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"Performance Dashboards in the United States Government"

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Abstract

In this paper, I examine the usage and effectiveness of performance dashboards within United States Government agencies. I gather initial research on performance dashboards used within for-profit entities as well as not-for-profit entities, including governmental establishments, and use this information to develop criteria for an ideal dashboard. I then evaluate dashboards currently in use and available to the public by government entities based on my criteria for an adequate dashboard. I predict that states, organizations, programs, and entities with higher funding and larger size will receive a higher grade for their respective dashboards which will result in a correlation between a good dashboard score and higher funding. The paper will consist of a written analysis, data collection and explanation, and a series of tables, figures, and references to aid the reader in a comprehensive understanding of what dashboards are, and how they are used.
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I. Introduction

In this paper, I examine the usage of and effectiveness of Performance Dashboards within the United States Government. In almost any company, business unit, agency, and organization the usage of performance measures, metrics, statistical data, and reports exist. Performance dashboards provide managers and leaders of organizations ways to view data and facilitate decisions making. (Dashboardspy.com)

The word “dashboard” is commonly associated with the component of an automobile, airplane, or even a train that presents vital information to the operator. Think of your car, it has fuel, speed, engine revolutions, engine temperature, battery voltage and sometimes even engine oil pressure. These things are usually, more than most drivers would need. As shown in figure 1, a simple dashboard is more than effective. If your vehicle displayed exhaust gas temperature, vacuum pressure, oil temperature, and intake air temperature you probably would experience information overload, i.e., being overwhelmed with the extra information that essentially distracts a user from the most important information. While all of the information may be important, certain criteria may be needed for certain decisions, and that is the goal of designing an effective dashboard. Managers can be presented with information overload on a day-in, day-out basis. Psychology studies by Baddaley and Miller have yielded that the average person cannot focus on more than seven things at a single time, meaning everyone has a multi-tasking limit. This is strong evidence and a perfect reason for performance dashboards to come into play.

A dashboard (DB) is a decision making tool that can be used to manage, monitor, and assist in decision making for a business. It is also a method of visualizing, explaining and signifying the current state of an entity in whichever category the dashboard creator chooses. A business DB carries a purpose just like it does in a vehicle, and provides the operator/manager
with the information he/she needs to know at the specific time. Like any business tool using them the right way is critical and requires practice. A DB is commonly a collection of Key Performance Indicators (KPI’s) and graphs of a requested data set. The DB is designed to be viewed as much as the target audience desires, and present the data audiences need. As shown in figure 2, a typical DB when printed is no longer than one page long and contains revenue information categorized by period, cost of goods sold, top customers, and top sales by account. A DB such as this would be particularly useful for a sales manager who needs an update on sales, or information on which customers to focus on for greater sales, promotions, etc. A DB used in a government setting will not vary significantly from its for-profit counterpart.

DB’s in a for-profit setting can be a great success if used correctly, and the same thing can be applied in a government setting (Eckerson). Government 2.0, which is a 2009-2010 social movement titled by the government to enhance and improve our nations internet and usage of technology. In response to the government 2.0 program, a push for usage of DB’s in government agencies is present, with a strong emphasis on transparency. Transparency is defined as: A minimum degree of disclosure to which agreements, dealings, practices, and transactions are open to all for verification (BusinessDictionary.com). DB’s are a means for governmental agencies to demonstrate transparency and information about their operations to the public. The focus of my paper is externally reported dashboards that present information for public view. The dynamics, criteria, and aspects of any dashboard remain the same, regardless of audience.

So why are Dashboards important and for who? The recent implementation of the American Reinvestment Recovery Act (ARRA) has initiated a large release of funds into the American economy. (GAO-09-580) The states, agencies, school districts, towns, departments and individuals are all receiving larger amounts of money in the form of grants and appropriations.
There has never been an ARRA before, and from a control standpoint, this large amount of new funds is susceptible to fraud (GAO-09-580). If DB’s are brought into use for each agency, and not just to report on ARRA funds, but all funds, then public and others can monitor the usage of these funds, and remain informed and involved in their countries economy. Therefore taxpayers, can benefit from the use of proper DB’s in government. Awareness about government, tax revenue spending, and cost management is good information for anyone. That being said, publically available DB’s increase the transparency of government agencies if these DB’s effectively communicate KPI’s. A transparent and accurate DB implies that a government is open to its spending, aware of its weaknesses and willing to present information it contains to the public.

