized the need for all stakeholders to be adaptable.

At the end of three years, Irvine had arrived at a new structurally balanced budget. Irvine was able to present a balanced budget without the use of reserves or other one-time measures and concurrently increased its support of local public schools. It began to prepare for the next recession by increasing its contingency reserve funding to 20 percent of budgeted appropriations. A 2013 survey indicated that 92 percent of residents surveyed were satisfied with the city's overall performance in providing municipal services, a satisfaction measure relatively unchanged from 2006, the last time such a study was conducted.

Connections to the Financial Sustainability Framework

LS #1 - Create open communication among all participants. The city was very open about the challenges with its forecast and the need to develop a plan to overcome financial distress. It engaged elected officials in the plan and kept stakeholders informed of the city's intentions for dealing with the crisis.

LS #3 – Convince stakeholders there can be benefits from collective efforts. The three-year Bridge Plan provided assurances that the city's decisions would respect both the interest of the public and public employees as the city contended with the crisis.

LS #5 – Build long-term horizons into fiscal planning. The city's plan for overcoming immediate crisis spanned three years. It also gave consideration to building back the reserves after the crisis was over.

IDP #1 - Well-Defined Boundaries. Irvine had created clear decision rules and boundaries that required long-term forecasting and adherence to financial policies on acceptable use of fund balances and the target level of fund balances. This meant that Irvine had the capacity to change its forecast model and use its fund balances responsibly when the situation calls for it.

IDP #2 - Proportional Equivalence of benefits and costs. Flexibility in a crisis situation insures that institutional arrangements don't collapse under the weight of a crisis, thereby preserving services. In Irvine's case, the city had established high quality service for its constituents and was able to preserve that value for citizens despite the financial crisis. The city had built up reserves before the crisis to provide flexibility and used short-term forecasting to remain agile. Further, the Bridge Plan was positioned as a living document that would change as conditions changed.

IDP #4 – Monitoring and decision making. The city developed a short-term forecast model and a process for regularly monitoring its financial position against the forecast. This helped make sure the plan stayed on track.

IDP #5- Graduated sanctions and credible rewards. The city had developed an identity as a "planned city," where planning was a natural response to a challenge. Hence, when confronted with a financial crisis, Irvine's reflex was to develop a long-term plan to overcome it. Because this identity naturally pushed the members of the organization in the direction of developing a plan, they did not need external exhortation to get them there.

The County of San Bernardino – Case Summary (Full text of case available as Appendix 5)

Located in Southern California, the County of San Bernardino has a population of over 2 million. It has a five-member board of supervisors elected by district. In addition to their legislative duties, supervisors are responsible for appointing senior administrative staff and overseeing administrative departments. Historically, supervisors focused on protecting the financial interests of their respective districts, and were reluctant to work together in setting priorities across

districts. Policy and political fragmentation combined with financial turmoil and operational dysfunction resulted in the perfect storm of impending economic collapse when the Great Recession hit in 2008. At the time, the county was facing a structural deficit due to its failure to account for full costs of capital projects and benefits agreements with county employees. In addition, the county lacked well-coordinated processes for making budgetary decisions across county departments and for coordinating across various governing entities within the county. When faced with steep reductions in property and sales tax revenues as well as state transfers triggered by the Great Recession, the county was facing the prospect of bankruptcy.

The county subsequently managed to avoid the fate of bankruptcy through a fortunate combination of new elected and administrative leaderships willing to tackle challenges arising from the jurisdiction's fragmented decision-making and operational processes. With the election of two new supervisors and the subsequent appointment of a seasoned public management professional, the county created a centralized chief executive officer structure that allowed for the development of an integrated system for tracking financial decisions across departments, with each department being required to provide estimates of long-term overhead administrative expenses and 10-year expenditure forecast. Department directors that failed to adjust to the new reporting and financial management system were replaced. A full-cost and long-term budget allowed elected officials and the public alike to understand the full extent of the various problems facing the county. Greater transparency encouraged departments to identify measures for cost savings and for more effective use of transfers from higher-level governments. The 10-year forecast also informed collective bargaining across separate negotiations, which led to agreements with unions in pension benefit reductions and reduced salary raise increments.

The county also initiated county-wide strategic planning processes that involved county officials, officials from the 24 cities in the county, officials from regional planning agencies, and civic leaders. In these processes, officials examined long-term strategies for allocating financial resources in the region. Two key and inter-related questions were used to guide the discussions: where do we want to be in 20 years and how do we get there? The discussions also included ways for leveraging strengths from multiple jurisdictions and agencies for greater cost-effective ways of delivering services in the county.

These strategic planning processes helped all stakeholders to understand that the county's "survival" required that they continuously stay engaged with one another in making tough financial and service delivery choices. One of the key outcomes from this effort was a shared understanding that the county's long-term development hinged upon having the financial resources needed to sustain its proposed populations—basically, the creation of a new view of what it meant to be in the county, with a shared set of interests, connected across districts, all facing the same set of difficult external conditions. Thus, a focus on collective vision replaced the previous focus on fragmented interests through the development of a network of interpersonal and inter-agency relationships.

All these efforts have enabled the county to avoid bankruptcy. But given the legacy of political fragmentation and operational dysfunction, the county has continued to face challenges in maintaining fiscal health. While maintaining a Moody MIG-1 rating as a whole, the county has faced a downgrade of its pension obligation bonds. Continuing efforts will be needed to

consolidate strategies and institutional design conducive to maintaining fiscal sustainability in the county.

Connections to the Financial Sustainability Framework

LS #2 – Help stakeholders to build trustworthy reputations. With a new majority in the board working and with a seasoned public management professional, in the chief executive, the county leadership began to demonstrate a commitment to developing a transparent and honest budgetary process.

LS #3 – Convince stakeholders there can be benefits from collective efforts. The new budgetary system rewarded departments for sound fiscal planning and decisions.

LS #4 – Ensure that key participants remain engaged. Extensive processes were put in place in different arenas to ensure that all relevant stakeholders are involved in planning and budgetary processes geared toward building shared visions for the county as a whole.

LS #5 – Build long-term horizons into fiscal planning. The budgetary process included a 10-year expenditure forecast requirement.

IDP #1 – Well-defined boundaries. Systematic efforts were undertaken to facilitate communications across departments and supervisory districts and among all relevant stakeholders in the entire region.

IDP #3 – Collective choice arrangements. Strategic planning processes involved county officials, city officials, regional planning officials, and civic leaders. A structured method was developed to help department heads to participate in a transparent and orderly budgetary process.

IDP #5 – Graduated sanctions and credible rewards. A budgetary process was put in place that required full-cost accounting from each department, and those department directors who failed to do so were replaced. Opportunities were created to help officials from different agencies and jurisdictions to identify cost-effective ways for collaboration in service delivery.

IDP #8 – Networked enterprises. The county initiated county-wide strategic planning processes that involved county officials, officials from the 24 cities in the county, officials from regional planning agencies, and civic leaders.

Whittier Union High School District – Case Summary

(Full text of case available as Appendix 6)

The Whittier Union High School District (WUHSD) straddles three southern California cities including Whittier, Santa Fe Springs, and North Norwalk and serves 23,400 mostly Latino students. Nearly 100 percent of its seniors successfully pass the California High School Exit Exam. The district has a 93 percent graduation rate, and 95 percent of its students attend college or a trade school after graduation. It has maintained strong fiscal health during the Great Recession despite declines in student enrollment and state funding. In the fall of 2008, the

district succeeded in passing “Measure W” that continued facilities upgrades started by a previous measure. The bond associated with “Measure W” earned a high credit quality rating of AA. WUHSD is a case of how community-wide trust plays a crucial role in supporting inclusive processes for financial decision making that support the core educational mission of the district.

A 50-member Budget Review Committee (BRC), which includes representatives from the unions, faculty, and staff, meets quarterly to discuss and review budget cost savings and efficiencies. Having the BRC in place has enhanced the financial literacy of its members and, through their public meetings, the BRC has educated the community. As a result, there is a general feeling among the district’s residents that WUHSD has created a sense of trust, communication, and partnerships and has effectively and efficiently used public funds. It has successfully used budgeting and financial scenario development in making fiscal decisions, leveraging projected enrollment information from its feeder elementary and middle schools.

The school district issues annual reports to the community and posted reports on the district website that includes easy-to-understand charts and narratives about the district’s financial condition and updates about bond measure initiatives. The management team provides a weekly report to keep board members informed of financial and other big issues. Community members are tapped to serve on oversight committees on facilities bond measures.

An unusual feature of the WUHSD’s fiscal decision-making process is its problem-solving partnership with its employee unions. Representatives from the unions are members of the BRC and are well aware of how differently other school districts treat budget and other fiscal information. A union member noted,

“the superintendent...was very candid about these things (where the budget was and would likely go, what the forecasts were and what the budget assumptions were...It was a deliberate effort to educate, explain why and lay everything on the table. I hear that in other school districts, they are not quite as open about all of those things.”

Community engagement and communication is seen as a reciprocal relationship within WUHSD with school district leaders attending community meetings and serving on community boards, and community members similarly involved with the district. School district playing fields are shared with city youth groups, and the district leverages its students’ high school experiences through its partnership with area community colleges. Both the district and its surrounding communities recognize the economic benefits that have resulted from having more businesses and residents wanting to stay in its schools, as well as others wanting to move into the district in order to attend high-quality high schools.

Connections to the Financial Sustainability Framework

LS #1 - Create open communication among all participants. The district management team keeps the community informed about financial conditions of the district through various channels: annual reports to the public, weekly reports to the board, the BRC, oversight committees, and other community forums.

LS #2 – Help stakeholders to build trustworthy reputations. The superintendent took the lead in communicating with and engaging the community, and over-time built community-wide trust in the integrity and quality of the school district.

LS #3 – Convince stakeholders there can be benefits from collective efforts. By developing credible and easy-to-understand financial analyses and making them available to the public, the district was able to convince the community to pass facilities improvement bonds even during economic hard times. Such openness about the district’s financial condition, together with good and constructive relationships with the two employee unions, helped the management team to successfully convince the unions to cooperate in building up substantial reserves to protect the district from the economic downturn during the Great Recession.

LS #5 – Build long-term horizons into fiscal planning. The district management team worked with feeder schools to anticipate the extent of decline in student enrollment. The team also worked with employee unions to build substantial reserves in anticipation of economic downturns.

IDP #1 – Well-defined boundaries. The district has developed inclusive processes, committees, public meetings, and communications channels that reach out to different corners of the community.

IDP #3 – Collective choice arrangements. The BRC, various oversight committees, and frequent interactions between the board and the management team help ensure the integrity and credibility of financial decision making in the district.

IDP #4 – Monitoring and decision making. Community trust in the district is built on open sharing of easy-to-understand financial information and the extensive involvement of community members in review and oversight committees.

IDP #7 – Minimum recognition of rights. The management team worked closely with the boards, employee unions, feeder schools, and community organizations to build up reserves in anticipation of declining state funding and student enrollment.

IDP #8 – Networked enterprises. The district partners with other schools, local governments, businesses, and nonprofits to save money.

Appendix 1 - Value Capture and the Fiscal Sustainability Index

The leadership and institutional design principles for financial sustainability create a culture within jurisdictions to look differently and creatively at how they develop the funding to support the public goods and the sense of common purpose needed to support the community. The financial sustainability framework described in this paper raises the possibility of using new tools for funding the needs of the community that have been overlooked for decades.

When plans, particularly land-use plans are prepared, they not only put forth a framework for economic, community, and environmental development and a specification of the infrastructure to support these goals and activities, they are codified and established as the official policies of the community. Not only do these plans represent a collective agreement on future direction of the community, but they also create significant economic and financial value for certain stakeholders. Presently, the decision-making process of our communities largely, if not totally, ignores the potential for capturing some of this value for local government in the form of increased revenue. Local government planning processes identify the social, economic, and environmental benefits to be had from community development; but local governments do not often develop a business plan to identify the revenues that will be used to pay for these benefits. By relating the vision of the community to a long term time horizon in fiscal planning, new fiscal possibilities are created to sustain the community.

Given the financial stress that governments at all levels are facing and given the responsibility of local governments to provide vital services at an acceptable cost, the need for change in how local governments make finance and development decisions is evident. Changes in public policy on land and development, along with investments in infrastructure and environmental enhancement/mitigation, increase the value of property. These increases can be captured through tax increments collected over time and, up front, by instruments such as developer fees, impact fees, joint development agreements, or special assessments. This approach to financing, when used in the past, has generally been used for targeted investments such as transit stations, transit-oriented-development, and the redevelopment of blighted areas. However, it has not captured the value that is created through the more general community development activities of local government, such as what might be created through comprehensive land-use planning.

The development of large scale GIS databases and new analytical modelling tools, such as the open source “Envision Tomorrow” modelling tool developed by the University of Texas, enables the value of an entire land use plan to be calculated. This tool was first used in the development of the “Compass Blueprint Report,” developed by the Southern California Association of Government as part of their Regional Comprehensive Plan in 2004. The vision for the region was adopted as a planning vision that was accompanied by a return on investment (ROI) analysis.¹⁵ Recently this experience informed the design of legislation that Jerry Brown suggested be enacted to replace the Redevelopment Authority, that he eliminated for state financial reasons, called Enhanced Infrastructure Financing District, SB628 in 2015 and Public Financing Authorities, AB 313 in 2016.

¹⁵ Southern California Association of Government, “Compass Growth Vision Report, June, 2004. <http://compassblueprint.org/Documents/scag-growthvision2004.pdf>

The legal authorities in these statutes enable cities and counties to form districts that develop investment programs for infrastructure, economic, and community investment strategies. The boards of these districts, Public Finance Authorities, are members of the jurisdictions who formed districts and any other public entity, appointed by the city and/or the county that can bring financial resources to implement the investment program. The legislative construct created a new form of institutional design for a governmental entity based on sharing financial resources that can achieve common goals.

These Public Finance Authorities (PFAs) have the authority to capture the tax increment associated with land use policies. The increased value associated with updated land use policies as well as the value associated with the investment activities can be captured with tax increment authority the districts have been granted. These Public Finance Authorities also have the authority to collect fees, undertake assessment financing, and can enter into public-private procurement arrangements. They can receive federal and state grants and loans. Using the tool of availability payments that can alter the pay as you go form of financing can bundle existing revenue streams of governmental entities debt financing structures. Availability payments are streams of future annual budgets pledged by contractual agreements with third parties. These multiple authorities enables the PFA to bundle multiple sources of funds to secure long term financing to cover the lifecycle costs of the investment strategy.

