

# **The Cobalt Citizen Satisfaction Survey (CCSS)**

**2009 National Baseline  
Study Results**

## Abstract

Currently, state and local governments across the country are struggling to balance budgets in the face of an economic slowdown, a weakening housing market and rising unemployment, all key factors in the revenue they collect. In the coming months, local governments will be forced to make a number of difficult decisions about how to allocate scarce resources across an array of public programs and services and/or raise taxes to generate more revenue. Incorporating input from community residents into local policy decisions is vital to the democratic process and necessary to ensure a successful program of change. Good government depends on strong public support and a citizenry that is invested in the development and growth of their community.

The Cobalt Citizen Satisfaction Survey (CCSS) delivered by Cobalt and CFI Group is a measurement and management tool designed specifically for the public sector that enables community leaders to identify and prioritize actions for improving citizen satisfaction and targeted behaviors. It also enables local governments to track their progress toward established goals and benchmark their success against other community organizations with similar missions. The measurement system is powered by the same methodology that drives the University of Michigan's *American Customer Satisfaction Index* (ACSI), the only uniform, cross-industry measure of satisfaction available in the United States today. The Cobalt Citizen Satisfaction Survey (CCSS) brings the respected analytics of the ACSI methodology to the world of local government management at an affordable cost.

In late 2008 and early 2009, Cobalt conducted a pilot study for the Cobalt Citizen Satisfaction Survey (CCSS). Paper surveys were mailed out to a random sample of 2,500 adults ages 18 and older in various communities across the country. A total of 458 completed surveys were received. Beginning in 2010, Cobalt plans to begin annual National Citizen Satisfaction Studies with larger samples to provide greater detail on regions and special populations. As a result, participating local governments will be able to compare their performance against current national benchmarks, refreshed annually.

- This paper summarizes the main findings from the 2009 National Baseline Study. In addition, it provides an overview of the ACSI methodology and its key advantages as a performance measurement and management tool for local governments.

### About Cobalt Community Research & CFI Group

Cobalt Community Research is a 501c3 non-profit organization with a mission to provide research and educational tools that help local governments thrive as changes emerge in the economic, demographic and social landscape. Cobalt is located in Lansing, Michigan.

Launched in 1988, CFI Group is headquartered in Ann Arbor, Michigan and provides its measurement solutions worldwide, within four continents. CFI Group services clients in a variety of sectors including telecommunications, manufacturing, banking, retail and government. CFI Group brings the methodology of the American Customer Satisfaction Index (ACSI) to help organizations in any industry build strong, lasting and loyal customer relationships.

## Introduction

The legitimacy of local governments and the growth of the communities they oversee rest on the goodwill, confidence and active engagement of its residents. Local leadership alone cannot achieve real progress and long-term community growth; they need to work in close partnership with citizens that are committed to these same goals. In order to facilitate this kind of cooperation, citizens must feel that they are working together with a government that is responsive to their needs and committed to incorporating their opinions into local decision-making. Inevitably, as the current economic crisis continues to unfold in the coming months, anxious citizens concerned about how their precious tax dollars are being spent will demand greater transparency and accountability from their local leaders.

At the same time, in the face of unprecedented budget cuts and drastically shrinking revenue sources, state and local governments are under an enormous amount of pressure to ensure the financial sustainability of their jurisdictions. Responsible leadership requires that these fiscal realities be carefully balanced against the public demand for services. Determining the most effective allocation of resources for performance improvement that delivers maximum returns on investment is fundamental to any citizen satisfaction measurement program. The Cobalt Citizen Satisfaction Survey (CCSS) delivered by Cobalt and CFI Group is a measurement and management tool designed specifically for the public sector that enables community leaders to identify and prioritize actions for improving citizen satisfaction and targeted behaviors. It also enables local governments to track their progress toward established goals and benchmark their success against other community organizations with similar missions.

The concept of citizen-centered performance measurement is not new to the public sector. A number of state and local governments collect and publish data on resident needs and opinions about service delivery. However, the biggest challenges for most existing programs are expense, demand on limited staff time, measurement quality and predictive capability. Most research suppliers use simplistic measures to capture complex, multi-dimensional concepts like satisfaction, resulting in unreliable and misleading information. Moreover, traditional approaches fail to connect performance measures with desired performance outcomes within a meaningful cause-and-effect framework. Finally, traditional approaches are costly both in time and budget, so those communities that can afford such measurements do so infrequently. At the end of the day, public officials are left with great one-time insights into citizens' opinions but no clear guidance on how to translate the information into an effective action plan and no reliable mechanism to regularly measure progress. Without prior knowledge about the impact that policy or program changes are going to have on desired outcomes (citizen satisfaction), decision-making and strategic action devolve into a mere guessing game. The Cobalt Citizen Satisfaction Survey (CCSS) provides public officials with fact-driven information and clear direction for action that will take away such guess work.

## Key Findings

- Satisfaction with local government service provision and community amenities lags well behind satisfaction in the private sector and federal government: Citizen satisfaction with local communities currently rates a 58.0 on the ACSI's 100-point scale, lagging well behind the American Customer Satisfaction Index (ACSI) for the private sector (75.7 at last measure in Q4 2008) and the federal government (currently at 68.9). In relative terms, satisfaction with local government is extremely poor.
- Local government administration, economic health, public schools, community events and transportation are 'top priority' areas for improving citizen satisfaction; results indicate that community leadership is falling short in these areas and improvements there will focus resources where they will have the greatest impact on citizen satisfaction. These are national trends, but results may vary from community to community.
- Citizens are least satisfied with the economic health of their communities; Among the 15 areas measured, economic health received the lowest score of 48, with scores ranging between 48 and 78 (local fire department). In addition to economic health, other categories with relatively poor performance ratings in the low to mid-50s are diversity (52), transportation (56), and local government administration (56).
- Among the issues relating to the local economy, citizens are most dissatisfied with the quality of jobs; citizens were asked to rate 3 areas regarding the local economy - the quality of jobs received the lowest score of 42, which is 6 points lower than the availability of affordable housing and 9 points behind the cost of living.
- Citizens report low satisfaction with how they believe their local tax dollars are being spent; Among the areas citizens were asked to rate about their local government, "local governments spending dollars wisely" received the lowest rating of 47, with scores for this category ranging between 47 and 59 (leaders are trustworthy).
- Satisfied citizens exhibit higher levels of civic engagement, public trust and economic investment in their communities; Compared to citizens with mid-range satisfaction scores, highly satisfied citizens (scores of 85+) are: 47% more likely to remain in the community, 59% more likely to recommend the community as a good place to live, 33% more likely to volunteer, 53% more likely to encourage others to start a business locally and 70% more likely to support the current local government administration.
- Citizen satisfaction ratings are significantly lower among groups from economically disadvantaged backgrounds; Non-white citizens and those with lower income and education report lower levels of satisfaction, are less likely to remain in their communities, and are less willing to recommend the area as a good place to live.

## The Cobalt Citizen Satisfaction Study

Cobalt Community Research partnered with CFI Group to create the Cobalt Citizen Satisfaction Survey (CCSS) to help local governments measure, monitor and manage satisfaction among its citizen base. The measurement system is powered by the same methodology that drives the University of Michigan's *American Customer Satisfaction Index (ACSI)*, the only uniform, cross-industry measure of satisfaction available in the United States today. For over a decade, the index has been considered the "gold-standard" for customer satisfaction metrics in both the private sector and the federal government.

The Cobalt Citizen Satisfaction Survey (CCSS) brings the respected analytics of the ACSI methodology to the world of local government management at an affordable cost. The value of the measurement tool lies in its ability to quantify the impact that programmatic changes will have on citizen satisfaction, and in turn, the impact of satisfaction on future behavior (e.g., likelihood to remain in the community, likelihood to recommend the community to others, likelihood to start a business, etc.). Managers can therefore pinpoint changes that are important in affecting desired outcomes and know precisely what to expect before executing a plan. A second key advantage is that local governments using the product will be able to benchmark their performance annually against other communities that have adopted this solution using the nationally recognized *American Customer Satisfaction Index (ACSI)*.

A third advantage is the creation of a standardized annual index using a consistent and affordable survey instrument. The index allows local governments to filter out the influence on satisfaction from broader societal influences over which a local government has no control – such as economic or political events. A well-managed local government can compare themselves across organizations, can regularly re-measure and compare changes in past performance, and can ensure changes in their scores are based on their action and are not the result of wider social influences.

In late 2008 and early 2009, Cobalt conducted a pilot study for the Cobalt Citizen Satisfaction Survey (CCSS). Paper surveys were mailed out to a random sample of 2,500 adults ages 18 and older in various communities across the country. A total of 458 completed surveys were received, producing a confidence interval of +/- 2 percent. Beginning in 2010, Cobalt plans to begin annual National Citizen Satisfaction Studies with larger samples to provide greater detail on regions and special populations. As a result, participating local governments will be able to compare their performance against current national benchmarks, refreshed annually.