After completing the project, I found that dashboards currently within our government agencies are overall sufficient, but still need some room for improvement. What I found was that larger organizations are not the only agencies that utilize effective dashboards, and the best dashboards come from the most motivated agencies.

My paper includes seven subsequent sections. First, my introduction describes the purpose and benefits of db’s to the reader. Second, the internship experience section describes my interest for the subject and involvement with DB’s during my GAO internship. Third, the literature review summarizes primary research in this project. Fourth, is the methods section which will describe how I selected dashboards and the internet sites they were shown on, and how the entire project was performed including a detailed description of how I grade each selected dashboard. Fifth, is the results section after the methods section, and is mainly statistical with a written portion of my data collected. Sixth, a discussion and analysis section will draw a conclusion to overall government DB’s. Finally my references, tables, and figures
used throughout the project will provide the reader with visual information and where to go if they desire further information.
II. Internship Experience

In the summer of 2009 I interned at the Government Accountability Office. The GAO is the government’s accountants, also known as the congressional watchdog. While interning, I was a part of their Financial Management and Assurance Team that performed financial, internal, and performance audits. As part of my experience I developed a great respect for the mission and the benefits GAO provides to the public and congress. GAO is bi-partisan and un-affiliated, meaning they provide objective and unbiased information. One of GAO’s goals is to provide information to the public and provide recommendations to many federally funded agencies. These recommendations could include increasing internal controls or developing new management staff, but one thing remains the same, the GAO makes sure tax payer’s money is being used efficiently and effectively.

The correlation between my experience at the GAO and this project is the goal of presenting accurate government information to the public via readable, easy-to-understand websites and dashboards.
III. Literature Review

In every company, the upper management’s role is not only running that entity but making decisions that contribute to the entity’s success or failure. Ensuring that these decisions lead to success is something that comes with time. Managers have found many ways to help them in making decisions, Federal managers and employees at all levels must use performance goals and measures to set priorities, monitor progress, and diagnose problems (Kamensky). Technology today can help immensely in how managers view company data, reports, keep track of records, etc.

The research performed for this project started with an initial research stage regarding the history and usage of DB’s. Then a significant amount of DB’s were viewed and noted for their characteristics and advantages. Any current Government dashboards were then researched followed by Government 2.0 articles and finally, GAO an OMB recommendations to administer DB’s into government agencies.

Dashboards Defined and History of

The initial research yielded a significant amount of online business articles and the text “Performance Dashboards” by Ralph Eckerson. These sources provided a great explanation of the history of dashboards and how they can be used. Eckerson’s book was able to explain how managers can make a DB into a useful and strategic tool. Almost every aspect of a DB is presented in this text, things as simple as the appearance of the dashboard: “the visual aspect and first impression a dashboard makes on it’s viewer is key to making a great dashboard” (Eckerson, 225). And the more technical side of the dashboards such as what software to use for implementing them, how KPI’s to measure for what goal, and how to keep a DB concise but
informative. Eckerson speaks of the benefits great DB’s can provide to businesses and entities, and is a great tutorial/starter’s guide for using on in any entity.

Numerous online business articles within the reference section of this paper are cited that were used for their general statements and information regarding the usage of DB’s in the for profit setting. An It company known as CIBER, whom provides IT solutions for both private and government entities stated that DB’s used in healthcare: “…with the ability to track critical Key Performance Indicators can spot trends and opportunities to help their organizations to survive and thrive. With immediate visibility to the important performance measures, they can balance the requirements of clinical excellence and financial responsibility to weather today’s economic conditions.” Although this quote in its context is directly relating to Healthcare, the purpose of the DB remains the same.

