



## A Small City's Dashboard Innovation

By Stephen Milford and Haley Creech

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to do more.

Municipal staff in rural and suburban villages, towns, and cities have to be generalists. Larger municipalities have individual departments that handle budgeting, treasury, accounting, grant management, and so on, but in small cities, all of these functions are handled by one or two people. There is also a very small taxpayer base to pay for even small increases in the municipal budget. And of course revenue sharing from county and state sources has evaporated. Small communities are increasingly required to shift the burden, cut costs, or make do.

But the residents of these small jurisdictions still want high levels of municipal service (while simultaneously calling for stable or reduced tax rates and increased administrative access, responsiveness, and transparency). In addition, increasingly sophisticated and complex administrative requirements for financial reporting, pension reporting, health care, payment processing, grant tracking, etc. can be overwhelming to small-town staff.

Internal innovation may not always be the most cost-effective solution, but it should always be examined as a possibility rather than dismissed by default, especially by communities with limited financial resources. A municipal culture that is accepting of potentially unconventional ideas can foster unexpected solutions. By understand and making

use of the web-based tools at hand, The City of Spring Breeze, Florida, was able to address one important area—improved financial transparency—by creating high-quality dashboard material at minimal financial cost.

### TECHNOLOGY TO THE RESCUE?

Technology is a double-edged sword for small municipalities. The ability to use networks and software to increase individual productivity certainly helps keep total staffing costs from growing. But, given the limited funding base, it can be difficult to find funding for hardware and software, as well as the ongoing incremental maintenance and support costs. In small organizations, technology helps the existing staff do more, but since staff members wear so many hats, it rarely, if ever, justifies staff reductions.

The choices often seem limited to either increasing costs to engage the necessary expertise (e.g., staff, consultants, outsourced services and software) or reducing the scope of services and benefits offered. But there is a third option: developing internal skills that can foster innovation.

It may be true that “you can’t manage what you can’t measure,” but small, innovative organizations understand that measurement alone is not enough. Staff members are most likely to innovate when they thoroughly understand

the capabilities of the tools they have available. Productivity increases when you do more with what you have, not when you repeatedly pay more to do more.

## **THE CASE OF GULF BREEZE, FLORIDA**

Gulf Breeze serves approximately 5,900 residents. The city runs the water, sewer, and gas utilities, and operates its own police force and volunteer fire department as well as public works and extensive parks and recreation facilities (waterfront, fields and community center). Its four square miles comprise 46 miles of streets; 2,000 households; elementary, middle, and high schools, all run by the county, and a few small retail strips, along with two major medical facilities. Elected officials, a mayor and four councilmen, serve for a dollar a year, and day-to-day operating responsibilities are handled by a full-time city manager. Despite Pensacola's long history (it was initially settled in 1559), the area that is now Gulf Breeze was largely undeveloped until the 1950s. The city council is proud of keeping property tax rates among the lowest in the state, an achievement made possible by city staff's focus on effectiveness, efficiency, and innovative and adaptive service systems.

Gulf Breeze has repeatedly undertaken atypical, if not iconoclastic, actions to work with and serve its community, ignoring what a city "should do" and focusing instead on "what's needed and what can we do?" For example, City Hall is staffed and accessible through weather emergencies such as hurricanes, and the city has provided

a free "hurricane camp" during the aftermath of storms, allowing parents to focus on recovery. Gulf Breeze also coordinated a volunteer "navy" of residents to patrol bay and sound waters during the Deepwater Horizon oil spill in 2010. The city was up to the challenge of finding a way to improve the transparency of its finance information.

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## **CREATING A BUDGET DASHBOARD**

A well-defined bureaucracy details policies and procedures to yield a consistent, reliable, accountable set of work processes. Creating an budget dashboard without straining the city's resources was a challenge, but new challenges are also known as opportunities. Online budget reporting and dashboards can be a useful way of providing a thumbnail sketch of operational performance. Numerous software vendors and SaaS (software as a service) providers are aggressively offering packages to provide a colorful hyperlinked sets of graphs and tables that update automatically when the underlying data is changed. Quoted costs range from a few hundred dol-

lars a month for SaaS to well into five figures for a software package.

Pensacola, Florida (population 52,000), sets the standard of municipal websites in the area. The city allocates more than \$2 million dollars a year to network, system, and financial information management. The scope of information and the frequency of updates is a credit to the city's webmaster and supporting departments.