The size of the districts can be community, city, county, regional, or any sub state area in California. They can fund any infrastructure category, except schools, or any environmental mitigation that has a public purpose. Districts can be nested within districts. Over 50 jurisdictions in the state are forming these districts to deal with their fiscal stress.

Not only does this approach deal with the revenue issue of infrastructure; but it also helps ensure that infrastructure truly meet the needs of the region and the country.¹⁶ A Public Finance Authority develops investment strategies that meet specified goals and that require support from a comprehensive land use plan. This approach overcomes the major limitation of the paradigm that has been used in the past to fund infrastructure: the isolated, programmatic focus of separate funding streams and limited ties to land use. By making land use part of the funding streams and creating public entities that can bundle other revenue streams that are used to fund securities that are issued in the capital market, integration is not only possible but becomes an *advantage*. Not only will funding be developed but investments that truly meet the needs of the region/country will be encouraged.

Finally, and maybe most importantly, this approach to financing makes planning the key to obtaining financial resources. Through planning, one can establish that new value would not be created but for an investment of public funds. In order for the Public Finance Authority to be able to propose value capture funding streams that will collateralize securities, bond counsels will look at the judicial validation processes, which will require these funding streams be grounded in an official legally defensible local policy that has been subjected to public scrutiny and be able to sustain legal challenges.

¹⁶ Frederick R. Steiner, George F Thompson and Armando Carbonell, Editors, *Nature and Cities*, Susannah Drake, "WPA2.0: Beauty, Economics, Politics, and the Creation of Twenty-First Century Public Infrastructure," (Lincoln Institute of Land Policy, November, 2016).

Appendix 2 – City of Baltimore Case

Stephanie Rawlings-Blake became the 49th mayor of the City of Baltimore under less than ideal conditions. Formerly the City Council President, she became mayor in the middle of the budget process when Mayor Sheila Dixon resigned her position and, by city statute, the Council President assumed the vacant office. And this was no ordinary budget process. The city was facing a record budget shortfall in fiscal year 2011: \$120 million in the general fund operating budget plus a \$65 million pension shortfall. This deficit totaled about 9 percent of the city's budgeted 2010 expenditures of \$1.35 billion. The challenge was even graver than these numbers suggest because just under half of the budget was already consumed by "fixed" costs like debt service, pension payments, and state-mandated levels of financial support for the Baltimore public schools. This meant the city had to take drastic measures to surmount a shortfall equal to about 17 percent of its discretionary resources.

The resulting "scorched earth" budget, as it was described by many, called for severe cuts to spending. To prevent the worst of the cuts, \$50 million in revenue increases were approved, including: increasing the income tax to state limit; increasing hotel, energy, and telecom taxes; reinstating a defunct beverage container tax; increasing parking taxes and meter rates and fines; and negotiating a payment in lieu of taxes with local non-profit hospitals and universities. Among the expenditure reductions still carried out were: employee furloughs; abolishment of 240 positions, including 100 layoffs; significant reductions to pay-as-you-go contributions to capital projects; cuts to tree maintenance, building maintenance, and bridge repair; reduced financial support for the arts museum and symphony; and ending transport subsidies for school students.

The 2011 budget gap was not an aberration – it was the culmination of many years of urban decline in Baltimore. Baltimore's population had dropped from a peak of about 950,000 people in 1950 to 620,000 in 2010, and, though the housing bubble had provided some temporary fiscal reprieve for the city, Baltimore's delicate post-industrial economy was now suffering the aftershocks of the Great Recession. One year later, these fundamental conditions had not changed and, accordingly, the fiscal year 2012 budget process was not much easier. The city closed a \$60 million budget gap without raising any taxes, but made cuts to popular services such as graffiti removal, animal services, and youth sports. The city also continued employee furloughs, froze pay for all employees, and rotated fire company closures.

Mayor Rawlings-Blake knew that there had to be a better way to manage the city's finances.

Enter the Long-Term Financial Plan

The city's Budget Director, Andrew Kleine, was ready with a solution to the annual cycle of reactive spending cuts in the face of a declining tax base and increasing liabilities: a long-term, strategic financial plan. Using such a process, the city would define the root causes of its financial challenges, take a multi-year look at the city's resource needs and the revenues projected to be available to pay for them, and commit to a long-term strategy to grow the city's economy. A long-term forecast and plan addressed the concerns that the mayor had articulated about the city's finances: that balancing the budget one year at a time was resulting in decisions

that were not in the city's long-term best interest and that many of the steps taken to balance the Fiscal 2010-12 budgets were unsustainable.

Hence, the mayor initiated and led, with the support of the city's Finance department, a comprehensive long-term financial planning process christened "Change to Grow" – based on the mayor's goal of adding 10,000 new families to Baltimore in 10 years. The objective of the plan was to develop a fiscally responsible approach to funding core services, rebalancing employee compensation to make wages more competitive and benefits more comparable to those found in neighboring jurisdictions and peer cities, improving tax competitiveness, investing in infrastructure, and reducing long-term liabilities, thereby allowing Baltimore to grow and thrive.

When municipalities develop a long-term financial plan, they often focus on a three-year or five-year time horizon. However, the mayor and the finance team knew that the city's biggest challenges, like declining population, a stagnating tax base, deteriorating capital infrastructure, and growing liabilities for employee pensions could not be adequately addressed over a five-year window. They thought that a ten-year time horizon was needed to effect meaningful change. Further, a longer-time horizon would allow the city to better assess the potential of strategies that might not make a big difference within a few years, but could have major positive impacts down the road. A ten-year window would also deemphasize the long-term plan as a response to the city's recent severe financial crises and emphasize the plan as a means of long-term transformation of the city's fiscal fortunes.

In order to gain support for the far-reaching strategies that would be needed to put Baltimore's finances on the right track, "Change to Grow" was a highly collaborative endeavor. The City Council, dozens of city department and division managers and professionals, and members of the public were all engaged. At the center of this engagement strategy were three "Guidance Committees," two of which were charged with providing policy direction on two of the city's most important challenges, the cost of employee health benefits and pensions. The third committee provided direction on the ten-year plan as a whole.

However, large, inclusive strategic planning processes in governments often have a tendency towards compromise and, as a result, middling strategies that would be insufficient to overcome challenges of the scale faced by Baltimore. The mayor and Andrew Kleine needed a way to communicate financial information that could help the diverse set of participants in "Change to Grow" understand the magnitude of their task and create a sense of urgency for far-reaching reforms.

Scenario Analysis: A Different Perspective on the Future

An argument sometimes made against long-term financial planning is that long-term forecasts are not reliable, so to develop strategies that depend on the forecast number is a futile exercise. Because the uncertainty inherent in a forecast necessarily increases as the forecast looks further into the future, developing strategies based on a 10-year forecast could elicit strong reservations from some people. Andrew Kleine and the budget team recognized that a single 10-year forecast was bound to be wrong; still, the city's planning and analysis for "Change to Grow" had to be based on some set of financial figures.

Therefore, Andrew and his colleagues chose to develop three different forecast scenarios. Each scenario would vary the values of the key assumptions underpinning the forecast. This way, the finance and budget staff would acknowledge the economic sensitivity of some of the forecast assumptions and the resulting uncertainty inherent in long-term forecasting – yet, at the same time, provide financial figures to ground the plan. Critically, the scenarios were not used as a compromise on the economic assumptions in order to allay criticisms of the plan. Rather, it was a way to make the “Change to Grow” plan even more robust by helping the city to prepare for a future that differed from the forecasters’ best estimates.

The city engaged a consultant to help develop the long-term forecast and scenarios. However, the baseline long-term forecast was developed using the city’s existing forecasting techniques. For example, the city used an algorithm to forecast property taxes, including variables representing a rotating three-year assessment cycle, underlying growth rates, and the impact of accumulated homestead credits. The forecast also used econometric regression to forecast income taxes, used expert judgment from the city’s lobbyist and other relevant city officials to forecast state-shared revenues, and used simple extrapolation and judgment for minor revenues.

To develop three scenarios, the consultant used the output of these methods and combined them with information from third-party entities that specialize in economic research, such as regional academic economists, agencies of the State of Maryland, and agencies of the federal government. The scenarios are described below, and exhibit 1 summarizes some of the key variables under each scenario:

- **Baseline.** The baseline projection assumed a steady, but modestly paced recovery. It was based on the consensus best estimate of the sources of economic information that the city consulted. The baseline scenario did not assume that the city benefited from population growth or positive changes in economic conditions resulting from city policy.
- **Pessimistic.** The pessimistic scenario assumed another near-term recession, with contraction of the gross domestic product (GDP) and delayed recovery. The pessimistic scenario was not a “worst case” scenario. In fact, the assumptions made for this scenario were considerably less severe than what the city had actually experienced during the Great Recession. These assumptions were chosen to ground the scenario in the city’s recent experience of the Great Recession, while still maintaining greater plausibility than if the scenario imagined a repeat of the Great Recession or something worse.
- **Optimistic.** The optimistic scenario assumed a more rapid economic recovery compared to the baseline scenario. This was not an extreme “best case” scenario but rather represented assumptions that were at the upper end of the spectrum of what were considered realistic expectations for the economy by the experts that the city consulted.

Exhibit 1 – Average Annual Change in some Key Assumptions in the 10-Year Forecast Scenarios*

Assumption	Pessimistic	Baseline	Optimistic
Population	- 0.8%	+ 0.1%	+ 0.3%
Housing Prices	+ 1.9%	+ 3.6%	+ 4.0%
Pension Costs**	+ 5.2% / + 6.2%	+ 3.3% / + 3.4%	+ 0.9% / + 1.4%
Baltimore GDP	+ 1.0%	+ 1.5%	+ 2.4%
Health-care cost inflation	+ 7.1%	+ 5.8%	+ 4.6%

*Baltimore had different percentage changes for each year of the forecast. This table summarizes the 10-year average.

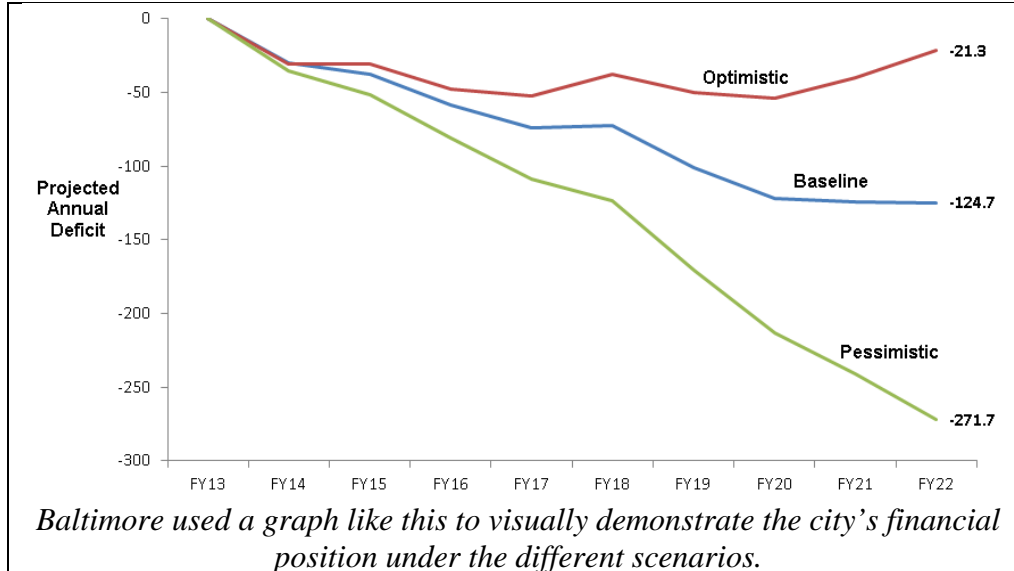
**figures shown for: employee retirement system / fire and police retirement system

The three scenarios allowed Andrew and the budget team to show what different, yet plausible versions of the future might look like and encouraged the participants in “Change to Grow” to ask questions like: If the economy goes well, will our problems solve themselves? If another recession does happen, will the city be able to withstand it?

Also, in the past, the city budget staff had been accused of being overly fiscally conservative in their forecasts during labor negotiations and budgeting. The scenarios changed the conversation because there was not much value in arguing over whether the assumptions underpinning the baseline forecast were too conservative (or otherwise), because anyone who did not like the approach taken in the baseline forecast could avail themselves of the optimistic or pessimistic scenario and observe the impact on the city’s financial position. Having a consultant involved in the development of the long-term forecasts and scenarios also helped bolster credibility and prevent accusations that the forecasts or scenarios were not objective.

Armed with the scenarios, Andrew, the budget and finance team, and the consultants set out to inform the participants in “Change to Grow” and the city’s other stakeholders of the situation Baltimore was in, using a graphic like exhibit 2. The graphic showed that the baseline scenario was dire, that even the optimistic scenario was no panacea for the city’s problems, and that the pessimistic scenario was disastrous. Something clearly needed to be done.

Exhibit 2 – Baltimore’s Scenario Analysis 10-Year Forecasts



The Reaction: A Sense of Urgency

The long-term forecasts and scenario analysis was a sobering experience for many of those who saw them. Most people were already aware of the problems underlying the city’s financial challenges, like pension costs, health-care costs, and a declining tax base – but this was the first time they saw how these problems played out over a multiple-year period and under different possible economic conditions. For many people who were not closely involved in the city’s financial analysis, this was a moment of insight when they became resolved that they would need to make some tough choices to change the city’s trajectory.

The long-term forecast and scenarios gained a lot more attention when they were released to the public: the lead sentence of one news story read: “The Baltimore city government is on a path to financial ruin and must enact major reforms to stave off bankruptcy, according to [its] 10-year forecast.”¹⁷ The media coverage worked to the advantage of the mayor and “Change to Grow.” It captured the attention of many people in city government, especially those who weren’t already involved in the long-term financial planning process, and helped galvanize the city to take action. It also provided the mayor with a unique opportunity to articulate her vision to a public that now was much more interested in the city’s financial condition, and to prepare people for the strategies that “Change to Grow” would recommend:

“When you have budget after budget and you know that there are systemic problems, I felt an obligation to do more than what we have done in the past. The forecast shows that the city needs to address its financial challenges before it’s too late, and somebody is coming in and making these choices for us.”¹⁸

¹⁷ “City of Baltimore is on a path to financial ruin, report says.” www.foxnews.com. February 6, 2013.