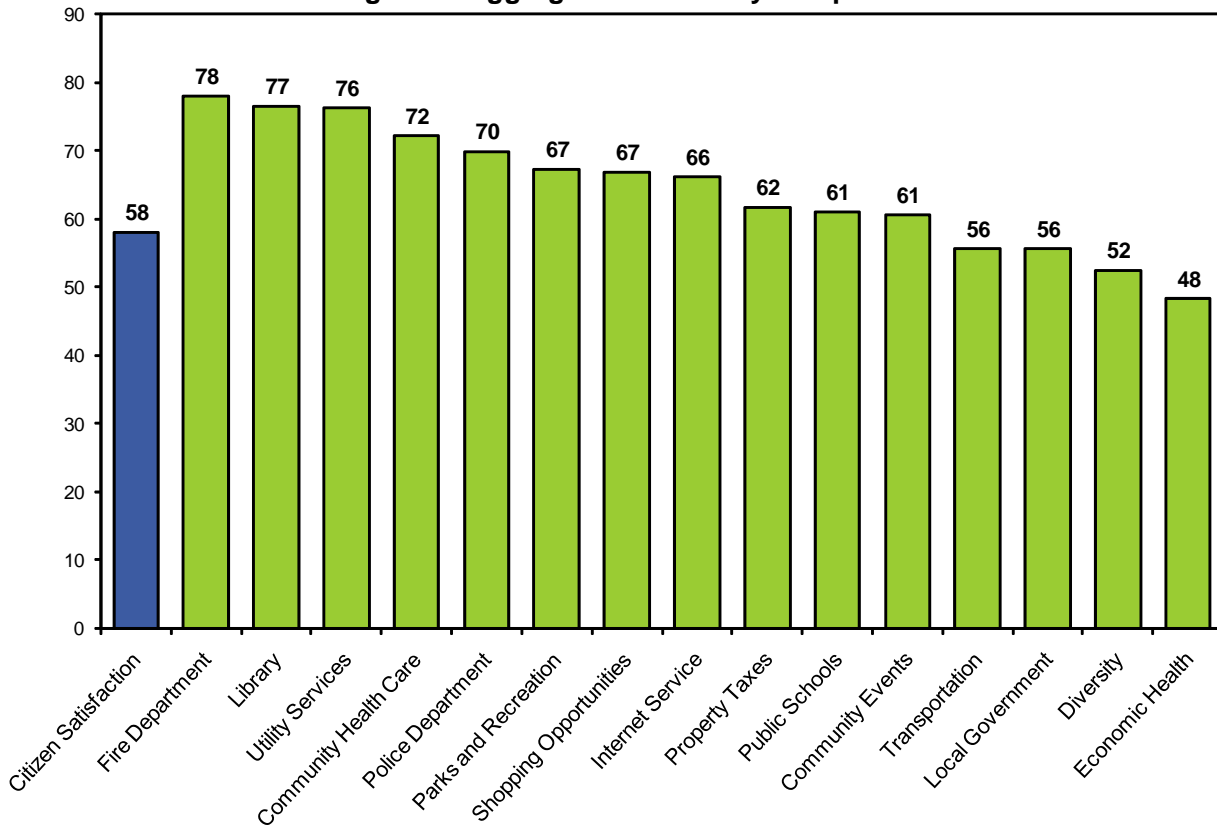
## National Study Results

The 2009 National Baseline Study shows that citizen satisfaction with local government services and community characteristics appears relatively low, coming in with a score of 58 for the entire sample. It is important to note that unlike the private sector, local governments provide services to all citizen “customers” in their jurisdiction and therefore cater to a much more heterogeneous base. Still, the score is significantly below the annually reported ACSI federal government index of 69 for 2008. While individual communities score higher and lower, there are plenty of opportunities for community leaders to improve their performance. The study focused on 15 components of community characteristics and local government services, arrayed in the figure below. They are:

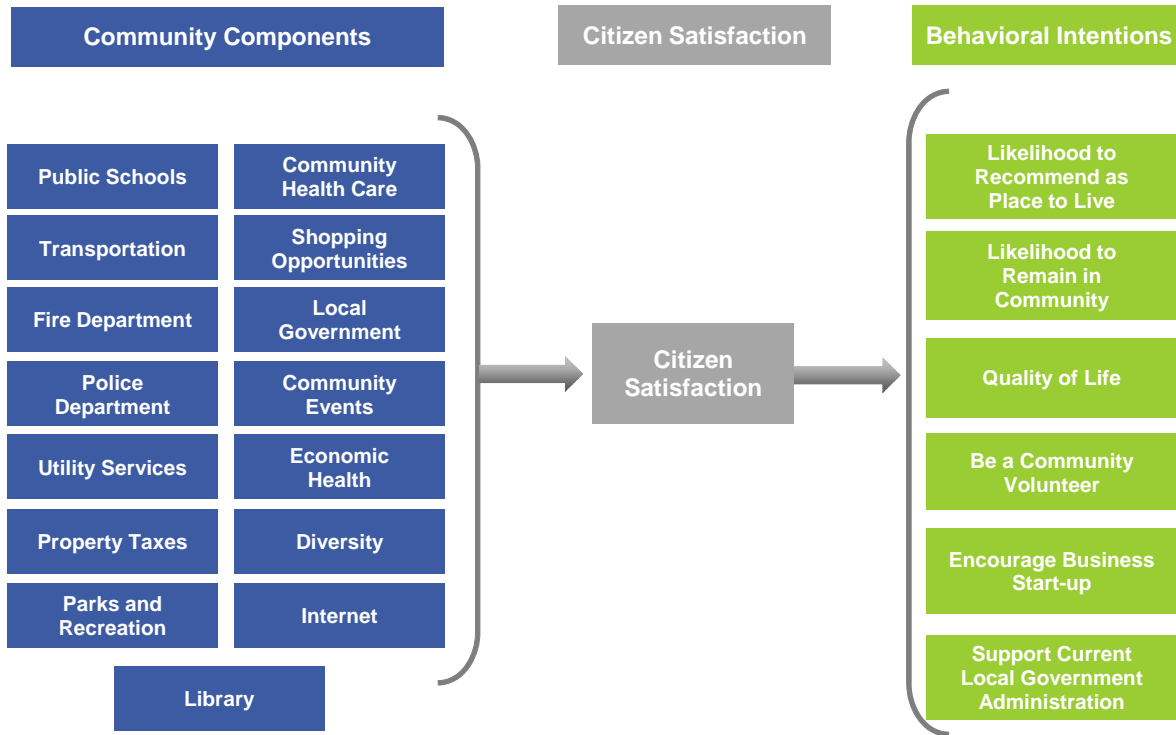
- Community Events
- Community Health Care
- Diversity
- Economic Health
- Fire Department
- Internet Service
- Library
- Parks and Recreation
- Local Government
- Police Department
- Property Taxes
- Public Schools
- Shopping Opportunities
- Transportation
- Utility Services

Among the community components, citizens gave fairly high ratings for the local fire department, library resources and utility services with scores of 78, 77 and 76, respectively. Not surprisingly, given the current climate of economic uncertainty, citizens appear to be least satisfied with the economic health of their communities, coming in with the lowest score of 48. In addition to the local economy, other categories with relatively poor performance ratings in the low to mid 50s are diversity (52), transportation (56), and local government administration (56).

**Figure 1. Aggregate Community Component Scores**



## The Citizen Satisfaction Model



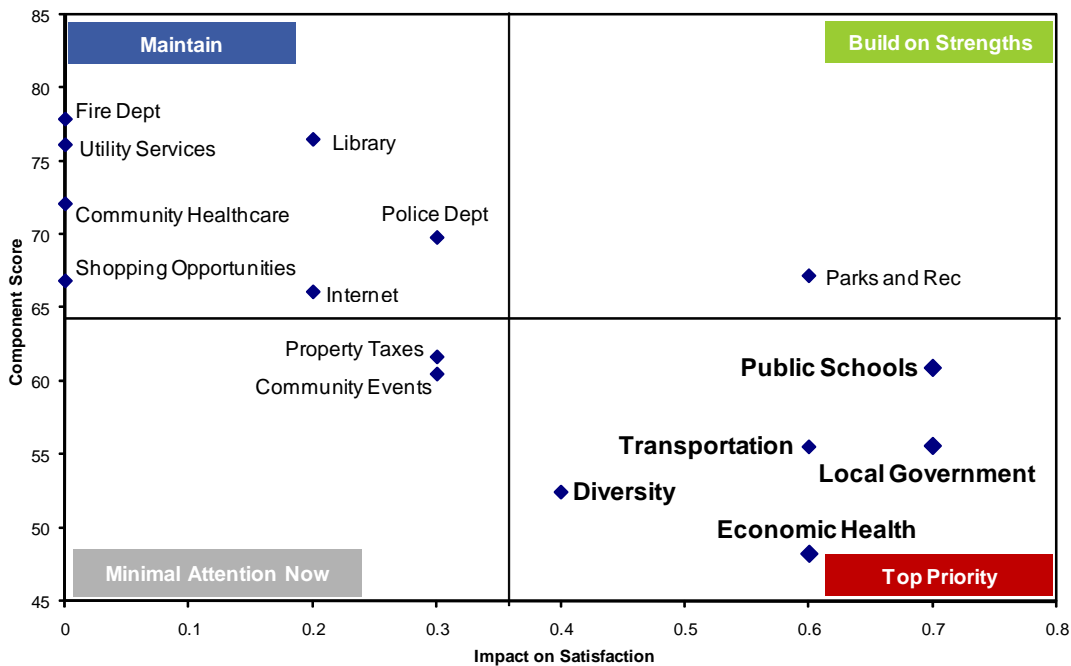
So where are the main risks and opportunities for local governments as they look for ways to improve citizen satisfaction and build community engagement? The ACSI methodology is based on a powerful causal modeling technique that is designed to assess which aspects of local government and community services have the greatest impact or leverage on citizen satisfaction. In the model diagram above, citizens' assessments of their community's performance across a variety of areas serve as key drivers of citizen satisfaction, which in turn is the driver of targeted behavioral outcomes (arrayed on the far right side of the model). Thus, the measurement system is based on a network of multi-dimensional concepts that are linked together in a cause-and-effect framework.

Community components, arrayed on the left side of the model, represent multi-dimensional indices, composed of several community *attributes* (which correspond to specific questions in the survey). Performance scores for each component range from 0 to 100 and represent optimally weighted averages of the ratings on the attributes. They are *optimal* because scores are derived to maximize the relationship (i.e., the correlations) between the various experience measures with citizen satisfaction *and* desired behavioral intentions. In addition to performance ratings, the model generates *impacts* for each community component and for the Citizen Satisfaction Index. These impacts represent the *independent effect* of each community component on citizen satisfaction and of citizen satisfaction on behavioral outcomes. In other words, impacts quantify the predicted change in citizen satisfaction given a change in a specific community component score – controlling for the influence of other factors. They therefore represent the amount of leverage that each component has on influencing citizen satisfaction and, in turn, targeted behaviors.