Samples and Examples

In order to grade current government DB’s, I assessed DB’s from for-profit and non-profit organizations, to determine what it is that makes s great dashboard. Two internet websites aided immensely in providing DB examples. The first is dashboardzone.com. This site provides over 150 dashboards from 2007-2010, divided by month. These dashboards are submitted by managers for certain companies, and given as examples for others to learn from, which was the exact purpose for this project. Most of the dashboards on this site were referenced and used for notes, none of them being cited unless an explanation of a certain concepts was provided and needed to be stated in my criteria. The range of db’s present on this site allowed me to see the vast usage of DB’s from “Wikipedia’s Power Struggle Dashboard” to the “2008 election
Dashboard”. Clicking on any DB link provided a screenshot, pros and cons of each dashboard, and even the type of software used and a secondary link on where to access that software.

DashboardSpy.com was the second site used for obtaining information on current DB’s. This site is similar to zone, but is structured in a blog format. This website contains two volumes of “business Intelligence Dashboards” and other non-business db’s with a thorough explanation of each DB’s purpose and creator. The usage, success, and beneficial attributes of certain DB’s are also described.

Overall these two sites prove to be a great resource for finding sample DB’s to reference and learn from, and should be used by any individual looking for advice on how to implement a dashboard into their business or goal.

Business news sites such as yahoo!news, informationweek.com, and govtech.com also cover stories on DB implementation within the government, and through them I was able to locate numerous DB’s to use for my sample. This locating and decision process is explained further in the methods section, and table 2.

**Government Samples and Government 2.0**

The first and most influential resource from a government source is a tutorial and explanatory powerpoint created by the State of Washington. This power point serves as a step-by-step guide for understanding, creating, and maintaining a dashboard in a government setting. This powerpoint was helpful in creating criteria, and characteristics for the DB’s I am evaluating. The Washington Transportation Improvement Board (TIB) created this tutorial after having great success with their own. The TIB…” uses a performance management dashboard to track its business processes and projects and to establish an accurate overview of the agency’s
performance.” This concept, and its success provide an excellent template for other states and agencies.

As stated previously, the ARRA implementation has pushed for an increase in transparency. Because of this, sites like recovery.gov, and articles regarding the effort to provide unbiased information regarding recovery funding have proven to be a great resource for this project. Recovery.gov contains information on the importance of transparency, presenting information to the public, and an excellent DB template style. Also, recovery.gov is a good resource for finding general information about the recovery act itself, which was used in this paper. I have decided to use the recovery acts aggregate DB and Illinois’s individual DB for two of my sampled DB’s.

President Obama’s administration has also organized a technical government plan titled “Government 2.0” that is geared to evolve, strengthen, and develop the IT infrastructure of the United States. From About.com, - “Web 2.0 is the move toward a more social, collaborative, interactive and responsive web. It is a change in the philosophy of web companies and web developers, but more than that, Web 2.0 is a change in the philosophy of society as a whole.” A major part of this is the usage of dashboards for both internal and external viewers. Accountability and transparency are huge when it comes to the stimulus funding and implementing DB’s to help anyone see how it’s being spent. The 2.0 plan has required every single government agency to use a dashboard. While some are still behind the curve, eventually all will eventually have their own DB available to the public eye. IT is important to understand that the 2.0 movement is not only for usage of dashboards, but a large social movement regarding a collaboration of internet design, and it is taking DB’s with it.
Government Recommendations

Lastly, the usage of GAO reports and a related testimonies from the SEC, DOJ, and DOD were referenced in the literature review and research portion of this project. GAO issues report on any congressional request, and within these reports, GAO frequently provides a specialist opinion/recommendation to the agency it is reporting on. These recommendations are generally agreed upon within GAO and that respective agency and then encouraged to be acted upon, with hopes if improving. Not surprisingly, GAO has made recommendations to numerous government agencies to administer the usage of performance dashboards for internal management improvements. This report, and other Office of Management and Budget (OMB) reports were used in this project.