¹⁸ From a statement made by the Mayor to the Associated Press. The last part of the statement makes reference to the fact that Baltimore is not among those older industrial cities that have experienced default or receivership.

The sense of urgency fostered by the long-term forecasts and scenario analysis led the participants in “Change to Grow” to propose bolder actions to secure the city’s financial future. For example, the cost of employee and retiree health benefits was a serious concern for the city because of both its overall size and its high rate of growth. The city’s previous efforts to contain these costs mostly involved making marginal changes to cost-sharing ratios with plan participants, and most of these changes affected only retirees, such as dividing potential pharmaceutical purchases into pricing tiers in order to steer participants towards generic and preferred brands. After the scenario analysis, the participants in “Change to Grow” were willing to consider changes that affected active employees and that required negotiations with employee unions due to the scale of the change proposed. For instance, a 20 percent co-pay for drugs was proposed for *all* plan participants – this was a doubling of the co-pay for retirees and an entirely new cost for active employees.

The sense of urgency and support for bolder strategies was not a consensus opinion among all stakeholders. However, there was at least enough support to move forward. The long-term forecasts and scenarios provided ready talking points for the mayor and other elected officials who supported “Change to Grow” as they sought to make the case for change to the public. The scenarios also helped deflect attacks against the financial strategies suggested by “Change to Grow,” such as the changes to employee benefits, because the scenarios highlighted that a robust plan was needed under multiple possible futures.

The Results

In February 2013 the mayor unveiled “Change to Grow” to the public. As the chief executive, the mayor’s substantive command of the financial issues facing the city and her ability to provide clear and decisive feedback to the planners and forecasters was essential to the success of the planning process. The scenario analysis helped provide the mayor with insights into the financial future of the city that allowed her to successfully lead the financial planning process. “Change to Grow” marked the first time that the City of Baltimore had discussed financial strategy in this depth, and the mayor received a lot of credit for her fiscal stewardship of the city as a result – as illustrated by this excerpt from a *Baltimore Sun* editorial:

*“[The Mayor’s] proposals reflect a clear-eyed view of Baltimore’s assets and liabilities and a remarkable willingness to take on politically unpopular causes ... The answer is not higher tax rates, it’s cutting costs and expanding the tax base, and that is what Ms. Rawlings-Blake’s reforms are designed to do ... Ms. Rawlings-Blake is taking a major political risk. But if she succeeds, she will accomplish what none of her immediate predecessors have managed: Change a vicious cycle of exodus and disinvestment into a virtuous one of growth and redevelopment.”*¹⁹

Critically, Baltimore’s success with financial planning did not end with publishing the document. The sense of urgency created by the scenario analysis led to the implementation of the plan. Over the years since the plan has been adopted, the city has completed a number of strategies proposed by “Change to Grow,” some of which are shown in exhibit 3.

¹⁹ “The Mayor Goes Out on a Limb.” *The Baltimore Sun*. February 11, 2013.

Exhibit 3 – Some of the Strategies Implemented Since the Adoption of Change to Grow

Structural Budget Balance	Tax Competitiveness
<ul style="list-style-type: none"> • Change fire shift schedule to reduce staffing requirements while maintaining coverage. • Higher cost-sharing for employee benefits. 	<ul style="list-style-type: none"> • Reduce the property tax rate by 6 percent for homeowners, on track for a 10 percent reduction by 2020. • Diversify revenue base with new revenue sources.
Infrastructure Investment	Long-Term Liabilities
<ul style="list-style-type: none"> • More than double pay-as-you-go capital investment. • Invest in whole block demolition and relocation, street resurfacing, recreation centers, IT modernization, and more. 	<ul style="list-style-type: none"> • Increase civilian employee contributions to the pension plan and replace defined benefit plan with hybrid defined contribution plan. • Change leave policies to reduce paid-time-off accrual liabilities.

As a result of these and other initiatives from “Change to Grow” that have been implemented as of the fiscal year 2016 budget, the city projects it will save \$255 million over a 10-year period. This will allow the city to reduce the cumulative size of all of the annual budget deficits shown in the baseline scenario (exhibit 2) by 53 percent. These savings are net of the costs the city has incurred to provide tax relief, invest more in capital infrastructure, make city workers’ pay more competitive, and other strategies designed to improve the quality of service the city provides. The city’s efforts were recognized by a bond upgrade in 2014 from Standard & Poor’s from AA- to AA, who cited the city’s long-term financial plan as one of the factors underlying Baltimore’s “very strong management conditions.”²⁰ The city anticipates implementing other strategies from “Change to Grow” in the future in order to close the financial deficit the rest of the way.

However, large urban areas, especially those that have experienced de-industrialization, have challenges besides financial ones, as the civil disturbances of April 2015 in Baltimore starkly illustrated. Therefore, there is still work ahead to fully realize the city’s goal of changing Baltimore into a growing, thriving community. The city’s long-term financial plan, underpinned by long-term forecasting and scenario analysis, provides a cornerstone for what Baltimore is trying to build.²¹

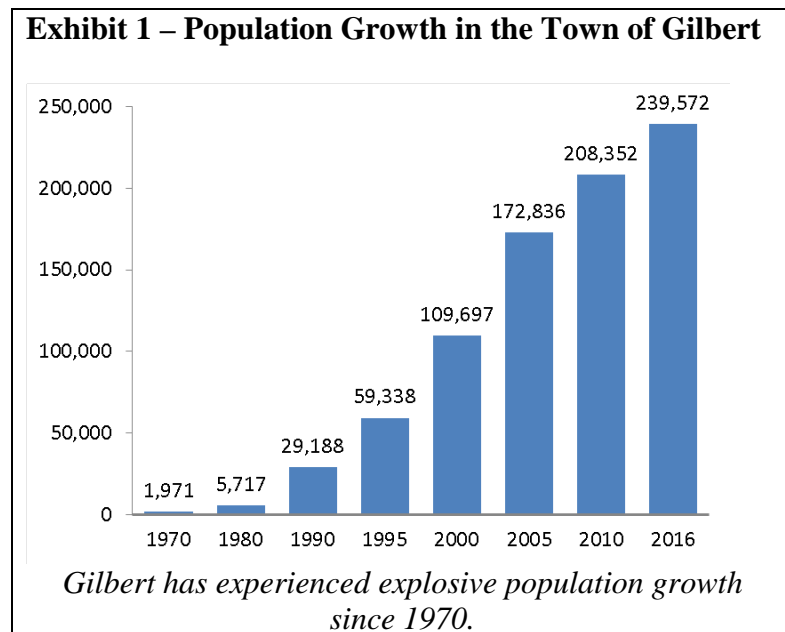
²⁰ “Summary: Baltimore Mayor & City Council, Maryland; Appropriations; General Obligation; Joint Criteria” Standard & Poor’s. July 22, 2014.

²¹ In an editorial that was critical of the Mayor’s handling of the civil unrest, the *Baltimore Sun* did acknowledge the work the Mayor had done to put the City on firmer financial footing. See: “Rawlings-Blake gets defensive.” *Baltimore Sun*. May 13, 2015.

Appendix 3 – Town of Gilbert Case

Words like “crisis” and “crumbling” have been widely used in the media to describe the state of local infrastructure in the United States – and with good reason: one out of every nine bridges in the United States is considered deficient and almost one-third of the major roads in the U.S. are in poor condition.²² The worst examples, like bridge collapses and sink holes, make national news and even claim lives. In other instances, infrastructure failures create large, unplanned expenditures, disrupt the local economy, and reduce citizens’ trust in government.

For many people, the issue of deteriorating infrastructure might evoke images of aging, post-industrial cities. However, preserving the investment the community has made in its capital assets is a concern for all local governments. In the Town of Gilbert, Arizona, the scenes of catastrophic infrastructure failure replaying in many American cities were not lost on Gilbert’s leadership. Though Gilbert was not an aging community, it had its own challenge that stemmed from its history of explosive growth. From 1980 to 2010, its population grew by just over **3,500 percent**, as shown in exhibit 1. Since 2010, Gilbert has continued to grow rapidly – it has, for instance, routinely issued more building permits each year than the City of Phoenix, a city of over 1.5 million people. Gilbert expects to grow one-third larger than its current size to reach build out, so growth will continue to be a feature of life in Gilbert for years to come.



Because Gilbert experienced so much growth in a short time, a lot of infrastructure was built in a short time. Just over a quarter of Gilbert’s entire infrastructure was built between 1990 and 1999 and just over half was built between 2000 and 2009. So, whereas a municipality that has experienced growth at a slower pace would have a smaller portion of its infrastructure reaching the stage of its lifecycle where significant maintenance and replacement outlays are required, Gilbert faced the prospect of a glut of repair and replacement bills coming due at once, all

²² Steve Kroft. “Falling apart: America’s neglected infrastructure.” CBS News. 11/23/14.

without the new revenues that accompanied the initial growth, such as impact fees, to pay for it. Further complicating the situation was that Gilbert was still growing, so the town also had to determine how new growth would pay for itself and how existing infrastructure could support itself, without one subsidizing the other.

Council and management knew that this was a challenge that could only be met through careful planning and forecasting. To that end, in 2011, “Long- and Short-Term Balanced Financial Plans” and “Proactively Address Infrastructure Needs” were included as two of only six Strategic Initiatives adopted by the Council. While work on these initiatives and the development of a Long-Range Infrastructure Plan (LRIP) was underway, in January 2013 an 8-inch potable water main broke in Gilbert’s Heritage District, an area of up-scale restaurants, entertainment, and shopping. A broken 8-inch water main moves enough water to fill a typical backyard in-ground swimming pool in less than 15 minutes. Gilbert Road, the main thoroughfare of the Heritage District, was closed and remained closed for 24 hours. Crews worked around the clock to repair the break and secure the site mostly in very poor weather conditions that included a lengthy and heavy rain storm. The water main break was near train tracks, so representatives from Union Pacific Railroad participated to ensure the integrity of the tracks was maintained, as well as the safety of the public, and that all scheduled rail traffic continued during the town’s response actions.

Exhibit 2 – Scenes from the Water Main Break in the Heritage District



The Heritage District water main break accentuated the urgency of long-term planning and infrastructure maintenance, and Gilbert’s vision to be “the best-in-class, all lines of service” meant that well-maintained infrastructure was an imperative.

A cross-departmental team composed of representatives from the Manager’s Office, Office of Management and Budget, Information Technology, Parks and Recreation, and Public Works led the analysis and development of a strategy. In addition to the other elements of a long-term plan, revenue forecasting became an important part of the team’s work for two reasons. First, much of Gilbert’s infrastructure was built using revenues from impact fees – one-time charges paid by new development to cover the costs to the town of creating the capacity for new police, fire protection, parks and recreation, traffic signals, and utility systems needed to serve the new residents and businesses. As Gilbert reaches build out, between 2030 and 2040, there will be far less of this revenue available. However, at the same time, Gilbert’s sales tax revenues have

increased and are expected to increase into the future due to the economic activity created by new residents and businesses. Consequently, the forecasts and financial strategy would need to be mindful of this changing composition of Gilbert's revenue portfolio and its implications for infrastructure financing.

Second, the citizens of Gilbert have consistently demonstrated a desire to keep taxes low, while balancing the provision of high-quality services. As a result of the state tax structure, Gilbert and many other communities in Arizona are heavily reliant on local sales tax revenues. The volume of transactions subject to sales tax in Gilbert has been sufficient enough to maintain a low rate of 1.5 percent, and the town has not yet demonstrated a need for a primary property tax. In fact, Gilbert is one of the few larger cities in the United States without a general purpose property tax. The organization's allocation of staff is also conservative, as demonstrated by the number of full-time equivalent employees (FTE) per 1,000 residents. In this and other metrics, like the average annual tax and fee burden per household, Gilbert consistently offers the lowest cost of any of the more sizeable municipalities in the Phoenix metropolitan region.²³ Therefore, accurate and effective forecasts are paramount in order to make the most of current and future revenues available, before proposing rate increases or new funding mechanisms.

Gilbert's Planning Process

The first step in Gilbert's planning process was for the public works and parks and recreation departments to develop an asset inventory, including an assessment of asset condition, in order to determine which assets were most in need of repair and when. The asset inventory helped the budget staff produce a useful revenue forecast in three important ways.

First and foremost, the inventory helped Gilbert fully understand the long-term maintenance costs it would need to cover. As a result, Gilbert's revenue forecasts were far more meaningful when they could be compared to the expenditures necessary to maintain the assets, thereby revealing the precise resource gaps that the town would need to address.

Second, the detailed asset inventory provided an opportunity to start a conversation about the *cost* of infrastructure compared to the *value* of infrastructure. "Cost" only refers to the expenditures made for infrastructure, while "value" refers to both the cost of the infrastructure and the benefit provided. For example, when considering just cost, one would favor an infrastructure investment with a lower total cost over higher total cost, even if the low-cost asset also had a disproportionately shorter useful life. When considering value, one would favor the asset that provided the most service to the public for the expenditure required to acquire and maintain the asset. When the Council and management could talk about value, rather than just cost, they could have an informed conversation about how expenses and revenues together can maximize the useful life of Gilbert's infrastructure. If value were not taken into account, the conversation would be focused on how to minimize the cost of infrastructure.

²³ The sources for this information are the budget offices of the Town of Gilbert and the City of Tempe. Both offices develop comparisons of the eight larger cities in the region: Gilbert, Chandler, Scottsdale, Tempe, Phoenix, Glendale, Peoria, and Mesa.

Finally, the details about infrastructure that were provided by the asset inventory helped the budget staff learn about how operating departments approach infrastructure, and gave budget staff a better understanding of how infrastructure ages and the conditions that contribute to longer or shorter useful lives for assets. This new knowledge gave the budgeting team additional credibility when talking about infrastructure planning. For example, the team learned why different assets in the water treatment facility needed to be replaced on a given schedule, and why failing to replace one asset could have deleterious effects on other assets involved in producing potable water. This knowledge helped the budget staff and public works develop regular schedules for funding maintenance and replacement that would keep the assets in good working order while also preventing big spikes in repair costs in some years.