When Gulf Breeze's much smaller staff was asked to provide a dashboard on the website—"like Pensacola has"—the issue was how to use existing web resources and minimize the amount of staff time required to update the dashboard material. The director of finance and accounting developed a strategy that uses a spreadsheet template. One tab (DATA) contains a standard, detailed budget versus actual spending report from the financial reporting system. The city's reporting system has the capability to generate reports in Excel format, but this strategy can use any reporting system capable of generating reports in CSV (comma separated values) format. The next tab(s) find, map, consolidate, and chart the DATA results for each department and all other funds through extensive use of VLOOKUP and SUMIF, along with the more typical spreadsheet functions. Using Google Sheets as the spreadsheet platform made web access as simple as creating a website link to the shared spreadsheet.

A summer intern was given the task of implementing the concept as an exercise to become familiar with government financial reporting and to develop spreadsheet template skills. In

## Exhibit I: Google Sheets to WordPress

Gulf Breeze took analytic charts and diagrams from a Google Sheet and put them into the city's website so that they instantly update.

The importing process begins by selecting a chart and importing it into WordPress or another website content manager. Then select the drop-down arrow in the top right corner of the chart. From this drop-down menu, select "Publish chart" (see Figure 1).

After the "publish to the web" option window opens, change the selection from "link" to "embed" (see Figure 2.) In Embed mode, publish the chart and select the "Automatically republish when changes are made" box.

Copy the iFrame code to the clipboard. Go to the WordPress page where you want the chart to appear. Change from "Visual" view to "Text" view as seen in Figure 3.

Once the page is in "text" mode, paste in the chart code. Confirm that the chart appears correctly and then publish the webpage, making the chart visible to citizens. This chart will automatically update with any changes in the Google pages. Since the page is intractable, hover the mouse over parts of the charts to display finance information in a side bubble.

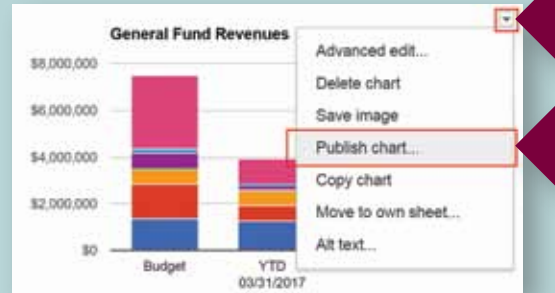


Figure 1



Figure 2

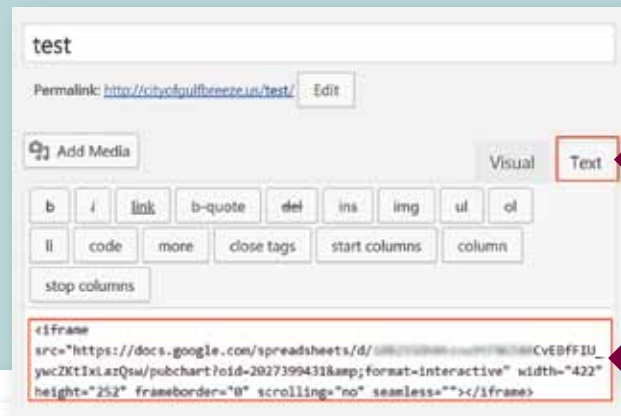
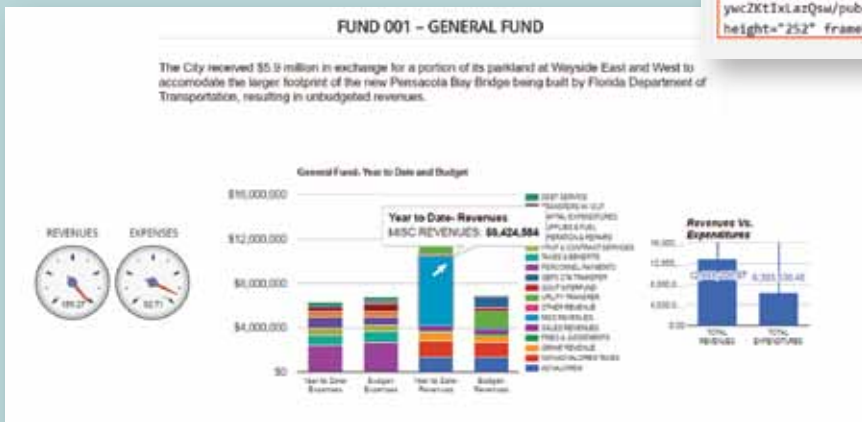