Research Question and Hypothesis

Since the usage of DB’s in a government setting is not absent, but in a development stage, what is the current status? How effective are these introductory dashboards and where is this heading? The goal of this paper is to establish the effectiveness of current DB’s in use within governmental agencies at all levels. Typically, agencies with higher funding, and those of larger scale are focused on first in government plans. Because of this, I predict that the larger organizations and federally funded agencies (vs state level and NFP entities) will achieve higher DB scores from my grading criteria than their lower funded counterparts. Also, the entities that do not disclose budgetary data, dashboard production info, and DB effectiveness will be correlated with a lower score.
Due to the higher number of views the Recovery Act DB will receive, I also predict that the amount of negative information on this DB will be slim to none. When conforming to transparency, management has the option to disclose nothing, or disclose everything. Anything in between these two can also be frustrating because we have no way of knowing if what we’re seeing is all there is, and exactly what there is. The negative percentage of information will be evaluated on the two Recovery Act DB’s within the sample.
IV. Methods

The process or method of my project will be explained in this section. The goal is to explain each step so that anyone could repeat my process to ensure its legitimacy and accuracy. My project consisted of five major stages.

Stage One:
The decision/topic choice stage. I decided that due to my recent internship employment at the Government Accountability Office it would be appropriate for me to study the usage of performance dashboards within the federal and state governments.

Stage Two:
Research stage. In the literature review above, I gathered research on the usage of dashboards in both the for-profit and not-for-profit worlds. This research would then help me evaluate DB’s that I would find online. Online articles, websites, books, magazines and government publications all proved to be great resources, as stated above.

Stage three:
The data collection stage. This step, which consists of two sub-steps, is where I choose my dashboards that would be used in the evaluation

a. Website choices and verification. In order to ensure that each site was a reputable source, I only used sites that were government provided. I started by typing in keywords such as “government dashboards” and “performance dashboards in federal government” into a search engine. This generated a large amount of hits consisting of articles and websites either hosting pictures of dashboards or information on what agencies, states, and entities were using them. A better majority of the dashboards came from a URL ending in “.gov”
and was a legitimate government hosted website. Not all dashboards chosen were on a refreshable or real-time web page. Some were pulled from annual reports, pdf files, and state websites. Each DB used will have a full explanation of where it came from with additional details on why it was chosen in step b. (See Table 2)

b. Choosing a dashboard. My evaluation criteria allowed for me to have a wide variety of DB’s to evaluate. I wanted to make sure that my sample had an equal amount of DB types. These types would range from size (funding), importance, category, and capabilities. My sample ranges from the overall federal IT dashboard to the public school districts of the State of Florida. After finding a dashboard I made sure it was current (within 5 years), and applicable to my criteria. The length and legitimacy of each dashboard was taken into account before I decided it would be evaluated, as well as its relevance. The most important factor in each chosen dashboard is that it is widely available to the public eye, and is used to present information to the public. After this decision was made I saved the DB’s URL and moved on to find my next DB. Once I located and saved about 20 DB’s I began my grading process.

Stage 4:

Grading each Dashboard. After the collection of DB’s I proceeded to grade each DB individually. With each DB open on my browser I began to read each criteria in its entirety and then view the DB. Each criteria section per DB was then given a point value over the total allowed and entered into a spreadsheet. (Figure 3). Certain criteria would
have one point per requirement while others would be graded in their entirety and then given a score out of the total points available. Each DB’s purpose, creating entity, and publish date were taken into consideration when grading. After all criteria had been filled, it was summed and divided by a total of 50 points. Each dashboard was then given a letter grade on a standard scale (90-100% = A, 80-89% = B, …). After all DB’s were graded I then took an average of each criteria and letter grades for further analysis. The following grade criteria was used:

(1) Length

c. The dashboard should be brief but explanatory. One typed page or one internet webpage. If too much information is presented it will be uninteresting to the reader and hard to decide what is more important.

d. If there is too much info on one dashboard, the entity should consider splitting into sub-dashboards and one large summary dashboard. In example, a county dashboard may be a summary of each city/town’s dashboard within that county.