With the asset inventory in hand, the second step in the planning process was to hold a conversation about the level of service Gilbert would find acceptable for its assets. For example, a “variable frequency drive” starts, stops, and regulates the speed of a water pump, which results in more efficient use of energy and a longer asset life for the pump. Variable frequency drives at Gilbert’s North Water Treatment Plant have a 15-year industry standard useful life. After examining the condition of the drives and evaluating how the assets were performing in Gilbert, it was discovered that the variable frequency drives typically last for 17 to 20 years. However, the rate of failure was found to be much higher after 15 years. After a discussion, Gilbert placed the drives on a 15-year replacement cycle due to the risk of failure and the criticality of the drives to plant operations. The level of service for other asset classes was determined in a similar fashion, taking into account factors like historical levels-of-service, anticipated levels-of-service based on growth projections, population, various master plan(s), etc.

The decisions about the desired level of service for its assets prepared Gilbert for the third step in the planning process: determine the revenues available to fund asset upkeep at the desired level of service. To make this determination, Gilbert’s departments compared the maintenance requirements to their current labor capacity and funding. If existing resources were not sufficient, then the departments would request additional resources, and the Budget Office would verify that revenues could support the request in the next year, and for five years to ten years into the future, depending on the fund. For example, the revenues for funding asset maintenance in the Streets Fund and General Funds were largely composed of state-shared revenues. Since state shared revenues can be volatile, a five-year outlook made sense. Enterprise funds have revenues that are under the direct control of the town, so a ten-year time horizon worked well.

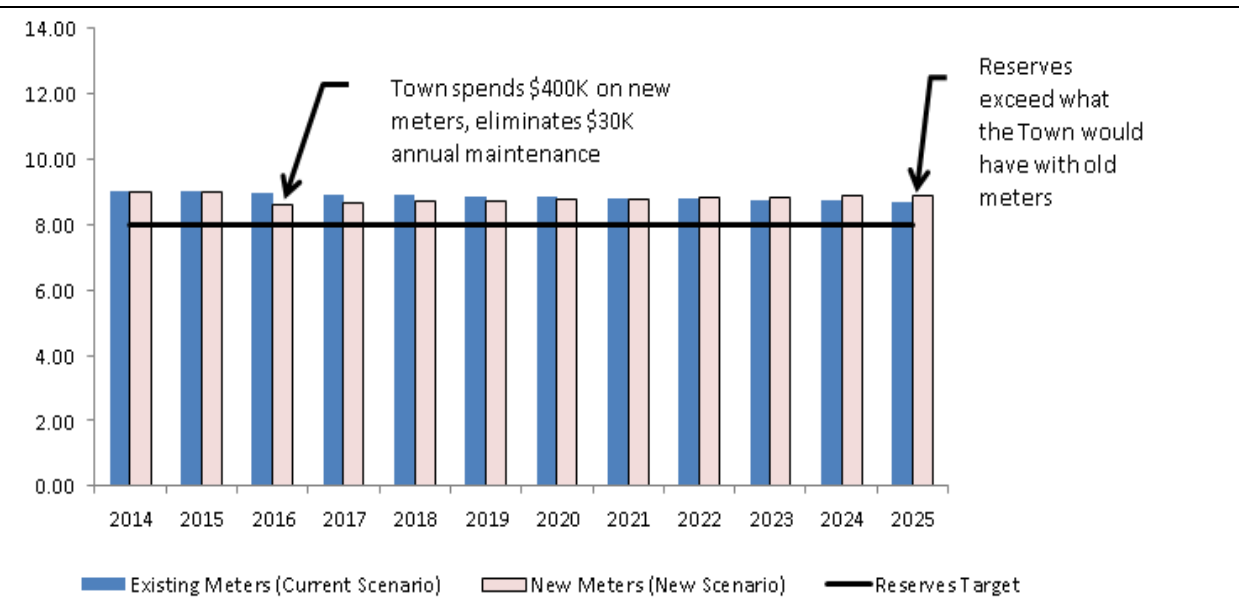
Enterprise funds account for many of Gilbert’s assets and provide a good illustration of how Gilbert used revenue forecasting to support its decisions about asset maintenance planning. In the enterprise funds, the paramount concern was the ability of user fee revenues to fund operations, meet debt obligations, and support Gilbert’s minimum desired reserve levels. Gilbert’s forecast model used algorithms that included variables to represent the total number of utility accounts the town would service, potential changes in water rates, expected changes in usage patterns, and other factors that impact water sales. The model also disaggregated revenues to a level of detail necessary to distinguish between revenues from existing rate payers and revenues from anticipated new accounts. It was important to know not just what system development charges were forecasted to be as a result of new customers coming on to the Gilbert’s utility system, but also to know how water usage fees would be affected by new growth. This is because as

Gilbert’s rate of growth declines, the Office of Management and Budget must be able to distinguish between (1) revenue growth caused by the addition of new accounts and (2) the amount of revenue growth that occurs within the existing customer base from rate adjustments or other factors. This way, Gilbert can develop more realistic projections of revenue, as the rate of growth in new accounts begins to slow down. Exhibit 3 shows how the Town’s forecast model projected revenue from just water sales, as an example.

Exhibit 3 – Gilbert’s Algorithm for Long-Term Water Rate Revenue Forecasts	
	Base rate revenue from existing customers
+	Additional rate revenue from growth
=	Subtotal of rate revenue
X	Proposed water rate percentage increase
=	Annual rate revenue, including increase
-	Adjustment for elasticity of demand*
=	Total revenue from water usage
* <i>Reduction in demand caused by increasing rates.</i>	

Gilbert also used “what-if” analyses to help analyze resource requests. For example, the wastewater division requested approximately \$400,000 to migrate to magnetic meters that would no longer require costly annual re-calibration and that would have a longer useful life. The enterprise fund rate model was used to compare the one-time expense of purchasing and installing the new meters to existing revenues. Exhibit 4 shows a representation of the type of analysis the staff performed. The graph shows the fund’s reserve levels, in dollars, if Gilbert were to continue with its existing meters compared to replacing the meters with the new model. Both scenarios are then compared to Gilbert’s desired minimum reserve level, and revenue forecasts were a critical ingredient to determining what the future reserve levels would be under each scenario. The graph shows that investing in the new meters would cause a short-term drop in reserves as Gilbert uses accumulated reserves to purchase the meters, but the reserves slowly build back up, due to the reduced operating and maintenance costs, and exceed what the reserves would be if the town were to remain with the existing meters. Staff found that this method of analysis was particularly effective when it was conducted, live, with members of the Council, in one-on-one meetings. This allowed interested Council members to ask about changes to key variables and observe the results immediately. For example, what might the graph look like if the purchase of the meters was deferred for two years, or if the purchase was phased in over multiple years? The answers to these questions helped the Council gain a better understanding of the sensitivity of different planning and funding decisions, which then better prepared them to explain the town’s course of action to a public that expects the highest value at the lowest possible cost.

Exhibit 4 – Example of Analysis of Impact on Reserves of Different Asset Management Strategies²⁴



Gilbert’s staff used this type of analysis to illustrate the value of replacing dated meter infrastructure with a newer, more cost-effective model.

The revenue forecasts allowed Gilbert to move to the next step in the planning process, which was to weigh proposals for spending on infrastructure against other potential uses via annual budget deliberations. Gilbert used a zero-base budgeting process, where every three years departments were required to re-justify all of the expenditures that comprised the baseline level of services that they provided to the public. In other words, the budget had to be rebuilt from a base of zero, as a way to critically re-examine what Gilbert was spending money on and to avoid reauthorizing obsolete expenditures. The departments also had to provide detailed spending plans for any programs or services they proposed that went above and beyond baseline spending. Gilbert’s budget analysts and executive management team then conducted a detailed review of all of the requests. Under this system of budgeting, the Council could weigh new maintenance programs against other possible use of funds, and existing maintenance programs could be re-examined to see if the level of service was still what was necessary. In many cases, the Council decided to approve the new spending for infrastructure maintenance because the presentation of the asset maintenance needs, forecasts of revenues, and Gilbert’s budgeting method created an environment that supported decision-making with foresight. In the words of then-Councilperson Ben Cooper, the Council came to the realization that “An investment in infrastructure is an investment in a community’s future. Cities and towns that make the effort to understand the assets they own are much smarter about how they maintain and replace them.”

²⁴ The example graphic does not use actual figures from Gilbert’s budget. Approximations are used to more clearly illustrate what Gilbert found.

The Impact of Planning

The most fundamental impact of Gilbert's planning process was to establish a better link between asset maintenance and replacement needs and its forecasted revenues, so that the town could better compare its infrastructure needs to the available funding. For example, each year, Gilbert had spent between \$2 million and \$4 million on preventative street maintenance in neighborhoods around the community. After the inventory and condition-based assessment, it was determined that in order to maintain the assets at the acceptable level of service, the annual funding required would rise to approximately \$7 million. Gilbert's financial projection models were updated to see if the supporting revenue stream (Highway User Revenue Fund and Vehicle License Tax) would be able to accommodate the significant increase in maintenance. This was essential to determining the long-term sustainability of the fund source as well as the infrastructure assets.

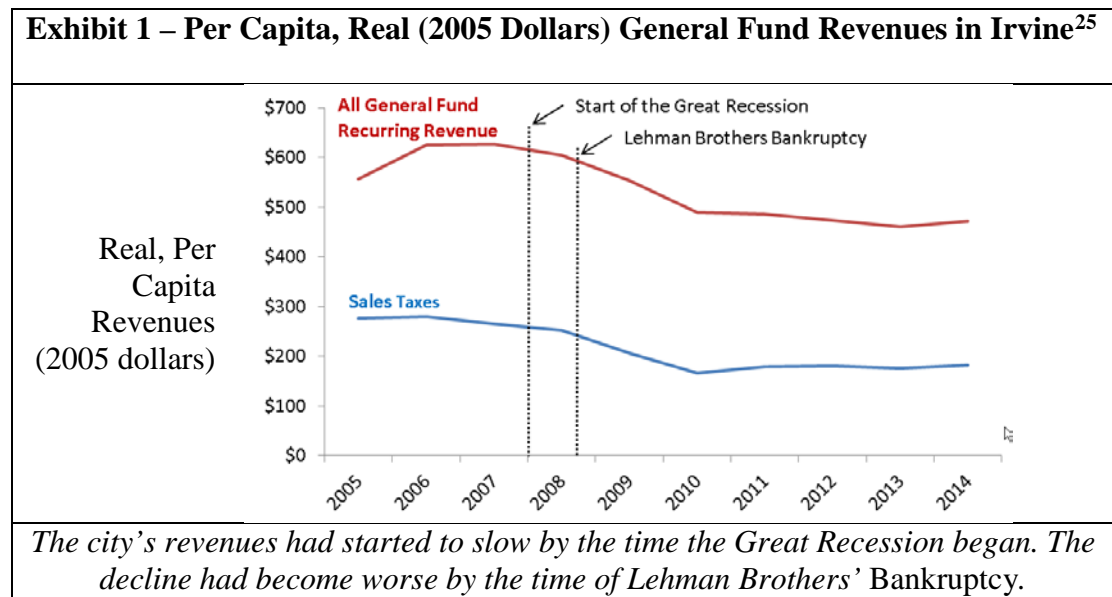
The information provided by forecasts and planning led to better decisions about how to use resources. Many local governments operate infrastructure until failure and then replace it. This is a more costly and less predictable strategy than effective planning of maintenance, rehabilitation, repair, and scheduled replacement. The challenge is that effective planning requires making investments in maintenance and repair before replacement becomes necessary – and making those investments consistently over time. Gilbert's forecasting and planning helped the Office of Management and Budget align the resources necessary for a timely and consistent infrastructure maintenance strategy. For instance, a policy was established to direct non-recurring revenues, like spikes in sales tax revenues, towards funding non-recurring expenditures, like replacing assets. According to then-Councilperson Ben Cooper, the realization that the town needed to make sustained and smart investments in its infrastructure in order for Gilbert to continue to be a great place to live and do business was one of the most important outcomes of the forecasts and plans.

The planning process also helped create teamwork between the departments to support this vision for sustained investment infrastructure. For example, the forecast information shared by budget staff helped departments better understand all of the variables involved in funding a long-range infrastructure plan. This was part of creating a more open dialogue and greater trust between budget and public works staff about infrastructure needs. The Public Works Director felt that working closely with budget staff helped him get a better understanding of where the revenues to pay for infrastructure come from, how much revenue Gilbert expects to have in the future to pay for infrastructure, and, therefore, how Gilbert might be able to pay for all of the infrastructure work that needs to be done. The Public Works Director found that having budget staff engaged from the beginning of the infrastructure planning process resulted in a plan that balanced the infrastructure needs of the community with the fiscal realities faced by the Gilbert municipal government.

Appendix 4 – City of Irvine Case

Ken Brown, then the Strategic Business Plan Administrator for the City of Irvine, California, had, like other municipal budget officers, been following the economic news. In 2007, he was concerned by the frothy housing market and the inversion of the yield curve, where long-term interest rates dipped below short-term rates. This is a phenomenon that often precedes an economic recession. Later, he knew that the economy had slowed, but it only became fully apparent to him that this was no ordinary recession on September 15, 2008 – the day that the Wall Street Journal landed on his doorstep with news of Lehman Brothers declaring bankruptcy.

The City of Irvine had experienced some slowdown in revenue receipts prior to the newspaper heralding what would come to be known as the Great Recession. However, in the fall of 2008 it was not just Lehman Brothers’ catastrophe that portended greater difficulties ahead. We see in exhibit 1 that the city’s real (inflation-adjusted) per capita general fund recurring revenue, including sales taxes (the city’s most important single revenue source), was already trending downward at the official start of the Great Recession at the end of 2007, and that by the fall of 2008, this trend had picked up momentum.



Lehman Brothers and other seemingly cataclysmic events, like the federal government bailing out insurance giant AIG, also in September, and the Dow Jones Industrial Average suffering its worst weekly loss in history in the first week of October, spurred the city into action. Irvine’s City Manager, Sean Joyce, called together a team to develop a plan to guide the city through the recession and to prepare for all possible contingencies. This team, reporting to him, included Assistant City Manager Wally Kreutzen, Director of Administrative Services Rick Paikoff, Manager of Budget and Business Planning Dave Tungate, and Strategic Business Plan Administrator Ken Brown.