## From Information to Action

The output from the measurement system supports development of sensible action plans. While this process requires consideration of various factors including costs and overall governance strategy, the critical next phase is to set priorities for improvement initiatives. Before delving into a discussion of priorities, it is important to keep in mind that this dataset is composed of residents from communities across the nation. In practice, model results and improvement priorities would be unique to each community. However, for the purposes of demonstrating how we can derive actionable intelligence from model results, we will discuss findings and recommendations as if they apply to a particular community.

**Figure 2: Improvement Priority Map**



The improvement priority map, displayed above, combines community component scores and impact information from the model output and serves as the starting point for action planning. Generally speaking, the critical areas to improve are those where impact is high and performance is low (lower right quadrant). Citizens are essentially telling us that community leadership is falling short in these important areas and improvements there will focus resources where they have the greatest impact on satisfaction and desired behavioral outcomes.

High impact, high performance areas represent community strengths and core competencies. There is relatively less room for improvement to alter satisfaction or behavior in these areas, but they still have a high impact on CSI. Generally speaking, performance here should be carefully monitored and maintained. However, if scores are fairly low overall – as they are in this case – public managers may want to invest in improving performance in these areas given the high predicted impact on satisfaction.

Areas where impact is low and performance is weak should be given minimal attention unless quick wins can be made. According to citizens, performance here currently has a small impact on satisfaction and any significant investment is not likely to lead to comparable returns. However, drastic improvements in any of these components (e.g., 10 points or more) are likely to have a marked effect on satisfaction and should be

considered if attainable with relatively little effort and resources. Where feasible, for example, public officials might consider collaborating with other local governments or private companies that offer these services to improve performance quickly, effectively and at a relatively low cost to the government.

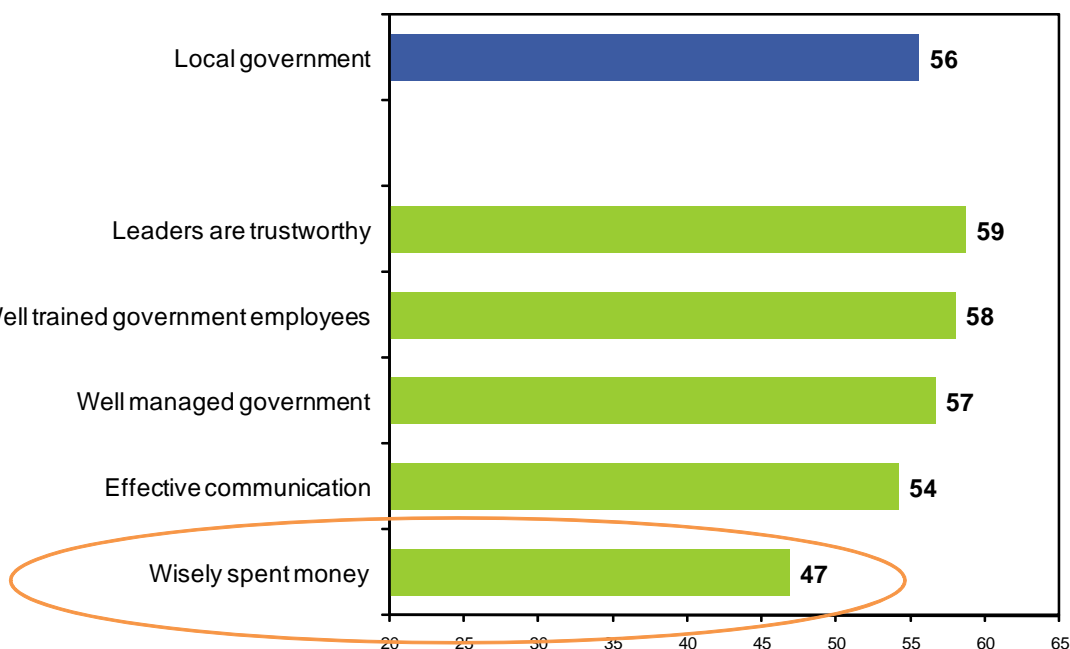
Finally, the implications for the remaining quadrant, where impact is low yet performance is high, is less clear and requires more careful consideration. On the one hand, it may represent areas of over-investment because the benefits and attributes are not currently driving citizen satisfaction. One cost-effective course of action in this instance might be to take advantage of the expertise gained in this area by developing cross-functional teams with lower performing areas where the additional resources, skills and best practices could benefit the lower-performing area.

On the other hand, components in this category may contain drivers of satisfaction that citizens perceive to be basic and necessary but are not top-of-mind. For example, having a responsive fire department may be important in an absolute sense, but this feature may offer no differentiation in terms of satisfaction because there is little to no variance in its performance from community to community. Citizens simply expect it so it doesn't enter into their overall evaluation of the community. In this case, local governments would need to maintain performance or else risk letting it slip into the high impact, low performance quadrant.

**The map identifies local government, economic health, public schools, diversity and transportation as top priority areas for improvement.** These are areas that are important to citizens' overall satisfaction with their communities and where performance is relatively weak. It is often helpful to break down the components by their attribute scores to understand what particular areas may need attention. This is done for local government and economic health below in figures 3 and 4.

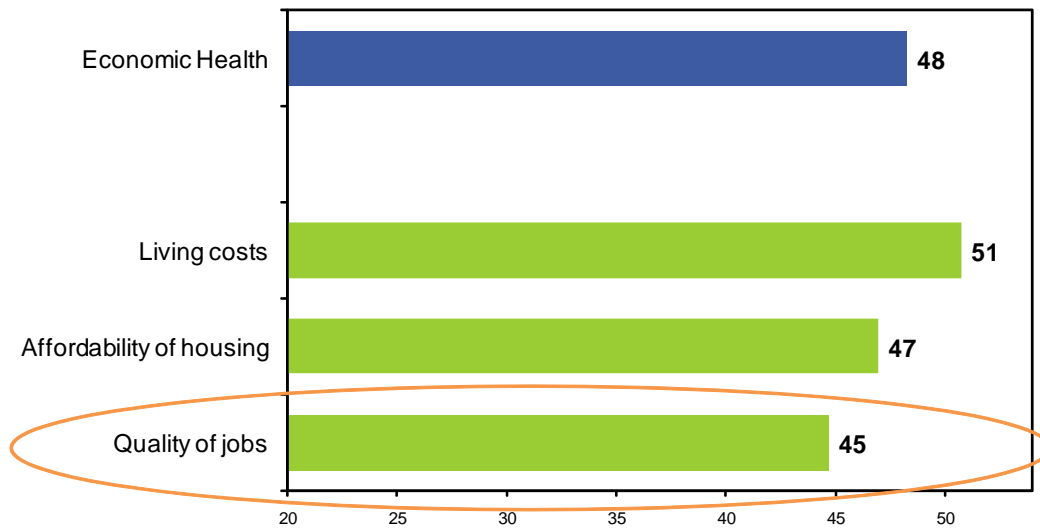
Among the areas respondents were asked to rate about their local government, citizens were most dissatisfied with how they believe their tax dollars are being spent. This attribute received the lowest rating of 47. Importantly, this suggests that local leadership may not be attuned to the needs of its citizen base when making decisions about how to allocate resources. It may also imply that more effective communication strategies are needed to inform the public of its spending decisions. Supporting this notion, note that the attribute for effective communication received the second lowest rating of 54. The saliency of these issues will only intensify for local government leaders in the coming months as they face difficult spending decisions and an increasingly anxious electorate likely to demand greater transparency.

**Figure 3. Attribute Scores for Local Government**



Not surprisingly, given today's unemployment figures, the lowest scoring attribute for the economic health component was quality of jobs. This attribute came in with a score of 45, approximately 2 points lower than the availability of affordable housing and 6 points behind the local cost of living. Although scores are low across the board, job quality is the area that offers the most room for improvement and is an issue that will continue to be top-of-mind for citizens until economic conditions stabilize. How much leverage local governments have to improve employment conditions obviously depends on the unique circumstances and resources of each community. Nonetheless, spending and communication efforts should focus on initiatives that address areas like job placement and training programs, new business development plans, public works programs, etc.

**Figure 4. Attribute Scores for Economic Health Component**



For the sample of participating local governments, the data help identify the key drivers of citizen satisfaction and develop intelligent action plans for the most effective allocation of resources to have the greatest improvement in citizen satisfaction, and the subsequent improvement in desired behavioral outcomes.