(2) Appearance

e. The most effective dashboards will have a visual component that is easy on the eyes and engages the reader. The attractiveness of the dashboard will help retain the attention of the viewers and aid in understanding. Characteristics such as color, graphs, fonts, and visual displays are key.

(3) Focus

f. The content of the dashboard should be focused on what is important and related to the issue at hand and relative to the agency. Most dashboards are
l. Actual Data- While too much is overwhelming, a dashboard with only words can seem illegitimate. Actual data will assist in credibility and allow for independent analyzing

m. Comparisons- Data or graphs should be compared to others. Whether it current vs. previous year, one county vs. another, or program vs. program. Comparisons help display the scale and range of the data discussed.

n. Status indicators- Certain parameters should be built into the dashboard to symbolize the status of each program/data group. Most states use green, yellow and red to show good, medium, and bad performances respectively. Status indicators serve a great purpose in explaining the data that otherwise may not be understood from outside viewers. Note: I will also analyze the use of status indicators in each dashboard to see what might be swayed for a possible more favorable view. I.E. if all that’s present is green plus signs, what are they neglecting to show us?

o. Notes and Analysis: As with any financial report, study, and document there should be a note section and explanation to anything that might not be clear. Footnotes, captions, and legends are acceptable.

(7)Summary

p. Each dashboard should be a summary of information, not an over specified report of a single issue. If a decision is being made on such a specific issue, it most likely does not need its own dashboard and therefore would violate rule #5.
q. Each of these rules will be implemented into a spreadsheet that I will then use to evaluate 20 dashboards used in a government setting. Both internal and external dashboards should follow these rules and each rule will be established a point value. In addition to the rule evaluation, I will grade each dashboard in its effectiveness compared to the others and its purpose. Any internal or public feedback given on each dashboard will also be a component of this grade.

Stage 5:

Data Analysis. This portion of the project is considered the bulk of the research. To my best ability, I evaluated each DB and then tried to draw any similarities, patterns, facts, theories, and ideas about each DB’s grade. These results and narratives are condensed into my results and discussion sections.

Stage 6:

Supplemental Material. After the discussion and analysis section I fabricated a supplemental section that consists of all relative figures, tables, illustrations, and references used. These items are all great resources to use when reading through the paper.
V. Results

Within this section will be a written discussion of the results. These are presented in a purely descriptive manner and will be analyzed in the subsequent section. A numeric display of the results from the data collection can be found in Table 1.

There were a total of 20 Dashboards evaluated. For letter grades, there were 8 A’s, 6 B’s, 6 C’s, 1 D, and 1 F or failing grade. Table 3 demonstrates the distribution of grades among the sample. The sample was reduced to twenty, so the D and the F will not be analyzed in the discussion section. The Mean score is a 38.8 out of 50, resulting in a C letter grade. For the criteria, each 5 point category (Length, Appearance, Focus, Adaptability, Cost Effective, Features and Summary) all averaged a score higher than 4 or an 80%. The overall effectiveness score averaged at 12.35 out of 15 which is an 82%.

The highest scoring dashboard was Washington’s TIB at 50, and the lowest scoring dashboard was the 2008 Social Security Snapshot (pdf) at 30. The two DB’s removed were Fuel Price Dashboard for lack of relevance and New Hampshire’s HHS DB for inaccessibility (broken link at the time of desired inspection).

The following Dashboards have comments regarding their score that will be provided in this section. FBI, NYC stat, Washington, Florida, IL Recovery Act, Commissioners of NYC, Dutchess Serv., State of MD, and NYC Call requests. Each DB may not have its own comments, in this case, the grade was either fulfilled (given maximum value) within the criteria description or given a lesser score for an obvious reason that needs no further explanation. The following comments are presented in order of appearance on Table 1.

-DB# 1: The Federal IT dashboard for FBI alone has received 81 million hits, giving it a 5/5 for its Cost Effectiveness score. Clearly this DB has a large audience. The
adaptability score is also a 5/5, because it is frequently updated. The information was less than a week old from when I referenced it.