²⁵The graph shows general fund recurring revenues, which removes non-recurring revenues from the general fund total. The city had received some sizeable one-time revenues during the period shown, but which were not available to fund regular general fund operations because they were designated for other purposes.

Irvine's team had the advantage of the city's history of strategic financial planning: the city had begun long-term financial planning as a response to the 1994 recession, which had hit Irvine and the rest of Orange County hard, and the City Council and the staff considered these plans to be successful. Further, modern Irvine itself has its genesis in a 1959 master plan for a city of 50,000 surrounding the, then new, University of California at Irvine. The plan called for a full spectrum of residential, commercial, industrial, and recreational land uses and came to fruition in the 1960s and 1970s. This history imparted an identity to the City Council and staff: an organization and people who develop long-term, strategic plans and follow them to make the community a better place.

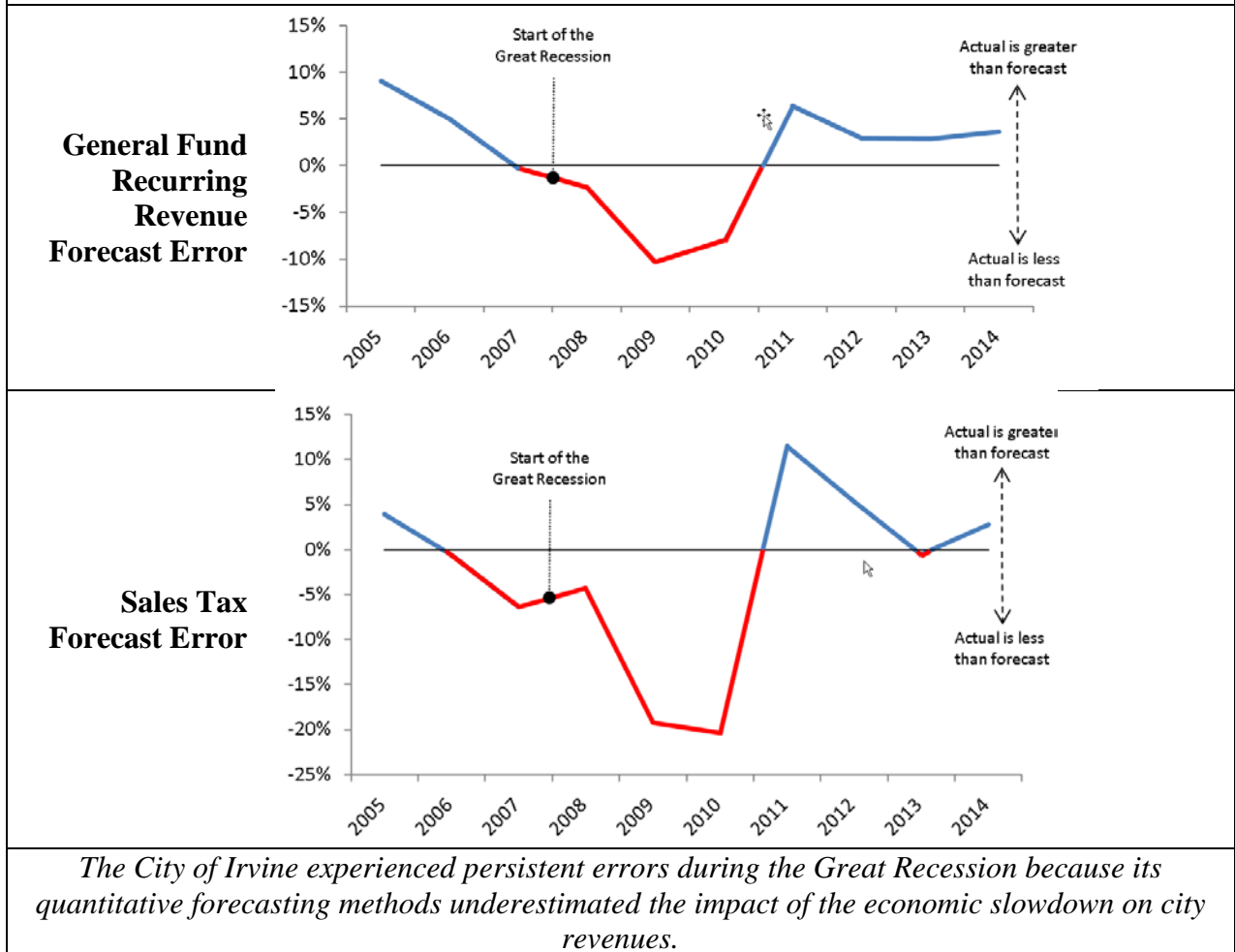
Long-Term Planning Rewarded

Irvine has long emphasized the importance of education and public safety in its plans. The city has consistently provided direct financial support to its public schools, emphasized excellence in police hiring, leadership and community relations, worked to maintain open sight-lines in the layout of new public, business, and residential spaces, promoted youth programs and sought to prevent graffiti and other visible signs of deterioration. As a result, the City of Irvine, now over 240,000 residents, has recorded the lowest violent crime rate of any city with over 100,000 residents each year since 2004.

A Challenge with the Forecast

A forecast is the lynchpin of a long-term, strategic financial plan. However, Irvine's forecasting model underestimated the magnitude of the decline in revenues at the start of the recession. The problem had its roots in Irvine's history as a high-growth city. In the 1970s, the city experienced about 20 percent annual growth, and during the 1980s, population increased at about 8 percent per year. While growth had come down from these stratospheric levels by the 1990s, it was still averaging about 4 percent average per year, which translated into about a 70 percent increase in total population between 1990 and 2007 – an additional 81,000 people. As a result, the city had developed a forecast model that emphasized the role of new development in the city's revenue income. However, with the bursting of the housing market bubble, the impact of the economy on the city's existing tax base became more important to future revenues than development growth, yet the city's quantitative, linear regression forecast model was heavily dependent on growth-driven variables.

Exhibit 2 – Forecast Errors in General Fund Recurring Revenue and Sales Taxes in Irvine



What’s more, though the city staff had come to realize this was no ordinary recession, they were still too optimistic regarding how well the city’s revenues would perform. Staff thinking about revenues was influenced not only by their own assumptions about growth variables, but also by other economic forecasts from third-party institutions for variables such as home prices, taxable sales, Gross Domestic Product, and the price of oil, each of which later proved over-optimistic. The fact that the city’s largest revenue, sales tax, is strongly pro-cyclical exacerbated the problem; forecasts overestimated sales tax revenues by as much as 20 percent and overall revenues by as much as 8 percent, and then predicted a quicker and more rapid recovery than actually occurred. Exhibit 2 shows a history of revenue forecasts versus actuals for the years during and around the Great Recession.

Further complicating the situation was that after a shopper purchased a vehicle at Irvine Auto Center or had lunch at a local restaurant, it would take as long as six months for the taxes from the purchase to hit the city’s books. This meant that the initial forecasts were based on sales tax data that did not yet include the up-to-date impact of the recession, so there was no direct and timely quantitative feedback to the city on how sales tax revenues were behaving.

Finally, as one might expect during a major slowdown in revenues and growth, there was some disquiet among elected officials and staff. Fortunately, the city's finance team had built up a reservoir of good will with previous long-term financial plans, but it was still important for the city staff to find a way to help the city cope with its current predicament, maintain credibility of the planning process, and, ultimately, navigate through the Great Recession.

Bridging the Gap

A combination of expenditure reductions and reserves was to serve the city as a bridge across the budget gap created by the Great Recession. This "Three-Year Bridge Plan" had four central elements:

1. No tax increases
2. No layoffs
3. No pay raises
4. No material reductions to core services

Elements one, three, and four gave elected officials and the public confidence that that the city's budget wouldn't be balanced at the expense of the public's interest. The second element gave reassurance to staff that they would be able to keep their job while the city contended with the financial challenge. Further, the Plan only committed to use reserves as a bridge for a three-year period, after which the city's budget would have to balance without reserves and, if possible, start replenishing the reserves that had been used. It was thought that this should provide the city enough time for the city to restructure its services, but not such a long period that the city's reserves would be depleted to unacceptably low levels. Finally, though the plan did provide precise numerical targets for expenditure reduction and use of reserves over three years, the city staff were sure to emphasize that the Plan was a guideline and that the city would need to be willing to adapt to changing circumstances.

The City Manager, Sean Joyce, and the city's finance team were able to secure acceptance of the Bridge Plan because of the balanced commitments made by the plan, and because the City Council and staff understood that the proverbial "rainy day" had arrived, so it was time to use the reserves it had saved up over the years. However, once the idea had been accepted, the staff had to make sure the city was able to arrive at a structurally balanced budget within three years. Good forecasting would be an important part of this, and staff knew that their existing forecast models were not as reliable as they had once been.

Ken Brown therefore worked under the leadership of Sean Joyce to refine the city's five-year forecasting model. The forecasting method would transition away from a regression that emphasized growth and development variables to a method that placed greater emphasis on forecaster judgment and algorithms that mathematically modeled the causal factors behind the city's revenue income. Good shorter-term forecasts would be needed for balancing the budget each year and a long-term forecast would be important for meeting the goals of the Three-Year Bridge Plan and achieving financial sustainability beyond. Ken's strategy was to emphasize the state of the economy more heavily in the annual budget and shorter-term forecasts for periods of

approximately one to five years, but to assume that new development would still be the most dominant force behind the city's long-term revenue performance.

Long-term forecasts, six years ahead and beyond, were to be used to make sure that the city's financial trajectory was sustainable. Anchoring these forecasts were a series of algorithms designed to capture key features of the tax base. For example, historical sales tax data for the previous five or more years was converted to revenue per square foot of retail space for each major type of retail establishment in Irvine (e.g., commercial serving local markets, commercial serving regional markets, auto dealerships). The five-plus years of data included both recessionary and economically robust years, and each year was adjusted for inflation. This reflected an assumption that, over the long-term, the city should expect a "neutral" impact from the economy as the recessionary periods and growth periods would balance each other. Sales tax revenue for the city was then projected in the future, using the average, inflation-adjusted amount of revenue received per square foot of retail development, accounting for both the current amount of retail in Irvine and new retail space expected to be developed in the future. The timing of expected development was provided by the city's Community Development department from a survey of local developers.

To develop the annual budget forecast, the city contracted with a consultant to provide a baseline projection using more detailed algorithms than those used for the long-term forecast. To illustrate, the forecast for sales tax took into account the timing of the state's payment of sales taxes to the city (the state collected the tax on behalf of the city), changes in the number of retailers in different categories of sales tax producers, and other specific changes to the city's tax base that might impact revenues that year. With this baseline forecast in hand, the city examined projections of local taxable sales growth from forecast institutions such as Chapman University, University of California at Los Angeles, and California State University at Fullerton State. If these institutions projected growth significantly in excess of that presumed by the baseline forecast, the forecast might be adjusted. A final ingredient was the city staff's own knowledge about local events that might impact the year's sales tax revenues. For example, a significant renovation at a regional shopping center could disrupt sales in the short-term, but have positive long-term impacts.

This annual budget forecast was then combined with the long-term forecast to arrive at a forecast for revenues two to five years in the future. To do this, the city assumed that revenues from the annual forecast would trend toward the revenue amount projected six years in the future, in a continuous fashion (the city did not try to simulate economic cycles). To illustrate using highly simplified numbers, if the annual budget forecast was \$100 million and the six-year-ahead forecast was \$120 million, the two-year-ahead forecast would be approximately \$104 million, three-years-ahead \$108 million, and so on, though the exact estimates would be adjusted for specific events and conditions in the tax base that city staff knew would affect revenues.

The result was a forecast method that offered a number of advantages over the old one. Foremost, was improved accuracy. As exhibit 2 shows, from fiscal years 2012 through 2014, the new forecasting model produced an average error of just over 3 percent. Importantly, the errors were errors of underestimation, which helped the city remain on stable footing. In addition to the new forecasting method proving more accurate at the time, the city could be confident that it

would be more reliable over time. This is because there were more perspectives brought to bear, so any bias inherent in any one source of information was more likely to be balanced out by another source. Also, the old regression equation required the city to obtain forecasts of the independent variables from third-party institutions. Forecasting items like GDP growth and oil prices is notoriously difficult, bringing a potentially large source of error into the city's forecasts. As a point of comparison, a major variable impacting sales tax projections under the new method was the volume of retail space in Irvine, measured in square feet – this was a much more easily predicted quantity. Finally, the new method was easier to communicate to other people. The algorithms were easier to understand than a regression equation. The additional expertise that the budgeting team brought into the forecast, including —consultants, regional universities, and other city staff such as the Community Development department, bolstered the credibility of the process.

Even with these improvements to the city's forecasting, there was still a great deal of uncertainty surrounding preparation of the FY 2010-11 budget. To help the City Council feel better prepared to deal with these conditions, the staff, at a councilmember's request, presented two scenarios before the City Council got into the details of budgeting. The first scenario described a deepening recession, while the second addressed a recovery. These two alternative futures helped the Council better appreciate that the city needed to be prepared for conditions other than what the adopted budget projected and gave the Council confidence that the city had considered an appropriately wide range of possibilities when formulating its budget.

In addition to improving the techniques used to develop its long-term financial forecast, the city's budget team worked with a consultant, Chris Swanson, to enhance its existing monthly forecasting model. Short-term forecasts would help the city make tactical adjustments within the fiscal year, and the short-term forecasts would serve as a conspicuous symbol of the need to be adaptable to changing conditions. While the city had previously modeled monthly revenues and expenditures based on historical experience at a department and budget category level (e.g., an all-encompassing "sales taxes"), the new Excel model tracked this city's budgetary data down to the object code level (e.g., all of the individual codes that comprise "sales taxes"). This made the model more adaptable to changing conditions because the object codes could be rearranged into different categories, if needed.