Figure 3



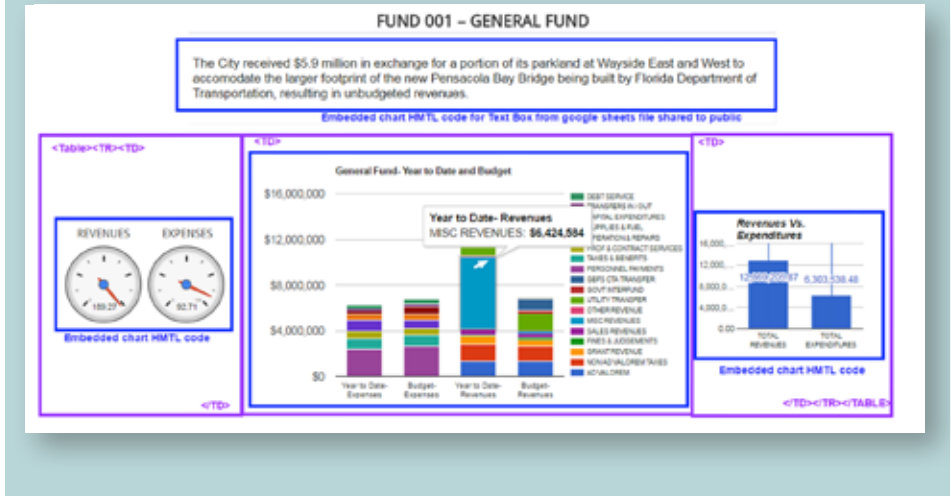
the course of researching differences in chart customization between Excel and Google Sheets, she found that charts and other objects in Google Sheets could be incorporated in web pages as standalone objects (see Exhibit 1). It was also discovered that those chart objects are automatically generated, incorporating rollover/hover “tooltip” captions with detail on the underlying graph data.

The final step was figuring out how to incorporate the budget charts on a Wordpress page. The layout of pages on Wordpress sites are created through use of extensive cascading style sheets (CSS), which yields a consistent layout and “theme” for the website that is easily changed by activating a different theme (avoiding the need to rebuild the look of each page). However, this design feature can result in unanticipated relocation of webpage elements. The simplest way to protect the grouping of chart elements is make them part of an HTML table. (A more elegant coding solution is possible with supplementary CSS files and embedding the charts as List items in custom DIVision and SPAN Identification for use across multiple themes.) See Exhibit 2.

After exploring the options available, the intern implemented another aspect of Google Sheets, the creation of text box objects in Google Sheets that could be referenced on the city’s webpage in the same way that charts were incorporated. This alleviated the need to actually edit the explanatory comments on the webpage itself, allowing comments to be edited on the Google Sheets template. The comments can be cumulative because they are inde-

## Exhibit 2: TABLE Coding

A major element in making charts look professional is webpage layout, which includes forming tables so the charts are consistently placed on the web page.



pendent of the charts, and they do not evaporate when the DATA sheet content is erased and replaced with a copy of the timeliest report. This enables the entire dashboard to be updated online without ever actually needing to access the website where the objects are incorporated.

Updating the dashboard now requires the following steps:

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- Run the monthly budget versus actual financial report; output to CSV/ Excel format.
- Open Excel and the newly output report.
- Open existing Google Sheets template file that created the charts.
- Copy the entire existing DATA tab to a new tab (just for backup).
- On the Excel sheet hit Ctrl A then Ctrl C (select all; copy).
- On the Google Sheets DATA tab hit Ctrl A, Delete, Ctrl V (select all; delete; paste from clipboard).
- Review the updated results and add/edit comments as necessary in the text boxes.
- Done (updated charts and comments now exist on the webpage).

The total time for this update is usually three minutes or less. The project was developed in less than three weeks, taking approximately 20 to 30 hours of the intern’s time with zero incremental software cost.

The resulting dashboard is certainly basic, perhaps even overly simplistic, but the methodology employed enables further details and development simply, quickly, and inexpensively. And most importantly, it can evolve in direct response to the requests of actual users as needed rather than awaiting “a next upgrade.”

## CONCLUSIONS

If a government is to consistently grow and transform itself in positive ways, employees must foster improvements by learning new tools and methods (and not just new data-entry screens). You can’t do “more with less” if you decide you need to pay a premium to buy or outsource the

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“more” you need to do. Outsourcing can be an expensive method of avoiding staff weaknesses and deficiencies, and where possible, small governments should consider building the skills of existing team members instead.

Leaders in municipalities need to encourage their employees, and themselves, to learn, innovate, adapt, and grow in their positions. It is up to these leaders to identify opportunities for innovation and growth. Those cities and counties that have adopted Balanced Scorecard-type planning systems have taken important steps toward encouraging recurring innovation and instilling systemic improvement as part of municipal expectations. ■

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