- DB# 3: The NYC stat DB received a 3/5 in the length category because it was cumbersome and extensive to look through. Although the tables and tabs provided to navigate through each department on NYC were nice, it takes too long to find information and is therefore not a proper length DB. Also, the feature score of 4/5 was given because within the DB links were provided for supplemental graphs and data sources, however, these links were all null. This prevents a completely transparent and effective DB.

- DB# 4: The State of Washington’s Public DB is the top scorer in my sample. Washington scored a perfect in each category flawlessly. Budget information would have been interesting to see for this DB because of its unique design and effectiveness. Unfortunately, it was not disclosed. The appearance, length, information, indicators, adaptability, and features of this DB stand out more than any other. A screen shot of this DB can be found in the figures section, specifically Figure 4. WA used three graph styles on one page and brief, informative metrics that do not involve confusing statistics. Each graph is explained with legible legends and supplemental info is also available. The DB is easy on the eyes and visually appealing. Indicators are expressed in a stoplight (red yellow and green) fashion and the Fund balance chart is divided by month. Fund balance is a state’s equity account and is a great indicator of a states financial position. It is clear that WA used a newer software style for this DB and should be considered the role model for every other state DB.
- DB# 8: The state of Florida's Public Education DB is a great dashboard. It is exceptionally fast for the amount of information it provides and is a great example of a DB that utilizes the red yellow and green color scheme to represent grading (amongst high schools). This DB received a 3/5 in adaptability because there was no clear indication of what year the data was acquired for each school. Each DB should have a distinct date to show the reader how current the data is.

- DB# 10: The social security Snapshot of 2008. A screen shot of this DB is shown Figure 5. This was the lowest scoring DB in the sample. The formatting and lack of explanation for information make this DB generally useless. The tables overlap and the text is impossible to read. While the legible tables do contain effective actual vs. target figures, there is little explanation to the implications of these numbers. The DB has no features, is plain, and not cost effective. Its benefit is nowhere near the amount of time put into the DB, and therefore has received the lowest grade.

- DB# 11: The Illinois Recovery Act DB is a great DB, much like the other federal DB's. It follows a newer map style that lets you select your own region of Illinois and view data for that area and operates at a great speed. The information here is also current and constantly updated. This DB received a 12/15 for overall effectiveness because there is no negative information present. Being a resident of Illinois and knowing the inconsistencies of our government, or any for that matter, it is skeptical as that each states recovery site does not advertise bad figures.
- DB# 16: The Commisioner's Report or NYC. This DB was found via a article on effective dashboards on (CITE). Its total score was an A of 46/50. This dashboard was used internally for a information collaboration source. Numerous Health services and welfare organizations feed their data into this DB and use it for decision making. The dashboard can be used by these numerous agencies and viewed by the public on NY’s website. This DB received a 5/5 for cost effectiveness for its evident success.

- DB# 17: Dutchess County Dept of Social Services DB. This DB would have been a 49/50 for its great attributes and design. However, it is not a true internet sourced dashboard that is used for decision making. Because of this, the overall effectiveness score is a 10/15. The scorecard was found within the Dutchess County annual .pdf report. The actual report however, does a great job of summarizing the effectiveness of D.O.S.S.’s mission and goals, and uses a great template that can be applied to other state agencies.

- DB# 18: The Maryland State Stat Dashboard. This is a website DB that proved information for each MD agency. With an overall score of 39 this DB scores low but mainly for being too extensive and cumbersome to look through. There are over 40 links on one page to different agencies and spreadsheets of data. In an effort to provide, they have become over transparent, which leaves the viewer confused and possibly frustrated with too much information. The exact thing a DB is supposed to prevent. Each agency does have its own viewable excel graph associated with it and
the data is all there, but not enough explanation is provided for this DB to receive and "A" score.

- DB# 20: The NYC emergency call request DB. This is one of the more interesting db's in the sample. This db's purpose is to summarize and sort the different types of emergency calls placed to NYC 911 operators. This information is helpful more so to workers in the municipalities than it is the public and therefore was given a 10/15 in overall effectiveness. This DB may not need to exist and could probably exist as a report of employees, not public display.
VI. Discussion and Analysis

Categorical Averages

To start, the overall reaction to my scores is satisfactory. The average on table one shows a 38 out of 50. This score though, includes the two failing dashboards that were not graded in the sample, and therefore the average of actually graded dashboards results in a letter Grade Average across all 20 DB’s of a “B”. Considering the DB’s used are all from 2007 and up, these results are encouraging.