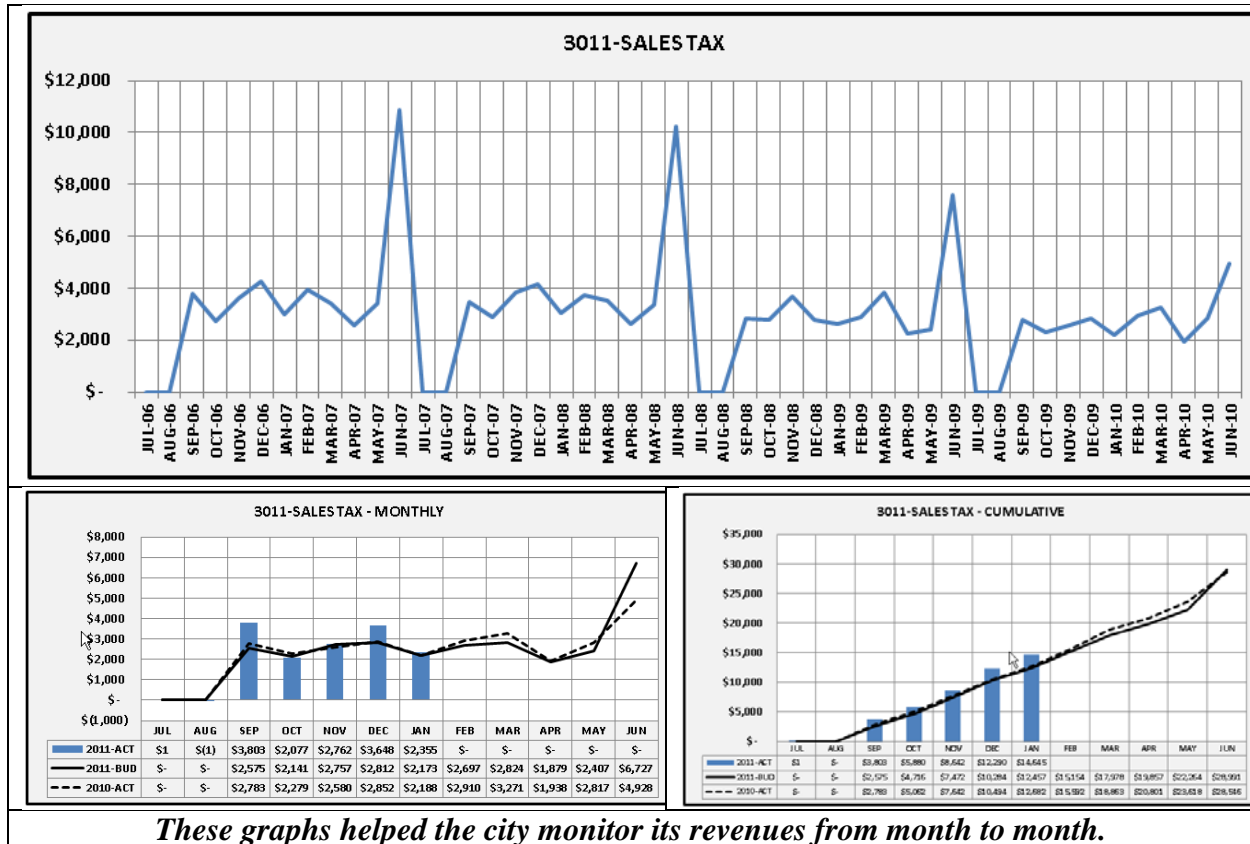
The model transformed the annual budget forecast, for revenues and expenditures, into a short-term forecast by applying one of a number of predefined algorithms. The most commonly used for developing monthly revenue estimates were:

- **Three-year average of monthly revenues.** The model looks back across the most recent three years to determine what percent of total revenue is typically received in a given month. For Irvine, that percentage was then applied to the current annual budget to get a budget for that month. For example, the city received an average of 9 percent of its sales tax revenues by the end of the first quarter in 2009, 2008, and 2007, so the monthly sales tax estimate for the first quarter of 2010 was also 9 percent of the annual budget. This city used this method for the majority of its revenues, but it was especially important for revenues following strong seasonal patterns.

- **Straight-line.** The annual budget is simply divided by 12 and that amount becomes the budget for each month. This method was used for revenues where there were not important seasonal patterns and where there was no better basis for developing a monthly budget.
- **Prior-year.** This is an alternative to the three-year average, where the pattern that occurs in the prior year is applied to the current year. This was used for revenue sources where there was reason to expect a similar pattern to the previous year's revenue income, but where a longer term historical pattern was not expected to be as helpful.
- **Manual.** For cases where none of the above methods were appropriate, the city distributed the annual forecast across the 12 months manually. Revenues from contractual services provided by the city, for example, could be modeled using this approach when the timing of a service and the resulting income was known.

This short-term forecast would then be compared to the city's actual revenues each month. Exhibit 3 shows visualizations that the model produced. The monthly revenue chart was useful for revealing seasonal patterns. For example, the graph demonstrated that Irvine should always expect to receive much higher sales taxes in June than other points in the year (because that's when the city would receive revenue from sales made during the holiday season). The monthly forecast and budget graph (titled "monthly") shows how the budget compared to the actual in each month. Here we can see that, in 2011 when Irvine was recovering from the worst impacts of the recession, the actual revenues exceeded both the budget and previous year's actual in two months. The graph titled "cumulative" shows the individual monthly budgets and actuals aggregated, where the amount shown in June would be the total for the entire year (the fiscal year ends in June). Here, we can see that the two above-budget months translated into sales taxes being consistently above budget for the year through January, the last month for which data had been collected at this point. The model produced similar analysis for expenditures, allowing staff to monitor both sides of the budget.

Exhibit 3 – Data Graphics from Irvine’s Monthly Model

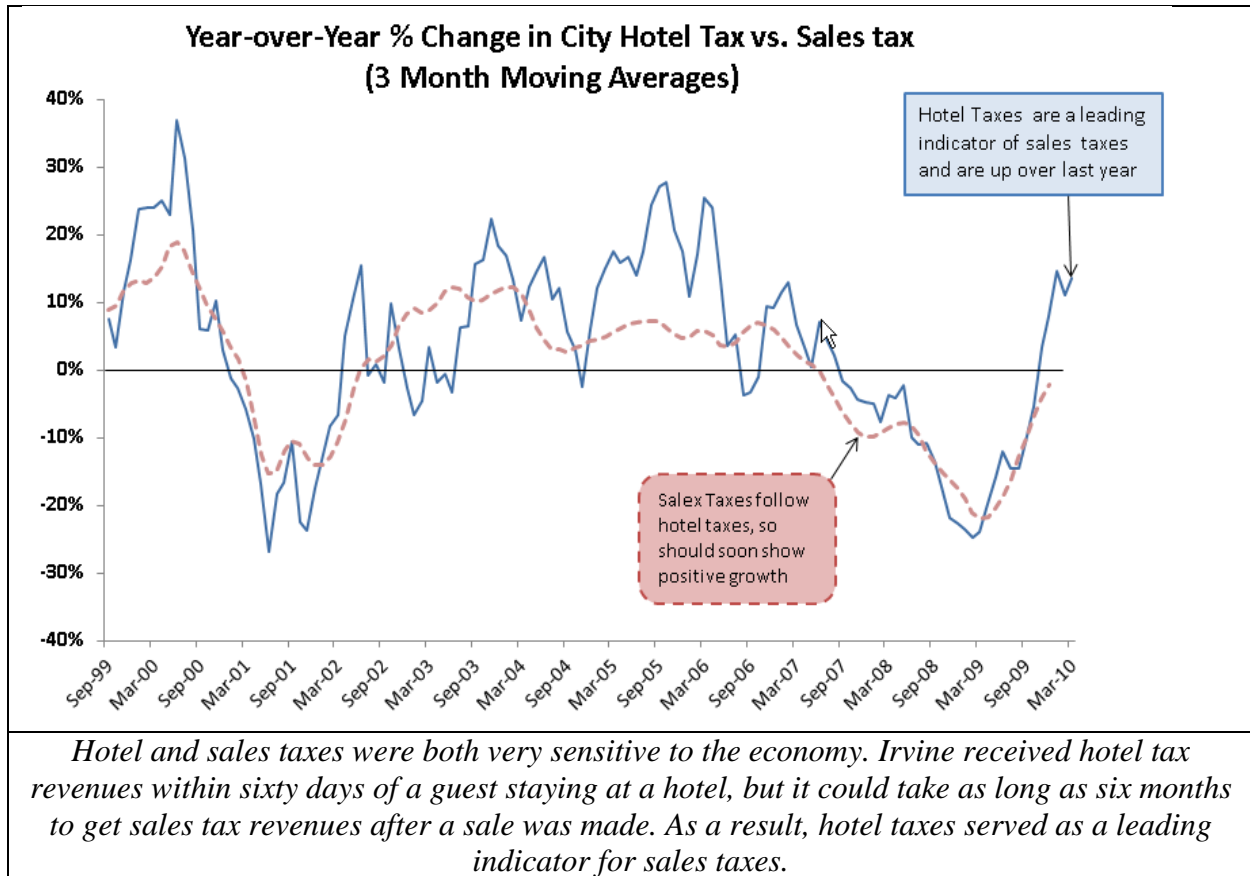


As we saw earlier, an impediment to monitoring the accuracy of sales tax forecasts was the length of time it took, as long as six months, for the city to receive actual tax receipts after a consumer had made a purchase. This made it difficult for the city to estimate the effect that immediate economic conditions were having on sales tax revenue. However, there was a potential indirect indicator: the city’s hotel tax. Like the sales tax, the hotel tax was highly sensitive to economic conditions. Thus, if the hotel tax decreased there was very good chance that the sales tax would too. Critically, the city would receive hotel tax money within 60 days or less from the time a guest visited a hotel in Irvine.

Unfortunately, however, turning hotel taxes into a leading indicator was not as easy as running a report from the city’s computerized accounting system. Because the accounting data included various adjustments and accruals, it was an imperfect representation of the amount of revenue produced by the tax base in each period. The chief example was the monthly advances on sales tax revenues provided to Irvine by the State of California. These advances were provided by the state to help cities avoid cash flow problems in between quarterly payments, so they were not a helpful representation of how the sales tax base was actually performing. Each quarter, the state would then adjust its payments to cities to reflect how each city’s local tax base had actually performed, but, at the same time, the state would also include another advance payment for the upcoming month. In fact, the graph of monthly revenues in exhibit 3 shows four “peaks” in sales tax revenues each year, which is where adjustments occur. Hence, the revenues recorded in the city’s ledger was only a partial reflection of the actual performance of the city’s tax base.

To overcome this problem, Ken Brown and the finance team used reports on the tax money actually paid by retailers and hotels and took a three-month moving average to smooth out some of the variation within quarters and better reveal the trends. The result they achieved is shown in exhibit 4. We can see that the sales tax curve follows along closely with the direction of hotel taxes. In this particular example, hotel taxes have experienced significant year-over-year growth at the end of the analysis period, suggesting that sales taxes will follow.

Exhibit 4 –Using Hotels Taxes as Leading Indicator of Sales Tax Revenues in Irvine



Both monthly forecasts and the hotel tax were studied at regular meetings of the special team formed to respond to the recession. These meetings helped the city’s management team understand trends in the city’s revenues, review operational strategies to reduce costs while maintaining service levels, and develop and implement contingency plans. By monitoring the trend in hotel revenue receipts, for example, the management team was able to rapidly identify the point at which the local economy turned the corner and began to improve, providing reassurance the worst was over.

Under the leadership of Sean Joyce, and supported by the forecasting tools developed by Ken and Chris, the city’s department heads and management team worked together to reduce costs and adapt to the recessionary conditions.

Arriving at the Other Side

The city was able to fulfill the four promises of the Three-Year Bridge Plan by eliminating over 70 full-time equivalent positions through attrition, consolidating duplicative activities across departments, deferring selected non-operating expenditures, re-evaluating interfund cost-sharing arrangements, and economizing on activities not core to the city's mission. Some of these activities were big and some were small. Among the measures adopted by the city to reduce costs, for example, was delivery of the city's "Art Beat" and "Shelter Scoop" in electronic format rather than paper, for \$84,000 in annual savings. The city, furthermore, consolidated programs split between departments, including environmental program administration, traffic review and analysis, water quality, concrete repair, and advanced planning. The city also reduced conference, training, and professional development budgets, renegotiated federal lobbyist services, and consolidated after-school and camp programs. The city eliminated contract services for shrub fertilization in parks and began using volunteers to staff open studio time at the Fine Arts Center.

These and other reductions resulted in savings of more than \$12 million, or 8 percent, from its general fund adopted budget from fiscal year 2008-09 to fiscal year 2010-11. In fact, while the city's forecast entering the recession proved too optimistic, it was correspondingly too pessimistic in projecting cost reductions that could be made without significant impact to the city's core services. For instance, the 2008 forecast projected operating costs at \$144 million, but actual costs were only \$141 million. This made it possible to return \$3.2 million to the city's Contingency Reserve Fund, and the agility shown by the city staff's response to falling revenues enhanced the credibility of the Bridge Plan and emphasized the need to be adaptable.

By the end of the Bridge Plan period, the City of Irvine was able to successfully present a balanced budget without the use of reserves or other one-time measures. It did so despite the fact that its most important revenue source, sales tax, was budgeted 3 percent lower than the peak it reached six years before. By outperforming its expenditure projections during the Bridge Plan years, the city was also able to replenish its Contingency Reserve Fund to a balance of over \$20 million by the close of fiscal year 2011-12, or just under 15 percent of the city's budgeted appropriations. The city was even able to increase its support of local public schools at this time.

Under the direction of its City Council, the city is now working to prepare for the next recession by increasing its contingency reserve funding to a level of 20 percent of budgeted appropriations. The city uses the same monthly forecasting and monitoring system shown in exhibit 3 to see if it is on track to meet its financial goals.

These financial accomplishments did not come at the expense of the city's core services: a 2013 resident satisfaction survey indicated that 92 percent of the residents surveyed were satisfied with the city's overall performance in providing municipal services, a satisfaction measure virtually unchanged from 2006, the last time the study was conducted before the beginning of the recession.

Finally, the city's new forecast model continues to perform well. Exhibit 5 shows the forecast versus actual results for the city's five-year forecasts for sales taxes and total general fund

revenues. The table includes the forecasts made in late 2008 and early 2009, before the new model was fully in place, and compares those to the forecasts made in late 2009 and early 2010, using the new model. As you can see, Irvine’s long-term forecasts made with the new model are a huge improvement over the old model and produce a level of accuracy that would prove enviable even for a one-year ahead forecast. The mean absolute percentage error (MAPE) using the old forecast model in 2009 was 17 percent for sales taxes and 10 percent for total general fund revenues. The MAPE for the 2010 forecast, using the new model, was about 2 percent for both sales taxes and general fund total revenues!