### **Strong Citizen Satisfaction Leads to Desired Behavioral Intentions**

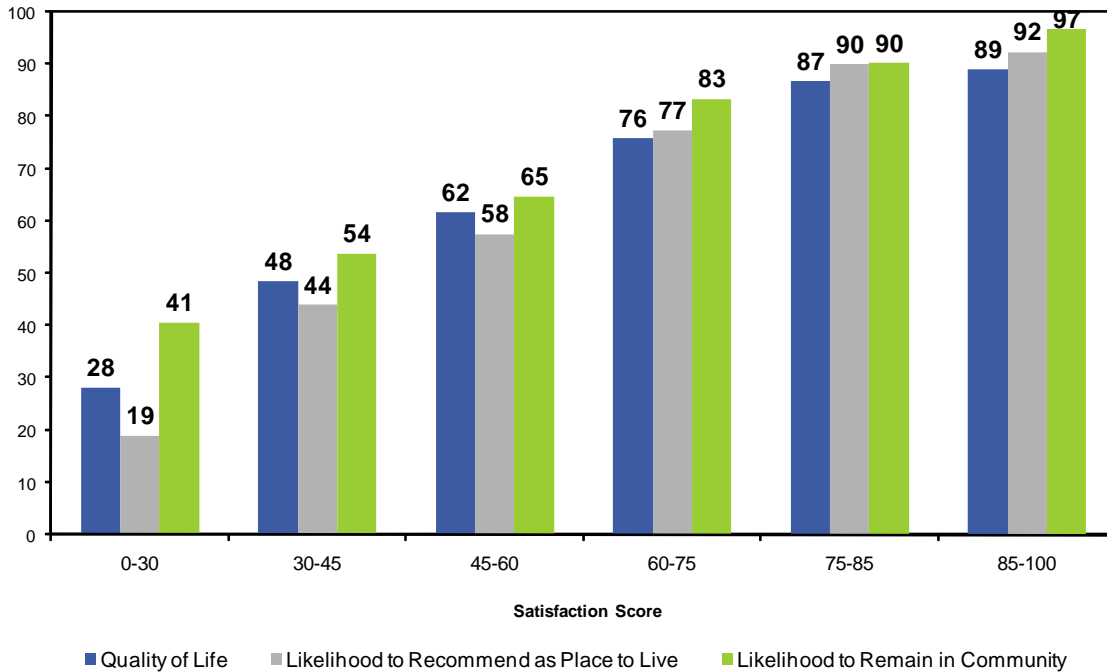
The study model provides many practical benefits for participating communities. While citizen satisfaction is an important high-level indicator of community health, it also drives practical behavioral outcomes that local officials care about. The study measured citizens' intentions or perceptions on the following six items:

- 1) Likelihood to recommend the community as a place to live
- 2) Likelihood to remain living in the community FIVE years from now
- 3) Likelihood to be a community volunteer
- 4) Likelihood to encourage someone to start a business in the community
- 5) Support of current local government administration
- 6) Overall Quality of Life<sup>1</sup>

<sup>1</sup> The Quality of Life component is a weighted average of 9 different attributes; Citizens were asked to rate their community on the following characteristics: a safe place to live, enjoyable place for children, enjoyable place for unmarried young adults, enjoyable place for senior citizens, enjoyable place for everyone else, attractive, a great place to live, a great place to have a business and growing responsibly.

These items essentially measure behavioral intentions among citizens that would significantly bolster the efforts of local governments and community organizations. They reflect the extent to which citizens are invested in the success and growth of their communities. Again, responses range between 0 and 100. Figures 5 and 6 show mean scores for each of these components across five satisfaction score groupings.

**Figure 5. Quality of Life, Likelihood to Recommend as Place to Live and Likelihood to Remain in Community Scores by Satisfaction Grouping**



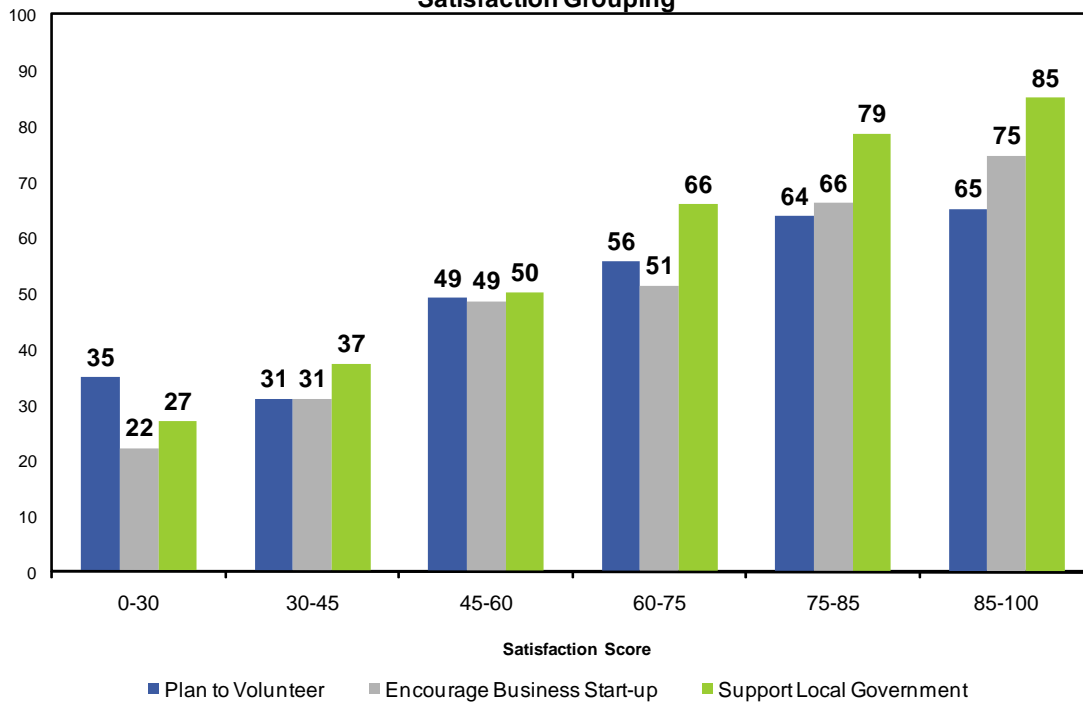
The data reveal a very strong and positive relationship between citizen satisfaction and all six measures of desired behavioral intentions and community perceptions. Intentions to stay, willingness to recommend and Quality of Life collectively measure citizens’ commitment to, and engagement in, their local communities. Comparing citizens with a mid-range satisfaction score of 45 to 60 to those with scores ranging between 85 and 100 we observe a:

- **44%** increase in Quality of Life (62 to 89)
- **59%** increase in Likelihood to Recommend as Place to Live (58 to 92)
- **49%** increase in Likelihood to Remain (65 to 97)

In addition to better Quality of Life perceptions, higher citizen satisfaction is related to increased levels of public trust, civic engagement and confidence in the local economy. These measures are important predictors of future community success. Residents are more likely to cooperate with proposed policies and initiatives advanced by their community leaders when trust in local government officials runs high. Furthermore, when residents are civically engaged and economically invested in the community, they actively participate in making the community more livable for all. Again, comparing citizens with a mid-range satisfaction score of 45 to 60 to those with scores ranging between 85 and 100 we observe a:

- **33%** increase in Likelihood to Volunteer (49 to 65)
- **53%** increase in Likelihood to Encourage Business Start-up (49 to 75)
- **70%** increase in Support of Current Local Government Administration (50 to 85)

**Figure 6. Likelihood to Volunteer, Likelihood to Encourage Business Start-up, and Support of Current Local Government Administration Scores by Satisfaction Grouping**

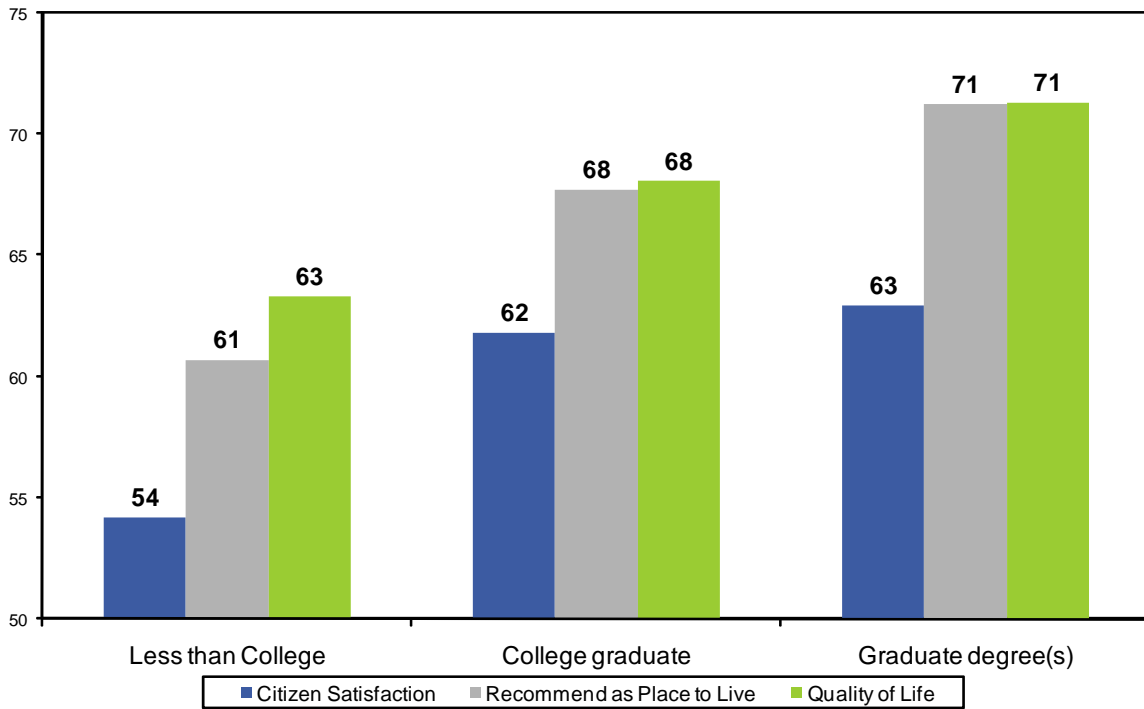


Overall, the 2009 National Baseline Study reveals a clear relationship between citizen satisfaction and desired behavioral outcomes. Higher citizen satisfaction means stronger support for local leaders, greater commitment to and investment in the community and, ultimately, a more successful future of growth. Measuring resident satisfaction is vital to effective community leadership, but satisfaction scores alone don't necessarily translate into clear action. This model helps community leaders identify the key drivers of citizen satisfaction and targeted behavior through this powerful cause-and-effect methodology.