For each criteria category, the average score was at the least, a 4/5. This implies that on average, across each category and within each dashboard, the agency/entity is achieving an 80% or higher grade according to my grading scale. The two highest average criteria are Adaptability and Summary. Adaptability consistently scored in the 5’s and 4’s because of the nature of each DB. Since each of these DB’s are generated electronically, the adaptability of each is relatively easy. Also, numerous DB’s in the sample are real time, and contain at a minimum, annual/year-year data. Showing that each of these DB’s are easily adaptable over time, and can be changed to suit the managers needs. The summary criteria states that a DB should always be a summary of information, not an entire explanation, expansion of a single problem, or over specific display of an entity. A dashboard must summarize important information to keep the viewer interested while informed. Each dashboard showed this aspect well.

The overall effectiveness score averaged at 12.38/15. This equates to an 83% score across the 20 dashboards. I focused on each DB’s content and tried to see how much it related to the mission or goal of it’s respective agency. For the most part, each DB was effective in doing this, and staying on topic was fulfilled by each dashboard.
With results as good as these, the current state of dashboards, statistically is good. There is still room for evolution and improvement in some of the DB's I sampled, but the majority are on the right track, and will undoubtedly evolve into something better/more effective.

**Funding and Scores**

The original hypothesis stated that the Recovery Act dashboards will receive a higher score due to their higher funding at a federal level. The Recovery Act Aggregate, Illinois, and Iowa scores are respectively 44, 43, and 43. While these scores are not in the top five of all scores, they are still great scores, and this most likely has to do with the amount of focus and attention they receive. It can be assumed that due to the desire to watch over the Recovery funds, that the dashboard for such a program will be nothing short of fantastic. I therefore am confirming my hypothesis in that something has largely funded as the recovery act, will also obtain a budget high enough to support a large IT staff, mission, goal, and development of a DB.

As far as measuring the amount of negative information presented in each of the federal funded DB's, my results are inconsistent and inconclusive. The ARRA DB's contain investment information and budgetary info split by each state. While it is important to note that very little negative information is portrayed on these sites, I was unable to collect enough information from the exact pages I evaluated for DB effectiveness. While the amount of negative information shown on a federal DB is undoubtedly important, it was out of the scope of this project, and is more suited for a transparency-specific project.
Motives for an effective DB

After reviewing each of these DB’s it is apparent that at least 15 of the 20 DB’s graded are properly designed and effective. While correlations with agencies that have higher amounts of funding and received a high grade do exist, it cannot be the only reason for a DB’s success. In numerous cases, such as Washoe Nevada’s DB (Figure 5) a great DB exists without a large scale agency behind it.

It is reasonable to conclude that a great dashboard is not a sum of budget, purpose, transparency initiative, and IT staff. The best dashboards come from a desired goal, a vision or a purpose. The recovery act is one of the largest releases of funds into America in history to lift the public from a deep recession. Since this is a goal for a majority of citizens, it is no surprise that the recovery dashboards are effective, and obtain a higher score. Db’s that serve their purpose in helping management achieve their goals are always effective. All you need for a great dashboard is a strategic goal and devoted staff, from there the DB builds itself and is tailored to present information effectively. DB’s can be generated by using simple Microsoft Excel applications and by expensive software, but depending on the creator’s needs, they can all serve the same purpose, which is informing those who rely on the information for decisions.

In most agencies the data exists, along with the software. DB creation is a simple, effective way of monitoring government agencies efficiently.