Exhibit 5 – Forecast versus Actuals for Irvine’s Five-Year General Fund Forecasts (1,000s of Dollars)

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Actual Revenues						
Sales Tax	39,735	45,788	49,226	51,065	55,580	58,767
Total Revenues	118,874	127,972	134,745	138,066	147,868	160,240
Forecasts Made in 2009 (old model)						
Sales Tax	49,421	53,040	56,342	60,397	63,589	N/A
Total Revenues	129,576	136,830	145,820	155,388	164,641	N/A
Sales Tax Error	-24.4%	-15.8%	-14.5%	-18.3%	-14.4%	N/A
Total Revenues Error	-9.0%	-6.9%	-8.2%	-12.5%	-11.3%	N/A
Forecasts Made in 2010 (new model)						
Sales Tax	N/A	44,763	47,987	50,565	53,685	56,830
Total Revenues	N/A	124,048	130,105	137,887	146,461	157,848
Sales Tax Error	N/A	2.2%	2.5%	1.0%	3.4%	3%
Total Revenues Error	N/A	3.1%	3.4%	0.1%	1.0%	2%

Appendix 5 – San Bernardino County Case

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Fiscal Sustainability Case Investigation County of San Bernardino

BY MARK PISANO
AND RICHARD F. CALLAHAN

San Bernardino County is complex and unwieldy. This “inland empire” of the Southern California mega region has a varied landscape of mountains, vast high deserts, and sprawling alluvial plains and covers the largest geographic area of any U.S. county. Most of its land is in unincorporated areas, and it is traversed by more miles of roads than most states have. The political culture of the desert area and of communities separated by the San Gabriel Mountain range, with peaks as high as 14,500 feet, differs significantly from that in the western part of the county adjacent to Los Angeles County.

Economic and Political Context

Over the past several decades, the economy has experienced a bust, boom, and bust cycle that has resulted in variable revenue streams for the county’s political jurisdictions. The economic downturns reflected the transformation of the U.S. economy over the past three decades: In the late 1970s, the Kaiser steel plant closure caused a loss of 12,000 jobs; the movement of the Santa Fe Railway Maintenance yard to Topeka, Kansas, cost 7,000 jobs; and military base closures in the late 1980s at Norton Air Force Base in San Bernardino and George Air Force Base in the high desert community of Victorville ended the employment of 20,000 people. A boom followed because the vast land area in the county and the extensive railroad and freeway infrastructure were ideal for building housing to support the employment centers in Los Angeles and Orange counties. The county’s western cities became new suburban centers, the poster children of a real estate and construction boom that led San Bernardino to become the fastest-growing county in the United States. But then the employment losses in the construction industry—22,000 jobs between 2007 and 2010—and the housing foreclosures of the Great Recession generated even greater losses than the previous cycle. Today one estimate is that over 50 percent of the housing units in the county are still underwater, meaning the value of the house is less than the current mortgage.

Its wide expanse made San Bernardino County difficult to govern through a shared vision and consensus. The variety of political cultures and the economic fluctuations created circumstances that would challenge any political entity. Moreover, an ongoing series of lawsuits over projects that supported development activities, particularly the sizable drainage project for the City of Rancho Cucamonga, added to an already complex array of challenges. An adverse judgment of \$104 million went against the county, and public corruption charges followed. These lawsuits, along with the convictions of an elected county supervisor and staff members for violating state law, signaled the existence of a dysfunctional political culture.

The administrative structure likewise was cumbersome and inefficient. A sprawling landscape governed by five supervisorial districts led to the fragmentation of policy and political structure; there were multiple special districts for many functions, including fire protection and human services. Each district had a separate administrative structure, which led not only to conflicts in setting priorities for the county but also to costly inefficiencies. A weak county administrative structure with separate and independent departments also created costly inefficiencies. The local and regional press continually ran stories on the dysfunctional operations of the county. During the 2009 budget cycle, for instance, the county ended up with an \$80 million deficit that was rolled into the next year, even while salary and benefit increases were approved.

Decisions to Reform the Structure

The declining revenues caused by external conditions, the inefficiencies of the county’s administrative structure, and the dysfunctional political environment prompted leaders to launch a new direction for the county. Garry Ovitt, chairman of the Board of Supervisors and former mayor of the City of Ontario, seized the opportunity provided by the election in 2008 of two new supervisors to bring in

a new county executive. Greg Devereaux had been city manager in Ontario, which is located in the economic center of San Bernardino County, and was highly respected for his keen business mind and track record of public management successes. Supervisor Ovitt had developed a positive working relationship with Devereaux while serving as mayor of Ontario and recruited him to be the top county administrative officer by appealing to his long-standing commitment to public service.

The hiring of Devereaux created a de facto chief executive officer who replaced the decentralized chief administrative officers. Under the new county structure, each of the county department directors, even those who were elected, was to report directly to the CEO. Previously the department directors had reported to the county board, and the staff within each department worked directly with the chief of staff in each of the supervisor's offices. The five elected supervisors and their staffs had addressed issues in their districts by contacting the departments directly; now they had to go through the CEO or his deputies. The previous practice, though not uncommon in county government, added stress, instability, and inefficiency in a time of fiscal difficulty. This earlier lack of centralized management also fragmented the priority-setting process in the budget because the supervisors tried to cover their geographically large districts while simultaneously serving as departmental administrators.

Under the newly implemented centralized structure, board offices will occasionally call departments asking for information, but they do not give them assignments. The CEO structure facilitated priority setting and kept the CEO informed of board requests, with the net result of improving operations. These changes also encouraged a focus on the entire county, not just individual districts. The CEO successfully proposed and implemented cutting the size of each supervisor's staff from eleven to six, which reduced the cost of staff salaries in each office from \$2 million to \$1.1 million. This action also conveyed to other parts of county government that cost cutting and efficiencies were to be part of the culture of the organization.

The changed relationship between the CEO's office and the supervisorial offices has improved the

level of professionalism. The CEO provides administrative, financial, and intergovernmental support for the multiple special-purpose county agencies, regional organizations, and commissions and so facilitates the coordination of policy by the disparate and numerous organizations within the county. The supervisors' staffs, which are now employed by following the hiring practices that county staff use, focus on communication with constituents and informing supervisors of the myriad issues within the vast county.

Changing the Budget Process

When Devereaux started in February 2010, the \$80 million shortfall in the discretionary general fund budget comprised 10 percent of the total budget, much of which consists of the state and federal funds the county manages for mandated programs. The board initially viewed the deficit as a problem caused by a temporary decline in revenues attributable to the economic downturn, failing to see that the problem was caused by long-term structural problems relating to such issues as employee pensions and deferred infrastructure maintenance, the external shocks of job loss, demographic changes, and the economic downturn. Even as revenues began to stabilize, costs were still rising.

There were four reasons for this situation:

1. The elected officials were not aware of cost projections when collective bargaining agreements were approved.
2. Department heads did not typically present a complete picture of the full costs of projects.
3. The county had not accounted for the full cost of services provided to other jurisdictions by county counsel, the sheriff, and the fire department.
4. There was no integrated finance system. Instead, departments had their own systems that often did not fully account for overhead and maintenance costs, particularly for capital expenditures.

As a consequence, the Board of Supervisors had difficulty in developing a full understanding of the long-term implications of budget decisions. The ambiguity and fluidity of the budget process allowed board members to defer decision making into the future and to act with incomplete information. Prior to the

hiring of Greg Devereaux, financial expertise and fiscal fluency had not developed organization-wide. Devereaux developed a strategy to correct these deficiencies. As a start, the administrative office staff developed an integrated finance system for all department heads, including full-cost, life-cycle principles with full allocation of overhead expenses. Those department heads who did not adjust to the new reporting and financial management system were replaced. Devereaux pushed for a budget that included a ten-year forecast of expenditures and revenues. The full-cost and long-term budget showed the board the full extent of the problem faced by the county: fiscal stress would continue unless county operations were restructured, collective bargaining salary and health benefits were renegotiated, and a strategy for economic renewal was developed.

The budget restructuring pulled together several units in the county to form a support department for all the departments. Facilities management, real estate services, and architecture and engineering were joined as one unit, allowing the budgetary impact of these overhead costs for the individual departments to be broken out. Finance, accounting, and human resources were combined to apply uniform policies and accounting across all departments. These changes created the capacity for all departments to advance their fiscal fluency, using language in the budget that accounts for full costs of projects and programs and addresses both short- and long-term costs. The concept of fiscal fluency calls for providing financial information that incorporates all overhead costs and for creating an organizational culture that embraces fiscal accountability across all the various silos of county departments.

The restructuring to improve fiscal performance led to a range of changes in county departments. For example, regional parks that were running high deficits were identified, and partnerships were formed with cities to assist in the operations of the parks and potentially reduce those deficits. One park that had an excessively high \$800,000 utility bill was evaluated, leading to the discovery of a broken utility line. The repair cost of \$200,000 reduced the utility bill to \$20,000 the next year. Creating a unified fire department budget reduced the costs for separate overhead units of multiple districts throughout the county.

The most important feature of the new budgetary and vision process has been a cultural shift away from allocating state and federal monies, such as Community Development Block Grant funds, by supervisorial districts to allocating the funds by need throughout the county. This decision-making process has shifted investment by the county to higher-priority, county-wide projects, such as an 800-MHz radio system for public safety.

An additional change with great impact that came with ten-year budget forecasting was a better understanding of the financial impact of collective bargaining agreements on department budgets and on the entire county budget. In fiscal year 2011–2012, there were sixteen contract negotiations with collective bargaining units. Agreements were reached, to begin multitiered pension benefits, which eliminated the county payment of a 7 percent pension match. These changes began with county supervisors and then were applied to the remainder of county employees. The agreements also reduced step salary increases from 5 percent to 2.5 percent for eleven steps and, for new employees, the agreement changed the pension payments and retirement ages to reduce the county's costs in the long term.

Leadership Developing Strategy

As the newly appointed executive, Devereaux developed strategy to guide the reform process currently under way and focused on developing a shared vision through a strategic planning process. He brought together the twenty-four cities, the departments, and all the other organizations in the county (both public and private) in a process that involved thousands of people. Two key and inter-related questions drove the process: Where do we want to be in twenty years? and How do we get there?

In convening the varied organizations, Devereaux sought to convey that the participation of each stakeholder was needed to realize their goals. The county's elected and administrative leadership committed to using the strategic plan in the budget process, which would look at the long-term allocation of resources. As one participant noted, "The motivation for participation was survival."

During the land use planning process, participants reviewed the general plans of the cities and of the unincorporated area of the county, developed a long-range understanding of demographics and land utilization, and discussed how the county's human development programs could complement the goals of the cities. Strategies were developed to coordinate county programs and resources with the cities. For example, county parks with low usage and revenues were identified, which led to efforts to coordinate with city park programs for the functional and financial benefit of both entities. In addition, the strategy development process identified milestones and strategies that could be used in future budget cycles.

The most interesting and possibly the most significant part of the process was the inclusion of an evaluation of the resources that would be needed to support the long-term development of the county. Not surprisingly for a county in the arid West, the consensus of the assembled parties in San Bernardino was that water resources would constrain the county's long-term future. The legitimizing capacity of the strategy development process facilitated a partnership among water agencies, public and private, to jointly assess the potential for cooperatively meeting water needs. In the past, these entities competed with each other or were required by policy not to cooperate.

Conclusion

The strategic planning discussion initiated by the CEO and the Board of Supervisors became a catalyst for moving from thinking about the county as five separate districts to a view of the county as a shared set of interests, connected across districts and facing extremely difficult external conditions. A focus on vision displaced the past focus on dysfunction and

corruption. The most significant finding of this case study is the capacity of leadership to change the direction of the county. Neither the narrative nor the structure was immutable.

Recognition of the need for change arose from an ever-widening public conversation regarding the county's problems and a set of legal actions taken against county leadership. The impending fiscal collapse became a catalyst for positive change rather than a precursor to filing for bankruptcy, as was the case in the same time frame for the City of San Bernardino. The actual change came about through a network of relationships on the part of both the elected and the administrative community within the county. Highly innovative steps that followed many of the lessons of earlier case studies were taken:

- Looking at the long-term elements of financial decision making
- Projecting costs over time
- Analyzing long-term revenues
- Accounting for life-cycle costs
- Structuring decision making based on knowing all the costs
- Developing fiscal fluency

Additionally, the case reveals innovation in the process that connects the long-term budget considerations with the long-term strategy planning process to create the possibility of fiscal and environmental sustainability.

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Appendix 6 – Whittier Union HSD Case

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Case Study III

Whittier Union High School District

Fiscal Solutions

BY GLORIA RUBIO-CORTÉS

In a time of declining public funds, the long-serving managers and elected board of trustees of Whittier Union High School District (WUHSD) have managed to promote fiscal sustainability by changing the culture of the organization to emphasize inclusive partnerships with district staff, building and rebuilding public trust, and increasing fiscal literacy throughout the organization. They have accomplished these changes without wavering from the district's well-recognized focus on increasing student achievement. WUHSD has adopted a broad and inclusive budgetary process, exemplified by a fifty-member Budget Review Committee. The committee was chosen and administered by the three school employee associations that have been embraced as trusted problem-solving partners. In addition, all three employee associations regularly meet at the same table with school leadership to encourage collaboration and trust building.

WUHSD Background

The district is Los Angeles County, which has the largest population of any county in the United States, and is located near the second largest school district in the United States, Los Angeles Unified School District (LAUSD). LAUSD serves more than half a million students. WUHSD serves 13,400 students at five high schools and 10,000 more at its adult and continuation schools. WUHSD straddles three cities: Whittier, Santa Fe Springs, and North Norwalk. Student achievement in this majority working-class Latino district has dramatically and continuously improved at WUHSD. Results since the year 2000 include a continuous narrowing of the achievement gap, with nearly 100 percent of its seniors passing the California High School Exit Exam, a 93 percent graduation rate, and 95 percent of students attending college or a trade school after graduation, according to the 2011–2012 WUHSD Community Report (see http://www.wuhsd.org/cms/lib/CA01000258/Centricity/Domain/1/CommReport_WUHSD2011.pdf).