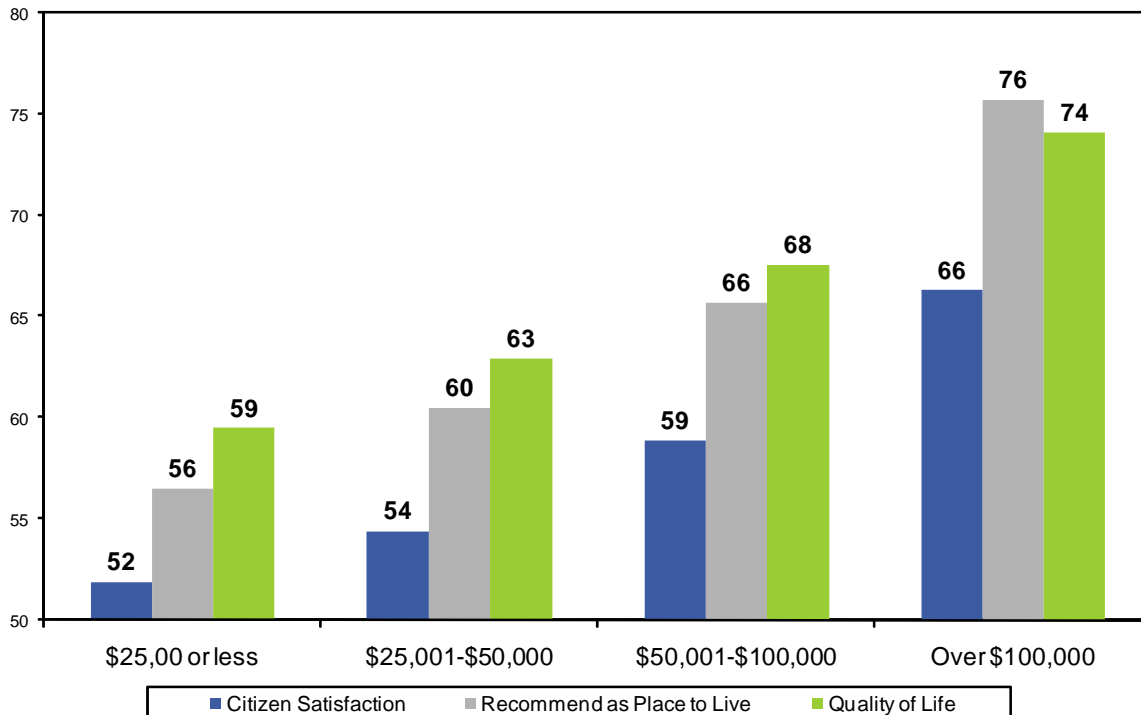
**Demographic Segments – Citizens with Disadvantaged Backgrounds Tend to be Less Satisfied**

In addition to the component questions, the study collected information on a number of key demographic characteristics. This includes information on gender, race, education, income, marital status, household characteristics, residential history, etc. This information allows a deeper dig into the data. A participating community, for example, can assess satisfaction and the quality of service provision across different segments within the community. In particular, it can help leaders identify underserved segments in the community and whether and where targeted communication, programs or investments might be advantageous.

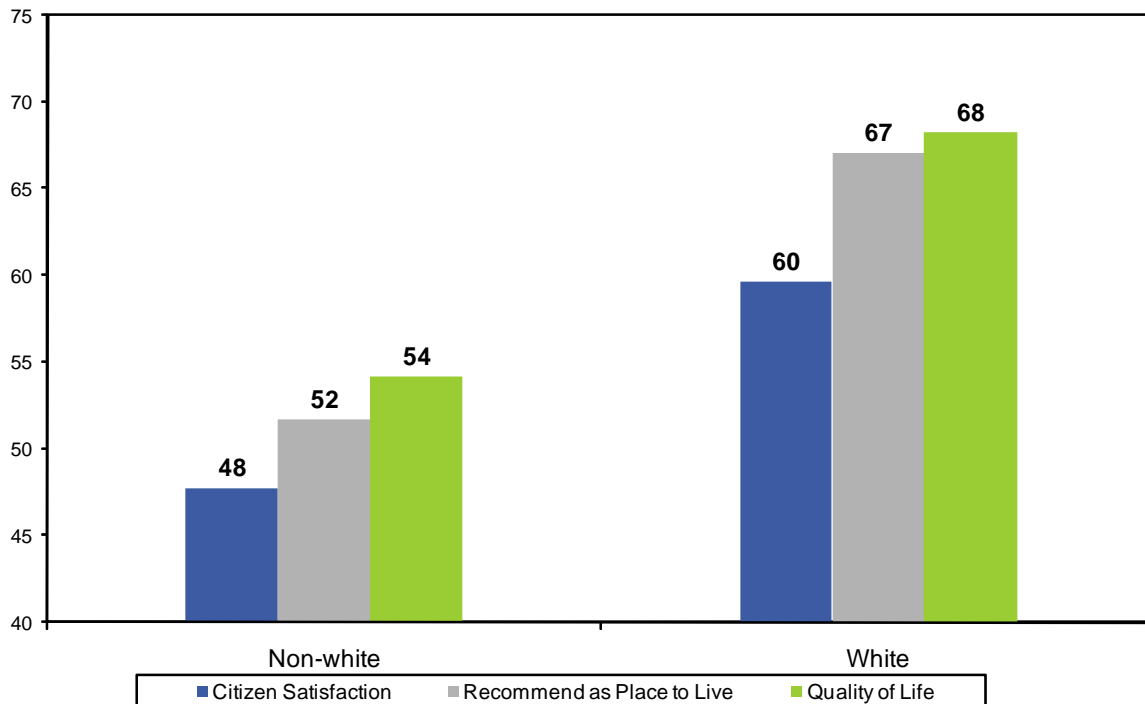
**Figure 7a. Citizen Satisfaction, Recommend and Quality of Life Scores by Educational Attainment**



**Figure 7b. Citizen Satisfaction, Recommend and Quality of Life Scores by Income Grouping**



**Figure 7c. Citizen Satisfaction, Recommend, and Quality of Life Scores by Race**



Figures 7a, 7b and 7c reveal some important group differences in citizens’ perceptions about the quality and level of community services and provisions<sup>2</sup>. Generally speaking, groups from economically disadvantaged backgrounds tend to give lower scores across the board. Non-white citizens and those with lower income and education report lower levels of satisfaction, are less likely to remain in their communities, and are less willing to recommend the area as a good place to live. Differences by household income are particularly stark; average scores across all measures for citizens reporting annual household incomes of \$25,000 or less are more than 10 points lower than for those earning over \$100,000. These preliminary findings are interesting in light of Bryant and Cha’s study<sup>3</sup> on group differences in ACSI scores, which actually found the opposite relationship between citizen satisfaction and socioeconomic status. Their study shows that satisfaction ratings for federal government services actually *decline* as education and income increase. The stark contrast with findings from our study suggests a significant rift in citizens’ perceptions regarding equitable public service delivery provided by federal versus local agencies.

<sup>2</sup> Importantly, inferences regarding differences in scores across demographic segments in this section are made as if the data apply to a single community and that therefore these different groups reside within a single jurisdiction.

<sup>3</sup> Bryant, Barbara and Cha, Jaesung, 1996. “Crossing the Threshold” *Marketing Research*; Winter 1996 Volume 8, Issue 4.

To identify areas where equitable service delivery may be particularly problematic, the table below displays mean scores for all community components by education, income and race groupings. The areas where we observe significant group differences in mean ratings include: community healthcare, economic health, and parks and recreation. Not surprisingly, economic health is where we see the most striking differences; there is a 12-point gap between residents with less than a college education and those with post-graduate degrees, a 12-point gap between white and non-white respondents and a 22-point gap between residents with household incomes of \$25,000 or less and those earning over \$100,000 or more. Depending on the unique situation of each community, these kinds of findings might prompt local leaders to consider concentrating resources in communication, programs and services that are targeted at some of these segments of the community.

Community Component Scores by Education, Ethnicity and Income																
	N	Public Schools	Transport	Fire Dept	Utility Services	Police Dept	Comm Health	Property Taxes	Shopping Opps	Local Govt	Comm Events	Econ Health	Diversity	Internet Services	Parks and Rec	Library
<b>Education</b>																
Less than College	243	60	54	78	75	68	68	59	63	52	58	44	50	61	64	77
College graduate	117	60	56	76	76	70	75	64	70	58	61	52	51	68	70	75
Graduate degee(s)	91	64	57	78	80	74	79	66	73	62	63	56	58	74	72	78
<b>Ethnicity</b>																
Non-white	64	54	51	72	69	58	61	55	67	50	52	38	48	63	58	69
White	386	62	56	79	77	72	74	63	67	57	62	50	53	66	69	78
<b>Income</b>																
\$25,000 or less	71	58	53	77	74	65	64	59	61	50	55	36	49	58	58	68
\$25,001-\$50,000	128	60	55	78	73	66	69	60	64	51	59	43	49	63	64	79
\$50,001-\$100,000	138	60	56	78	77	72	74	62	69	59	62	52	55	68	69	76
Over \$100,000	91	67	58	76	79	75	78	66	73	61	66	58	52	70	75	78
All	458	61	56	78	76	70	72	62	67	56	61	48	52	66	67	77

\* Highlighted cells represent statistically significant differences in group means at the 0.05 level  
 (Reference groups for mean comparisons are Education=Graduate Degree, Race=White and Income=Over \$100,000)

Currently, state and local governments across the country are struggling to balance budgets in the face of an economic slowdown, a weakening housing market and rising unemployment, all key factors in the revenue they collect. Local governments are making a number of difficult decisions about how to allocate scarce resources across an array of public programs and services and/or raise taxes to generate more revenue. Incorporating input from community residents into local policy decisions is vital to the democratic process and necessary to ensure a successful program of change. Good government depends on strong public support and a citizenry that is invested in the development and growth of their community. Furthermore, as the recipients of public services, citizens can best identify which areas of government are functioning well and which areas need improvement. They can also be instrumental in identifying how best to improve quality and efficiency. Toward these ends, citizen satisfaction programs can serve as a valuable performance management tool for government agencies.

The following section provides a methodological primer on the ACSI methodology that drives the powerful analytics behind the Cobalt Citizen Satisfaction Survey (CCSS). The discussion gives a broad overview of the major components of the methodology, the potential benefits realized by community leaders, and some illustrative comparisons to common alternative methodologies used by competing research organizations.