Future Implications

So where is the DB trend going? As part of Government 2.0, DB’s are being fabricated within more and more agencies, and are required to be in place in all agencies. (Infomrationweek.com). This plan is fantastic, because over time the public is informed with
how fraud is found, funds are misallocated, improper payments exists (GAO - Medicaid) and numerous government agencies. Government DB’s can lift us from the hidden world of government spending and help controls in each agency. DB implementation should not be a recommendation, but a requirement. After grading my sample, I have a reasonable level of assurance that our government is on the right track with the usage of effective performance dashboards. If these trends continue, I would predict a survey identical to this one to improve a full letter grade in less than two years.

Conclusion Paragraph.

In closing, DB’s can find their place anywhere, not just in the private sector, but in government as well. If a DB can conform to my grading criteria and effectively improve operations at the agency it is created in, than that DB should remain. The success of our government and its control over its money, has the ability to effect each and every one of it’s citizens. The most crucial point to understand is that something simple, cheap, and informative can help immensely. The implementation of Performance Dashboards in Government Agencies, can, and will, improve the missions and goals of our government, just as they do in the private sector.
Figures

Figure 1: Automotive Screenshot

Figure 2: FP Dashboard Example

Figure 3: Grading Template

Figure 4: Screenshot of 2 Highest Scoring Dashboards

Figure 5: Screenshot of 2 Lowest Scoring Dashboards
Figures:
Figure 1 - Picture of Car/Automotive DB

Figure 2 - Screenshot of FP example DB - From: http://executivedashboards.org/wp-content/uploads/2008/06/landscape-design-executive-dashboard.png
### Figure 3 - Grade template

<table>
<thead>
<tr>
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<th>B</th>
<th>C</th>
<th>D</th>
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#### Attribute Length Appearance Focus Adaptability Cost Effective Features Summary Overall effectiveness Total Letter Grade

![](image-url)

- **Attribute**: Name of the attribute being evaluated.
- **Length**: The length of the attribute.
- **Appearance**: How the attribute appears.
- **Focus**: The focus of the attribute.
- **Adaptability**: The adaptability of the attribute.
- **Cost Effective**: Cost effectiveness of the attribute.
- **Features**: Features of the attribute.
- **Summary**: Summary of the attribute.
- **Overall effectiveness**: Overall effectiveness of the attribute.
- **Total**: Total score for the attribute.
- **Letter Grade**: Letter grade assigned to the attribute.
Figure 4- Screenshot of two highest scoring DB’s
### Financial Snapshot

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### Performance Measures

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<td>$430M</td>
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<tr>
<td>Expenses</td>
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### Strategic Goals

1. Improve efficiency and effectiveness of institutional programs.
2. Enhance transparency and accountability of the agency.
3. Increase public trust in the agency's services.
4. Expand outreach and engagement to underserved communities.

#### Financial Summary

- **Revenue:**
  - **2008:** $426M
  - **2009:** $430M

- **Expenses:**
  - **2008:** $350M
  - **2009:** $340M

#### Key Performance Indicators

- **Revenue Growth:**
  - **2008:** 10%
  - **2009:** 8%

- **Expense Reduction:**
  - **2008:** 5%
  - **2009:** 6%

#### Future Agenda

- **Education Sector:**
  - Improve literacy rates
  - Enhance STEM education

- **Healthcare:**
  - Expand access to healthcare services
  - Increase preventative care programs

- **Economic Development:**
  - Stimulate job creation
  - Promote small business growth
Tables

1) Main data Table

2) DB URL and description list

3) DB grade Distribution Graph
Table 1- Main Data Table

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Indicates a State/ Large Funding Agency
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<th>Legitimacy</th>
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<td>An agency view within the FederalGov IT Dashboard</td>
<td>Current, Federal to public spending, and Real Time</td>
<td>15-Apr</td>
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<tr>
<td>Public D.C/Feds D.C</td>
<td>D.C.</td>
<td>Tracks DC spending and provides financial summaries</td>
<td>D.C. sponsored site, updated, and designed for public view</td>
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<tr>
<td>City of Boston</td>
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<td>A map based DB that allows viewing of projects, investments and financial position/roll down the city</td>
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<td>This is a DB that summarizes all emergency, and 911 calls by category. It also provides traffic info, safety info, etc.</td>
<td>State document, and available to public view</td>
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References:


