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Regarding the:

Major Revenues Forecasting Process Innovation

City of Mesa, Arizona

Office of Budget and Research

20 E Main St., Suite 450

Mesa, AZ 85201

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Prepared by

Klint A. Johnson

Senior Budget Analyst (Forecast)

Tel.: 480.644.2327

Fax.: 480.644.5585

klint.johnson@mesaaz.gov

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# Innovation name and a short description of the innovation.

Major Revenues Forecast Process

The City of Mesa has created an innovative and distinct major revenues forecast process whereby the city integrates low-cost econometric modeling resources to produce an improved and more effective forecast of Mesa’s major revenue sources for budgetary and planning purposes. This process has resulted in increases in reliable and timely forecasts for decision makers, which has proved to be critical to the success of Mesa in preemptively addressing the revenue shortfalls resulting from the recent recession.

# A description of your jurisdiction, the history of the situation(s), which gave rise to the innovation’s need, and additional underlying, factors.

The City of Mesa is the 38th largest city in America and 3rd largest in Arizona with a population of over 473,000. Situated within the Phoenix-Mesa-Scottsdale metropolitan statistical area, Mesa is a very large suburban community with a diverse population and economic base. Major industries in Mesa include mining equipment manufacturing, light production and fabrication of steel, defense, aerospace, retail, recreation, microchip fabrication and design, newspaper services, educational services, and numerous other professional and light-industry production industries. Mesa has a relatively young population with a median age of 34.1 years, yet Mesa is also home to thousands of winter visitors, which contribute in unique ways to our community.

Until recently, Mesa was one of the largest cities in America without a property tax as part of the municipal tax base. In November 2009, a limited-use property tax was implemented, but constitutes less than 15% of the General Fund budget revenues and is dedicated toward debt service. As a result, Mesa is heavily dependent upon a municipal sales tax and state-shared sales and income tax revenues for General Fund operations. While these revenue sources are generally stable when the economy is stable, the revenues are highly elastic to economic cycles. As a result, these revenues have decreased tremendously during the most recent economic recession. Furthermore, Mesa’s City Charter specifies that any additional tax rate increases be approved by a vote of the people. With these conservative tax levy constraints, the need to increase forecast accuracy for planning purposes is extremely high.

As long as the economy is growing well, there is no tremendous need to forecast accurately. However, when the City of Mesa began experiencing double digit declines in sales tax revenues the need for ascertaining the extent of the decline was, and still is, critical for the sustainability of programs and services provided by the city to the public. The use of this innovative forecast process has proved to be a tremendous asset for decision makers in order to maximize the sustainable level of services that can be provided through the recession.

# A description of the innovation’s importance, internal impact, and community benefits:

## • Who has benefited from the innovation?

The citizens of Mesa have benefited the most from this innovation as it has resulted in increased sustainability in services and programs expected from the municipal government. In order to produce this increased sustainability of public benefit, the following entities (in no particular order) have been aided tremendously in their decision making processes as a result of the information gained through the major revenue forecast process:

* City Manager’s Office
* Budget Office
* City Council
* Mayor
* Other departments with earmarked revenues

The increased understanding of revenue behavior lends itself to better planning and more appropriate responses to financial fluctuations. The ups and downs of economic cycles, when recognized early due to this forecasting process, allow the decision makers and stakeholders to better prepare for the downturns and maximize sustainability of services. This preparation prevents the need for larger than necessary draconian cuts during downturns and allows decision makers to manage downturns in a way that provides greater stability in services provided to the public. The benefit is accentuated by higher levels of job security and moral among city departments through recessionary times. Increases in the ability to respond to fiscal instability equates to higher levels of continuity in public services being provided and higher levels of efficiency, as losses associated with cuts and closures are minimized.

## • How was the innovation initiated and implemented?

The revenue forecast process required three critical elements, all of which were necessary for successful implementation.

1. Participation in the University of Arizona Forecasting Project
2. Purchase of inexpensive forecasting and statistical software
3. Recruiting and training of staff software use and the forecasting process

The initial step taken by the Office of Budget and Research was the participation in the Forecasting Project, which is a service provided by the University of Arizona to corporations, governments and other institutions that are interested in the anticipated condition of the Arizona economy. Participation provides access to the State’s top forecast economists and also to databases of economic data (which include historical and forecast data) on both a state-wide and metropolitan statistical area basis. These databases are then used in conjunction with the statistical software to create econometric models that generate several comparable forecasts of the major revenues.

Another critical step is the hiring and retention of individuals with some background in statistics and econometrics. During the forecast process, these analysts research information on how the national, state and local economies are performing and also run econometric models to determine which elements of the economy have the highest correlation with the major revenues collected or received by the city. These analysts double as budget analysts, as the forecasting process does not warrant a full-time position to be dedicated to the process. Total time commitment for the forecast process is equal to approximately one third of a full-time budget analyst position.

## • What risks were associated with planning and developing the innovation?

The largest risk associated with this process deals with public and internal trust in the forecasting process. Many local governments may fear that creating a forecasting process would necessitate the hiring and retention of professionally trained economists, and may possibly believe that working on a forecast process should be left to large governments or major corporations who can afford to pay for these professional economists. Yet, local jurisdictions are required to create budgets, which are completely dependent upon revenues received. This constraint forces each jurisdiction to estimate revenues regardless of the procedures created to determine the budget constraint, thus, making forecasting one of the largest risks inherent to the budget process.

The in-house econometric forecast option actually provides greater understanding of the forces affecting the jurisdiction’s revenues. This is helpful in establishing policy and providing greater knowledge of the economic forces influencing the local economy, and ultimately, the jurisdiction’s budget constraint. Each economy has peculiarities associated with it and utilizing the forecast information provided by a statistically based revenue forecast process could help any jurisdiction to better determine what forces have a more dominate influence on the local economy and tax revenues. Therefore, the risk of being considered inexperienced or amateur by outside or internal forces is far outweighed by the benefits of greater understanding of local economic peculiarities and an increased ability to anticipate revenue more accurately.

## • What was the environment in which the innovation was created and sustained?

One of the greatest “environmental” factors that influenced this innovation was the atypical lack of a property tax for a city of the size of Mesa. Mesa recently adopted a small property tax that became effective in November 2009. Another very important environmental factor is that Mesa has an extremely conservative tax policy included within the City Charter, which prohibits the implementation of a sales tax above 1% and also prohibits the implementation of a property tax or income tax without popular approval from the voters. This extra conservative tax policy severely restricts the ability of the city to implement additional tax revenues during revenue declines, and also creates an instable tax base. Although sales taxes have been fairly consistent resources over time, these revenues have declined severely during the recent recession. This instability in the revenue base has been the greatest environmental pressure that sparked the need for this innovative forecasting process.

## • What were execution costs and savings?

Total execution costs include:

* Participation in the Forecasting Project – approximately $9,500 annually
* Purchase of inexpensive econometric and statistical modeling software – approximately $1,500 per license (City of Mesa currently owns three copies of Forecast Pro XE)
* Training of analysts on the forecast software – historically around $900 per analyst

The hiring of budget analysts with a statistical and econometric background is not considered a part of the execution costs, simply because these analysts would be hired and retained regardless of the process as a budget analyst. Therefore, this cost is considered within the existing budget plan and is not an additional expense required for execution. All economic research aside from participation in the Forecasting Project is performed using free information available through the internet, local library, government databases, and private news sources.

## • What lessons were learned that could be shared with other local governments?

The main lesson learned is that individuals working directly with city revenues can provide economic insights that help prepare decision makers and the organization for anticipated fluctuations in revenue. Effective economic modeling and forecasting does not require the use of a professional economist or consulting firm on retainer. A small amount of funds invested in research can produce significant managerial insights that provide for higher quality management decisions. This process allows managers additional time to respond when fiscal crises arise, providing greater understanding of the potential depth of the crises. More time available to respond, and greater understanding of the anticipated extent of economic cycles, reduces the wasted efforts and resources involved with management through borrowing schemes and reductions in the sustainability of programs.

## • Which department and/or individuals championed the innovation?

This innovation was championed by Jamie Warner, former Budget Director, and Chuck Odom, Jr., current Budget Director for the City of Mesa. The department that has championed the econometric modeling process is the Budget and Research Office of the City of Mesa. The Budget and Research Office has been responsible for both research and participation in the Forecasting Project, allowing for collaboration between analysts in a coordinated manner. Analysts perform the research and conduct econometric modeling based upon what is known, anticipated, or discovered concerning the local economy. The models that generate insight are discussed both within the forecasting team and with city management in an effort to maximize program services and budgetary resources. Presentations are also provided on a regular basis to the Mayor and City Council, with update presentations provided as circumstances warrant and as a part of the traditional budgetary process. All parties support the process, which supports continuation of the innovation.