## Rationale – Why is the ACSI Methodology Needed by Local Government Agencies?

The value of ACSI based performance measurement to public sector organizations lies in its usefulness as an information source for management and policy decisions and a tool of accountability. In general, performance measurement methods such as customer/ citizen satisfaction (CS) programs can be used as management information sources in seven key areas:

- 1) **Budgeting and Resource Allocation:** The use of CS performance measurement in the budget process links financial costs to program results. This leaves policymakers better prepared to assign priorities, expand or reduce programs, and more accurately assess the costs of achieving desired results.
- 2) **Program Management and Service Quality:** Once CS measures have been agreed upon, progressive organizations may choose to give managers greater flexibility in determining *how* to achieve the desired results. Expanded operational authority enables them to respond more rapidly to changing conditions and needs while still ensuring accountability. Not only can CS performance measures identify problem areas that need attention, but they can also bring to light approaches that are working particularly well and which might warrant replication in other settings.
- 3) **Accountability:** CS measurement supports strategic planning and goal setting by gauging progress towards established goals (i.e., citizen satisfaction levels). Many observers feel that without such a mechanism to “hold government’s feet to the fire,” it is unlikely that a mere plan will lead to meaningful change.
- 4) **Contract Monitoring:** As governments increasingly contract out the provision of services to private vendors or other governments or nonprofit agencies, CS performance measurement becomes a critical tool in controlling risks and ensuring service quality. In short, contract monitors need performance measures to know whether or not contractors are fulfilling their performance obligations.
- 5) **Personnel Management:** CS performance measures can increase employee motivation and provide an objective means of assessing the achievement of group and/or individual targets. In fact, the establishment of clear departmental expectations and goals alone can go a long way towards increasing the motivation of managers and employees, many of whom otherwise see little direct connection between their efforts and any long-term goals.
- 6) **Interdepartmental Collaboration:** By providing a clear direction for efforts in a particular functional area, CS performance measurement can promote interdepartmental communication and collaboration.
- 7) **Communication with the Public:** Public reporting of performance measures can enhance citizens’ understanding and support of public programs. Moreover, a government that reports its own performance to citizens, rather than totally relinquishing that task to the media, has far more control over the manner in which information is disclosed and greater opportunity to describe its response to particular problems.<sup>4</sup>

Citizens are demanding results—they want to know how their money is being spent, why it is being spent that way, and how much they are getting for their money. Pressure has been thrust upon policymakers to continually strive for better, more efficient service delivery. Strategic planning, performance-measurement, budgeting, and citizen satisfaction surveys provide the framework for a government to be efficient, effective, and responsive to its citizenry.

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<sup>4</sup> Adapted from Paul Epstein, *Using Performance Measurement in Local Government* (New York: Van Nostrand Reinhold Co., 1984), and U.S. General Accounting Office, *Executive Guide: Effectively Implementing the Government Performance and Results Act* (Washington, D.C., 1996).

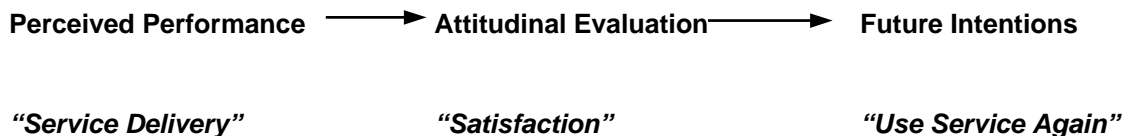
## The ACSI Advantage

The simple essence of the ACSI methodology is *measurement, diagnosis and prognosis*.

Building upon the knowledge developed from 70 years of social psychology research, CFI Group *measures* the three levels of a customer's thought process resulting from an experience with a program or service:

- *Perceptions of the performance* delivered by the various facets of the program or service experience,
- Overall *attitudinal evaluation* of the experience, and
- *Future behavioral intentions* towards the program or service in question.

These measures are embedded in a *diagnostic model* of cause-and-effect linkages that helps quantify the measures while at the same time empirically connects the three measurement levels; i.e., how do perceptions affect evaluation, and how does evaluation affect future intentions. The linkages quantify the changes that are necessary at one level to effect the greatest amount of change in the subsequent measurement level.



Finally, the *diagnostic* framework is then used to provide *prognoses* about how best to invest resources in programs, practices and procedures that affect the perceived performance levels of services, and what can be expected (in terms of evaluation and future intentions) as a result of the investments.

For commercial enterprises this powerful set of metrics, with their cause-and-effect linkages, gives a company an unequalled ability to manage the economic value of its customer base by providing *marginal resource allocation* guidance for product and service quality<sup>5</sup>. Government agencies may have different outcomes as objectives, but the same principles apply. In the following sections each of these elements (measurement, diagnosis and prognosis) is described in detail.

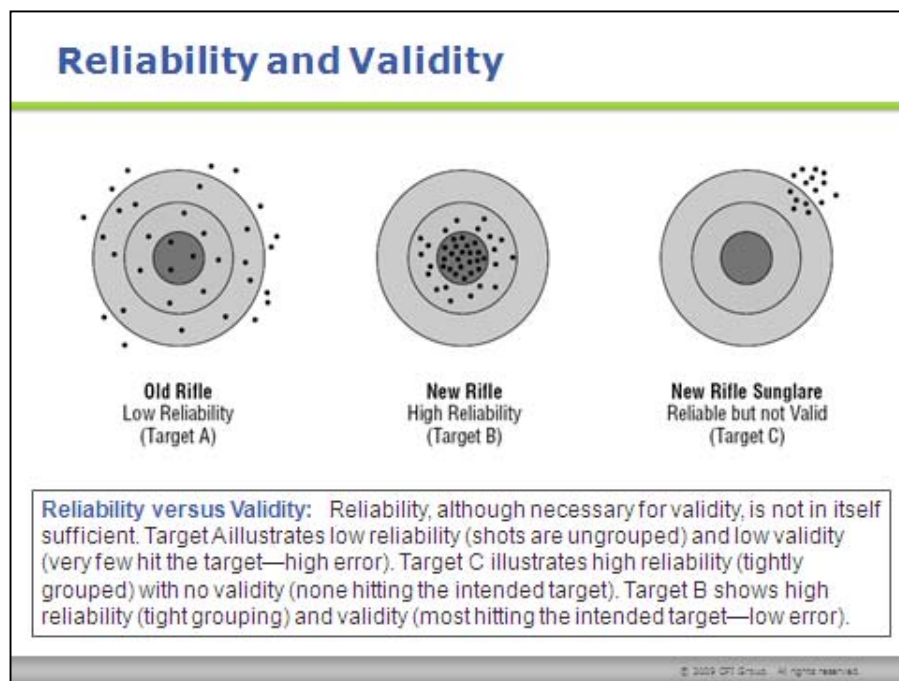
### Measurement

Good measurement requires reliability, validity and sensitivity.

- **Reliability:** Reliability is the quality of a measurement tool that allows it to obtain similar results over time and across situations (this is also referred to as the *internal consistency* of a measure). It is the degree to which measures are free from random error and therefore yield consistent results.
  - > Example: a rifle that is fired at a target the same way each time by the same rifleman should result in the same pattern of hits each time it is fired. If it does, then the rifle is considered to be reliable. If it doesn't, then there may be a flaw in the construction of the rifle (the sights are loose) that prevents it from being consistent.

<sup>5</sup> The *marginal resource allocation* concept is sometimes called “derived” importance. It should be noted that in the cause-and-effect measurement networks executed by CFI Group, all experience facets are fundamentally “important” to the customer/citizen. However, from a prognosis perspective the concern centers on how to achieve the greatest amount of change in a desired outcome (e.g., satisfaction), so the issue is most efficient marginal allocation of resources—not the reallocation of resources. An efficient allocation of resources is an allocation that satisfies the rule marginal benefit=marginal cost for each area of investment.

- **Validity:** Validity is the quality of a measurement tool to measure what we intend it to measure. In other words, extending the rifle analogy, does the rifleman hit the bull's-eye of the target? It is the degree to which measures are free from measurement error and reveal the truth about an object or quality of an object.
- **Sensitivity:** The sensitivity of a measurement tool is important, particularly when changes in attitude, or other hypothetical constructs, are under investigation. Sensitivity refers to the ability of an instrument to identify variability in stimuli or responses over successive measurement occasions or between groups (*power to detect change*).
  - > The sensitivity of a single item scale can be increased by adding additional questions or items. In other words, because index measures allow for a greater range of possible scores, they are more sensitive than single-item scales.



The ACSI methodology is based upon an advanced measurement and analysis system that combines best practices from psychometric science with an advanced causal modeling algorithm that insures potent levels of precision (validity combined with reliability) and power (sensitivity—ability to detect change).

What are the salient characteristics of the ACSI system that make it superior to competitive measurement approaches?

- Reduction of measurement error through the use of *multiple measures* of important experience factors and satisfaction levels. It is a well documented fact that the use of multiple item measures are far superior to single items for capturing the underlying “truth” of citizens’ experiences and satisfaction. Multiple item measures are the best way to measure intangible psychological concepts, such as performance perceptions and attitudes, since a single measure has a very high probability of “missing the target.”
- The derivation of optimal measure weights based on the cause-and-effect relationships between experiences, evaluations and intentions for combining the multiple measures into a single index.