WUHSD's superintendent, Sandra Thorstenson, has spent her whole life growing up and working professionally in WUHSD, apart from the four years she spent in college. A Latina, she has personally experienced the school district as a student from the Westside barrio (and was set on her current path with the intervention of her mother and a counselor who helped move her into more challenging classes) and as a professional educator. A previous WUHSD superintendent set out to develop her leadership and management abilities by moving her from teacher to administrator, first as principal, and then into districtwide management as an assistant superintendent. Although it was not a path she envisioned for herself, she embraced it. A thirty-three-year veteran of WUHSD, Superintendent Thorstenson has been leading the school district for eleven years. In this time, she has changed the culture of the school district into a learning organization, creating a professional learning community in which teachers develop common assessments and then share the data to develop more effective classroom strategies and increased quality instruction. WUHSD's mission statement is "to achieve and maintain excellence in providing a comprehensive education for all students." Professional leadership development for teachers is promoted and supported by WUHSD.

This case study spotlights WUHSD's smart, long-term, and inclusive fiscal actions, values, and practices; however, it is important to put it into the context of how WUHSD has focused its resources on the central vision of providing "all students with an engaging, quality, standards-driven instructional program by a well-trained staff resulting in improved student achievement." WUHSD and its superintendent have been hailed for effective practices, such as "embedded support" for students during the school day and their "Whatever It Takes" attitude, which is also the name of their quality education initiative.

WUHSD increased fiscal literacy and fiscal sustainability through trust, partnerships, communication, and effective and efficient use of public funds.

WUHSD's practices and results have been recognized nationally in a number of ways. Students in the Executive Master in Leadership program at the University of Southern California compiled a study called, "An Exemplar of Leadership: Sandy Thorstenson, Superintendent of Whittier Union High School District." A book of promising practices in education, *Raising the Bar and Closing the Gap: Whatever It Takes*, authored by Richard DuFour and colleagues, featured a chapter on WUHSD. In the past five years, the district has been visited by more than a thousand people wanting to learn firsthand from it. In 2011, Thorstenson was named California's nominee for the 2012 American Association of School Administrators National Superintendent of the Year. Chosen by her peers, she was honored for the WUHSD Whatever It Takes Initiative and for spearheading the district's transformation to a high-achieving district and for being an advocate for quality and equity in public education. WUHSD has two voter-passed facilities improvement bonds with excellent ratings. Measure C, a \$98 million bond passed in 1999, has an AAA bond rating, the highest credit quality investment grade. Measure W, a \$75 million bond approved in 2008, also has a high credit quality rating—AA.

WUHSD's budget for 2011–2012 is \$121 million, of which 73 percent is from state funds, 5 percent from federal funds, 5 percent from local sources, and the balance (17 percent) from the district's beginning balance. Since 2007, the state's funding of WUHSD has declined during the last four years by \$17 million. The 2011–12 budget is flat and is balanced as a result of spending reductions.

The fifty-member Budget Review Committee (BRC) played an important role in discussing and reviewing proposals for cost savings and efficiencies. Since 2009, the BRC has been meeting quarterly, and it will continue to do so for a third year in 2011–2012.

WUHSD

WUHSD increased fiscal literacy and fiscal sustainability through trust, partnerships, communication, and effective and efficient use of public funds. As a local bank president explained:

Today, fiscal sustainability usually means having options for reductions. This management team from the board of trustees to the campus leadership has established a significant amount of trust in the organization and in the community, which allows them a certain amount of flexibility. Although there is a great deal of trust and respect for the school district, there is also the expectation that WUHSD be efficient because that is what households and businesses have to do.

One indicator of community-wide trust is the approval of Facilities Bond W. Seventy-three percent voted in favor of the bond in 2008. "During the time when there was a lot of concern about tax levels and how public money is spent, [WUHSD was] able to get a bond measure passed. . . . The fact that it passed so overwhelmingly shows how [WUHSD is trusted] by the community and the value of the district within the community," said the bank president. He added that the school leadership's longevity and its support from the community are key ingredients in fiscal sustainability.

The long-serving school board's commitment, active engagement, and awareness of financial issues are important to fiscal sustainability at WUHSD, said Superintendent Thorstenson. "They ask a lot of questions and very good questions. They are very engaged and aware and they also trust. We work hard to continually earn that trust." She described trust as a journey, not a destination. She said that trust requires quality work, short- and long-term planning, regular reporting back to the school board and the community, and the ability to answer the hard questions.

A school board member listed the fiscal sustainability strategies at WUHSD as having the right people working on fiscal issues, having continuity in the positions, and letting people know they are trusted. He notes the decision early in his tenure on the board to promote a former principal and human

relations staffer to WUHSD business development, which is in essence second in command of the school district, to be in charge of budget and financial issues. He recalled that Superintendent Thorstenson said that it would be a learning curve but that the staffer's knowledge of the district and his capacities had greater value than someone who might have more business and financial experience but did not know the district. "He is now a fine and supremely well qualified business officer, a role he has served in for the last decade or more," the board member explained.

In its budgeting and fiscal scenario development, WUHSD gathers information from a variety of sources, including the enrollment levels of its feeder schools. Five years ago, declining enrollments led to the development of a Declining Enrollment Reserve Fund. A school board member said:

Even before the storm clouds of the state budget appeared on the horizon, we were anticipating a problem in terms of declining enrollment. We were able to set it up very transparently because of the good and constructive relationships we have with our two principal employee associations. Again, it contrasts our situation with others. Not everywhere would employees' associations sit still for setting up substantial reserves to protect you against a rainy day.

One upside of California's economic crisis on WUHSD is that the decline in enrollment figures was far less than anticipated because more private school students were enrolling in district schools.

WUHSD's good practice of setting aside more than the state-required 3 percent through the Declining Enrollment Reserve Fund helped the district weather the current climate of state funding reductions. A school board member added:

We went into the current period of fiscal stress with significant reserves. The reserves haven't proven enough to get us through without making significant changes. But the fact that we had substantial reserves going into this period let us manage the loss of revenue in a way that has minimized the loss in terms of our operations

. . . [resulting in] a soft landing as opposed to a crash.

For the 2011–2012 school year, WUHSD anticipated reductions that would result in layoffs of more than two hundred teachers across the district. As required by California state law, layoff notices were sent in the spring. However, efficiencies, expense reductions from early retirements, and salary freezes agreed on by the employee associations allowed the school district to avoid layoffs. A school board member explains:

The biggest reason why we just avoided significant layoffs, and we were able to rescind the spring's layoff notices, is that our employees associations agreed to contract terms that involved concessions. Why did they make those concessions? Because they knew that in the aggregate they would save jobs. They knew it would let us bring teachers back and they were willing to make that deal. They deserve credit for doing that.

Problem-Solving Partnership with Employee Associations

Over many years, WUHSD has built trust and a problem-solving partnership with the school district's three unions in a number of ways. It began early in Superintendent Thorstenson's tenure, when the district had excess funds. The employee associations approached the district to ask for salary increases. Not only did the school district agree to their request, but it agreed to more than was asked. Now, many years later, when funds are significantly reduced but the mission has remained the same, the established trust and partnership culture has paid off and the ultimate beneficiaries are the students.

For many years, WUHSD has been transparent about fiscal issues and future funding scenarios. It has shared this information in detail inside and outside of the district, which is not all that common, said one education researcher. In doing so, the school administration has discussed budget matters with all three employee associations—at that same table, at the same time. "We used to not do this; but more recently, this past year, we have met

with all three associations at the same table,” said Thorstenson.

In the 2009–2010 school year, this partnership with the employee unions led to the establishment of the fifty-member BRC. The committee increased fiscal literacy throughout the school district. Individual members of the BRC felt that their concerns and ideas were heard, included, and valued and that they themselves were informed about the budget scenarios and implications, which promoted transparency. “Transparency is more apparent now than it has ever been and also the trust is ever more apparent,” said one member of the BRC. “I’ve told the board of trustees and the school district administration that when I attend a board meeting, I am going into a meeting where I have trust and respect in the room.” Another member said that he is now aware of how unusual the openness about budget scenarios is at WUHSD compared to other districts.

The WUHSD BRC is increasing understanding of budget issues and is an effective forum to solicit budget solution ideas and input from teachers and administrators in all of the high schools. According to a school board member:

Superintendent Thorstenson shared with [the BRC] information the school district was receiving from multiple sources, not only about where the budget was, but where it was likely to go, and what the forecasts were and the budget assumptions. She was very candid with them about those things and then took it on the road, visiting all of the school sites and meeting with teachers and staff. She presented the same information, talked about budget options, and invited questions. It was a deliberate effort to educate, explain why, and lay everything on the table. I hear that in other school districts, they are not quite as open about all those things.

The unions decided who served on the BRC and ensured wide representation. Each of the campuses had representatives from the faculty and classified staff (positions that do not require certification) as well as administrative staff. Thorstenson said: “The role they have played has been invaluable. . . . The BRC gives us all sorts of ideas. We give them options.

We tell them we expect you to really chew on this and take it back to their schools and have meetings in their schools. [We] asked them to have a lot of dialogue.” This past year, BRC brought to the school district a request for a suggestion box on each campus, a request the unions implemented. The ideas and questions were shared with the school administration. “It was a lot of information and much of it validated the plan. And it told us we needed more communication, especially about how the



facility bond money is separate, and that we needed to identify it in a better way,” Thorstenson said.

An education researcher who has worked in the district described the school district’s partnership with the employee associations as remarkable and impressive. “The associations voted to give up a [raise] to protect people’s jobs. It is astounding that there is that kind of trust and commitment from employees to do that. That is an indicator of relationship building. WUHSD is a positive example of relationship building and transparency and sound instructional decisions.”

The increased understanding of the budget process and scenarios is an important result of the BRC process. In collaborative processes, greater understanding, according to the two decades of National Civic League community engagement, is an indicator of success.

Mission-Centered When Making Budget Cuts

WUHSD has little control over its revenue because the funds are public dollars, largely from the state of California. However, there are always temptations to seek out additional grant funds—even if they do not support the mission—to supplement declining dollars. WUHSD has not done this. It has stayed mission-centered in its grant pursuits.

Also, it has used this same perspective, staying mission-centered, when making expense reductions. Even when other school districts cut their counselors, WUHSD did not because it understood that the counselors are the key link to the parents.

“[WUHSD] has held to what they believe is in the best interest of the students. . . . So many schools have cut programs, while WUHSD has maintained music programs, added to their career academies, and continued the teacher leadership program that includes 130 teacher leaders,” said an education researcher.

Community Engagement, Partnerships, and Communication

Trust increases when there is interactive communication, fiscal accountability, and substantive engagement. Sandy Thorstenson is a known quantity.

She’s spent her whole life learning or working in WUHSD. She is a neighbor, a friend, an active community leader, and a parent. Interaction is natural in a small community, like WUHSD. When running errands or being a community volunteer, there are opportunities for interaction with Thorstenson. She seizes those opportunities and has encouraged the school’s senior managers to be community leaders because doing so leads to trust.

Engagement at WUHSD is reciprocal. School district leaders are involved in the community (attending community meetings and serving on boards), and the community is engaged in the school district. Volunteers from business serve on the oversight committee, for example. The community also sees the school district as a public resource, by providing facilities and a stable workforce. Through collaborations, WUHSD is leveraging the high school experience for students through its partnership with local community colleges and sharing the school district’s outside fields (playing fields) with city youth groups.

Annual reports to the community include the financial health of the school district with charts and narrative about the general budget and updates on the bond measure initiatives. The school district’s Web site has a letter from the superintendent to the community that reports on fiscal and academic progress. The 2011–2012 WUHSD Report to the Community says that the school is on firm ground, “fiscally solvent due to the dedicated efforts of our experienced Board of Trustees who, together with our teachers, staff and administrators, have worked collaboratively to cope with our budget limitations.”

A local business leader commended the school district for

a very good job of communicating with the community, not just the parents and students, but the community at large increasing understanding of fiscal challenges and the difficult decisions to be made. In everything they do, their communications, their engagement with the community, and with their community partners, the community’s trust is paramount in their minds.

Through weekly reports, the management team keeps board members informed of financial and

other issues, including previews of big issues that are approaching. Key members of the community are tapped for the oversight committees for the two facilities bond measures. By law, the oversight committee is made up of a diversity of the community and ensures that the money is used for its intended purpose—facilities upgrades.

Measure W, which continues the facilities upgrades begun by Measure C, was approved in the fall of 2008 at the beginning of the economic downturn. It was approved with overwhelming support because of a number of reasons, including the need to upgrade the facilities after the 1987 earthquake, the faith the community placed in the school district due to its exemplary handling of Measure C activities, and the district’s regular communication with the community, which increased trust. “Everyone is impacted by the district. There are a few institutions that have gained that amount of trust,” said a local businessman who serves on one of the oversight committees.

Conclusion

The Whittier Union High School District embraces the community, and the community has embraced it back. Success of the school district spells the success of the community. Economic benefits take the shape of more businesses, residents wanting to stay in the district, and others wanting to move in to attend the high-quality high schools.

In summary, the WUHSD strategies that promote fiscal sustainability include:

1. Earning and reearning trust
2. Building fiscal sustainability problem-solving partnerships with employee associations and promoting fiscal literacy throughout the district
3. Valuing and supporting staff, thereby promoting stability around fiscal issues among staff and school board members
4. Preserving student achievement resources when making budget reductions, thereby staying true to the school district’s mission
5. Communicating constantly and in a proactive manner within and outside of the district about its fiscal challenges

6. Providing excellent effective and efficient stewardship of tax dollars paving the way for succeeding improvement bonds
7. Conducting long-term financial forecasting, as an important part of short-term budgeting
8. Partnering with middle schools, local universities, local government, businesses, and nonprofits, thereby providing financial savings for the community

An interviewee doubted whether the trust and partnerships built through Superintendent Thorstenson’s leadership could be replicated. The rationale for that opinion was that neighboring school districts have not accomplished the fiscal leadership achieved by WUHSD. However, the interviewee conceded that the leadership development within the school that Thorstenson has built and supported is likely to continue on the current path of fiscal solvency and academic excellence once Thorstenson leaves the school district.

Perhaps WUHSD’s practices are not replicable; however, they are influencing others in California and throughout the nation. With the constant stream of educators and university students wanting to know more about how WUHSD is succeeding, there are ample opportunities to discuss not only practices and policies to improve academic achievement, particularly in a district that has a majority of students qualifying for reduced and free school lunch, but also to spotlight the financial long-range planning and problem-solving partnerships with the district’s employee associations.

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