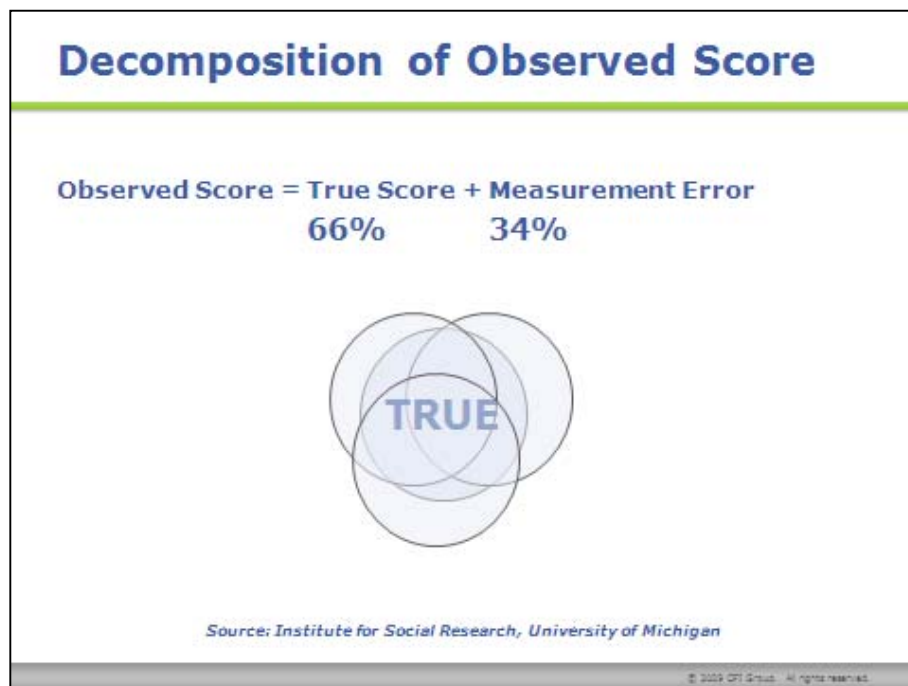
## How the ACSI Measurement System Realizes Precision and Power

Fundamentally, the main focus in measurement should be on ensuring measurement validity. While there are different types of validity, the most important is *construct validity*—i.e., does the measure actually measure what it purports to measure.

Other research suppliers often violate construct validity. For example, while there are a number of ways to measure satisfaction, most firms make the mistake of treating satisfaction as a simple binary concept. Simple in the sense that only one question is used; binary in the sense that citizens are categorized as either satisfied or dissatisfied (a so-called “Top Box” approach) – often in percentage terms (e.g., we have 80% satisfied citizens) or frequency counts. This approach is flawed because there is more measurement error in “Top Box” measures and a lower likelihood of detecting a change in satisfaction. Given the low quality of the resulting metric it is not surprising that many firms fail to find any relationship between quality and satisfaction and between satisfaction and desired behaviors.

As an illustration, compare satisfaction, as a concept, to intelligence. Both are “multidimensional” (i.e., they possess many different aspects), and they are not directly observable (i.e., one cannot “see” intelligence or satisfaction by observing somebody). Any attempt to measure intelligence by a simple question (are you intelligent or unintelligent?) is not likely to yield useful information. It is not reasonable to think that one can assess a person’s intelligence by a single question (or by a single test question). Likewise, it is not reasonable to assume that one can capture the concept of satisfaction by a single overall question.

The same logic also applies to the many different experiences that citizens have with programs or services. Each experience is multi-faceted. To get a “true” unbiased picture of what citizens experience, a number of questions (3 to 5 is usually sufficient) are required to triangulate on the essence or truth of the experience. As illustrated below, the more overlapped (and highly correlated) the individual measures are, the more valid (or true) the resulting combined measure is likely to be—i.e., the greater the likelihood of hitting the target<sup>6</sup>.

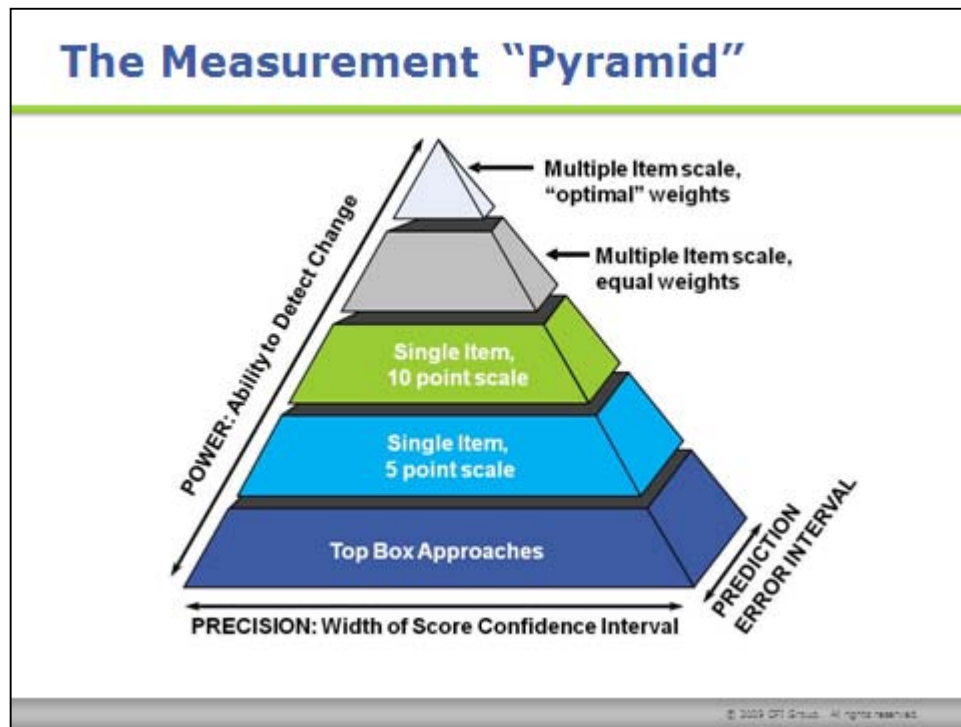


<sup>6</sup> It is important to note that just because a measure uses multiple indicators does not ipso facto result in a “valid” measure. It depends on how the indicators were developed. Questionnaire items that are based on the judgment or guess work of the researcher may be completely unrelated to the concept being measured. The result will be a flawed multi-item measure that may give reliable results—but completely “miss” the target. Only by using Voice of Citizen qualitative methods can one be reasonably confident that the customer measures are valid.

Clearly all measurement involves some degree of error. Ryan, Buzas and Ramaswamy (1995) found that the ACSI measurement system leads to an increase in precision (expressed as confidence intervals) over traditional methods by 20-30%. This can lead to a direct reduction in sample size requirements on average by 22% while still obtaining the same precision as conventional methods. Also, the explanatory power with respect to the consequences of satisfaction (e.g., behavioral intentions) is 56% better than with conventional methods. This is a result of using multiple measures for overall satisfaction<sup>7,8</sup>. The increase in measurement precision implies that *smaller samples* can be used with the *same measurement precision* as traditional methods, which results in very high cost savings for the client (or, alternatively, in *higher precision* with the *same sample size*).

Without enough measurement precision in the satisfaction index, the achievement of a performance outcome (such as volunteering or supporting public officials) will suffer<sup>9</sup>. The reason is that lack of precision shows up as random variation in the measure. As a result, it will be much more difficult to identify how satisfaction changes as management institutes quality improvements. Overall, the importance of the gain in precision that the ACSI system offers can hardly be understated. *In most cases, it would mean that the cost of using our system should be substantially lower than using a system by anybody else.* On average, about 50% of the cost is data collection and the size of the sample has a direct impact on precision.

The schematic below illustrates the relationships between precision, power and prediction error as a function of the type of measurement used.



<sup>7</sup> Fornell, Rhee, and Yi "Direct Regression, Reverse Regression, and Covariance Structure Analysis," *Marketing Letters*, 1991, 309-320.

<sup>8</sup> Ryan, Michael J., Thomas Buzas and Venkatram Ramaswamy (1995), "Making Customer Satisfaction Measurement a Power Tool," *Marketing Research*, Vol. 7, No. 3, Summer, 11-16.

<sup>9</sup> Hauser, John R, Simester, Duncan I, Wernerfelt, Birger. "Internal customers and internal suppliers," *Journal of Marketing Research*, Aug 1996. Vol. 33, Iss. 3; p. 268

## How Multiple Measures are Optimally Weighted

After good measures have been identified, a major issue in measurement is how best to combine the multiple measures into their respective indices—the formation of what is known as a “measurement model.” The method chosen can have important effects on the analysis results, especially if the results will be used for diagnosis and prognosis.

The typical ACSI measurement system is based on a network of multi-dimensional concepts that are linked together in a cause-and-effect framework. The scores of the various experience indices, the customer satisfaction index and the performance outcomes are a function of the simultaneous optimization of the entire framework. This empirical process is superior to any other method for ensuring diagnostic and prognostic power. Competitors use methods that are piecemeal replicas by comparison.

For example, in developing a satisfaction index some firms use relative weights derived from the factor analysis<sup>10</sup> of a number of questions about different aspects of a service or program. The resulting index is simply a consequence of the shared aspects (correlation) of the questions without regard to some optimizing criterion, such as a dependent variable like performance outcomes<sup>11</sup>. A particularly debilitating drawback of this approach is that if there are more questions about a particular attribute, that attribute will have a disproportionate representation in the index and can bias the resulting score.

The fact that quality aspects correlate among themselves often has little to do with citizens’ satisfaction levels, yet some firms persist in using this confounded measure by mixing a citizen’s experience with their satisfaction levels—the causes are lumped together with the effects. Since the weights applied to the variables to create the satisfaction index are based on the inter-correlations among the experience measures themselves, there is little reason to expect that the resulting indices have any relationship with performance outcomes. Thus, this weighting scheme is based on an irrelevant criterion (inter-correlations as opposed to optimizing on an objective criterion). To be useful, a performance index or a satisfaction index must be based on a more relevant criterion (such as willingness to recommend or volunteer)<sup>12</sup>.

The ACSI system relies on a measurement model that empirically produces a system of optimally weighted indices. It is *optimal* because the weights for the experience measures are derived to maximize the relationship (i.e., the correlations) between the various experience measures with customer satisfaction *and* desired behavioral intentions. The weights for all of the measures in the model are “adjusted” so that the correlations between the variables along the cause-and-effect pathways in the measurement system are maximized.

The weighting process used in the development of the measurement model is the first critical part of the ACSI measurement system. Unlike other weighting schemes, an objective criterion of importance to community leaders is used to optimally weigh the various measures in the service quality and citizen satisfaction indices. Since the weights are determined based on the performance-satisfaction-behavior relationships in the model, this maximizes the likelihood that an increase in a precursor index (e.g., service quality) will lead to an actual increase in a successor index (e.g., citizen satisfaction).

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<sup>10</sup> The purpose of factor analysis is to discover simple patterns in the pattern of relationships among the variables. In particular, it seeks to discover if the observed variables can be explained largely or entirely in terms of a much smaller number of variables called *factors*.

<sup>11</sup> For example, the optimizing criterion in a business model is usually a behavioral outcome related to increased profits like repeat purchasing. In the case of community satisfaction models, the optimizing criterion might include behaviors like volunteering, support for local officials or recommending the community as a good place to live.

<sup>12</sup> Other firms use even less sophisticated methods for combining individual items into a satisfaction index by relying upon summing or averaging of the ratings on the various questionnaire items.

## Diagnosis

As discussed above, the connective pathways between the experience indices, citizen satisfaction and behavioral intentions play an important role in the determination of the weights used for score calculation. But these paths also provide the backbone for the second key feature of the ACSI measurement system—impacts.

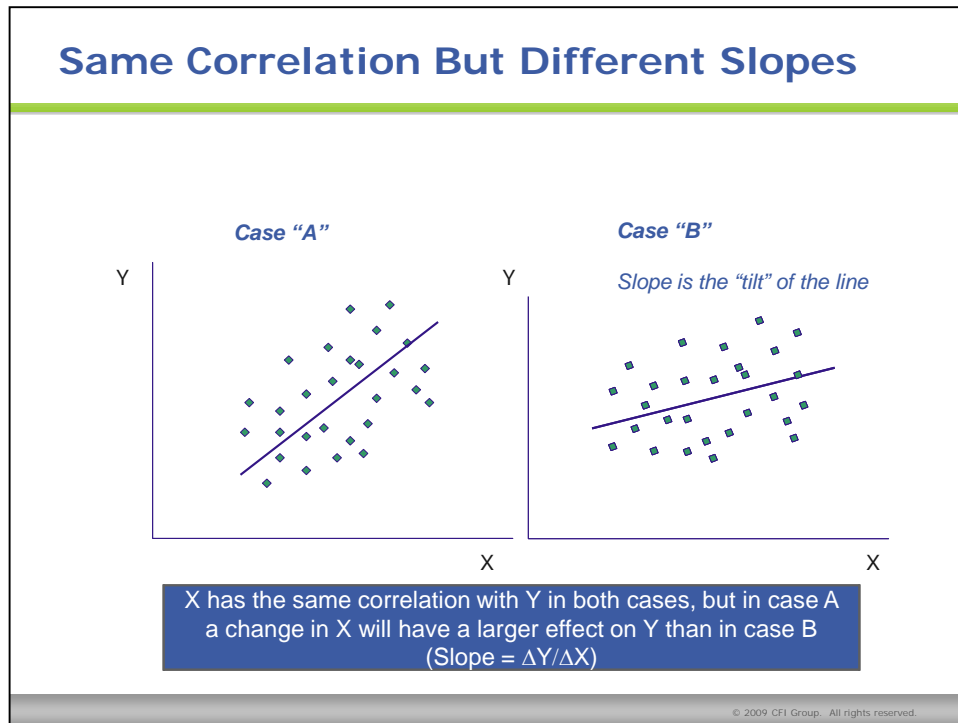
The most fundamental task of any organization (commercial or government) is the efficient allocation of scarce resources needed to accomplish desired performance outcomes. The ACSI system quantifies the impact of experience changes on satisfaction and, in turn, the impact of satisfaction on future behavior. Managers can then use this information for efficient resource allocation. What are the properties of the ACSI system that makes this possible?

ACSI methodology is based on a powerful causal modeling technique called Latent Variable Partial Least Squares (LV-PLS). This statistical technique essentially isolates the marginal impact of a change in an experience component on the change in citizen satisfaction (and the subsequent change in desired behavioral outcomes). It is also characterized by a “simultaneous” treatment of all its components (i.e., quality, satisfaction, behavioral outcomes). Importantly, while the basic LV-PLS approach is more suitable than other structural equation modeling techniques (like LISREL) used by many competitors for the analysis of citizen satisfaction data, it is not sufficient. In particular, the basic method does not handle the common problems of multicollinearity and standardization very well. ACSI proprietary modifications to the basic LV-PLS algorithm directly and effectively address these tricky estimation issues. As a result, the models are better able to detect the true association between experience quality and satisfaction, more able to explain satisfaction, and do so with greater accuracy.

It is not well understood, but a cause-and-effect assumption is made every time a management or policy decision is made (“if we do x, y will happen”). Unfortunately, public officials often base their decisions on hunches, cross-tabs or correlation coefficients. The ACSI system is different. It supports causal inferences based on considerable scientific backing and the reasons for this are several.

The first is somewhat technical. The logic is the same as in path analysis and covariance structure analysis – the decomposition of correlations into causal paths. This involves a comparison of the empirical correlations in the data and the correlations imposed by the model (expected correlation matrix). If those sets of correlations are identical (within sampling error), there is evidence for the causal structure imposed by the ACSI model (e.g., experience component x leads to citizen satisfaction).

The second important point concerns what is meant by “effect”. The ACSI system defines this as the marginal effect of component x on y when other components are held constant—i.e., the effect of a *change* in x on y. If we graph x on the horizontal axis and y on the vertical axis, it is represented by the *slope* of the function as illustrated in the schematic below.



It is critical to understand this concept because it is different from what most other competitors provide and the results may be different from what seems intuitive to the client. Market research firms, for example, often talk about “importance” and use correlation coefficients as measures of importance. But a high correlation does not imply that a change in x will cause a change in y.

Many firms use “stated”, or self-reported, importance measures, but these are equally flawed for the measurement of citizen satisfaction. The method assumes that citizens understand what you mean by “important”, they know and can identify just what attributes are important to them, and they are willing to tell you about it. Direct importance measures often result in socially acceptable or status quo answers and poor discrimination. Using direct scale ratings, for example, respondents have a difficult time differentiating among those attributes that are most important to them. It is rare to find significant differences in importance among the top-rated fifteen to twenty attributes in a survey. Moreover, research shows that there is often a considerable disconnect between those factors that people report as “important” in an abstract sense and what factors actually predict future behavioral decisions.

For management to efficiently allocate its resources, they need to know what will happen if there are changes in a certain aspect of citizens’ experiences – this is what the ACSI system provides. It also means that the use of the term “important” in this context refers to what will happen as a *result of a change* in something – not what is important per se.

## Prognosis

The ultimate proof of a good measurement system is its ability to make accurate predictions. The models built on the principles described above provide public officials with measurement-based tools for better management of citizens' satisfaction and behavior. With the patented process<sup>13</sup> used in the development of ACSI measurement systems, managers in commercial and public service organizations alike can be assured that they are getting valid, reliable and sensitive measures within a cause-and-effect framework that allows them to evaluate their decisions *before* they make them.

Once a model is finalized, the resultant output provides managers with clear direction on the best course of action to take for accomplishing desired outcomes. Specifically, performance scores and impact information are combined to pinpoint key drivers of citizen satisfaction and targeted behaviors and prioritize improvement initiatives to produce a clear plan of action. Competing measurement systems “statically” compare self-reported importance measures against current performance measures. The ACSI performance measurement approach provides a “dynamic” tool that tells managers what changes are important in affecting desired outcomes (e.g., increases in citizen satisfaction and community engagement). This distinction is a critical one for the success of resource allocation decisions that managers make daily. Without the knowledge of “what to expect” when executing a plan, decision-making devolves to a mere guessing game.

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<sup>13</sup> United States patent number 6,192,319, visit [www.uspto.gov](http://www.uspto.gov) for more information.

## Summary Table

The following table provides a basic summary of many of the key points made in the foregoing discussion.

Elements of ACSI Methodology Implementation			
	Measurement →	Diagnosis →	Prognosis
Objective	<ul style="list-style-type: none"> <li>✓ Reliable (precision)</li> <li>✓ Valid</li> <li>✓ Sensitive (power to detect change)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Impact or Key Driver Analysis (“To improve citizen satisfaction what matters the most?”)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Change Prediction (“How do changes in experiences effect changes in satisfaction and retention?”)</li> </ul>
Characteristics	<ul style="list-style-type: none"> <li>✓ “Voice of the citizen” (VOC) based</li> <li>✓ Multiple measures optimally weighted based on strength of relationships in measurement network</li> <li>✓ Reduced measurement error</li> <li>✓ Reduced confidence intervals</li> <li>✓ Uses unstandardized performance scores</li> </ul>	<ul style="list-style-type: none"> <li>✓ Calculated within the context of a complex cause-and-effect network.</li> <li>✓ Based on unstandardized slopes, not correlation</li> <li>✓ Optimized with regard to key management objectives (i.e., CS or behaviors)</li> <li>✓ Control of multi-collinearity provides more reliable impact estimation</li> </ul>	<ul style="list-style-type: none"> <li>✓ “What if” predictive tool</li> <li>✓ Quantifies the effects of changes across multiple nodes (experience to evaluation to intention)</li> <li>✓ Future effects are comparative across time, location or segment given planned investment levels</li> </ul>
Benefits	<ul style="list-style-type: none"> <li>✓ Accurate</li> <li>✓ Meaningful—tied directly to citizen experience</li> <li>✓ Comprehensive—incorporates all aspects of citizen experiences</li> <li>✓ Understandable—simple scoring method</li> <li>✓ Comparable – by using unstandardized scores</li> </ul>	<ul style="list-style-type: none"> <li>✓ Prioritizes improvement efforts</li> <li>✓ Provides impacts that are additive in nature and comparable across groups</li> <li>✓ Allows for more efficient allocation of resources based on the economic concept of marginality</li> </ul>	<ul style="list-style-type: none"> <li>✓ Focuses on the “dynamic” quantification of change</li> <li>✓ Increased ability to envision future change in key performance outcomes</li> </ul>