The State of Performance Analytics in Local Government: Analysis of Measures

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EXECUTIVE SUMMARY

This second report in the series builds on our previous report (The State of Performance Analytics in Local Governments: An Initial Assessment) and delves into the usage and need for performance analytics in local government. As we note, the usage of analytics reflects the reaction of local government to move away from reliance on a single individual to spot trends and make recommendation to move towards data-supported decision-making. As such, we surveyed the usage and application of performance analytics across 132 total local governments including the police, parks and recreation, public works and code enforcement departments.

Several key overall themes emerged. First, we note great disparity in the collection and use of performance data across departments although there is general alignment between the frequency with which a department uses performance analytics and its perceived impact. Second, there is great variation in the management and governance of analytics across departments. Third, generally speaking, departments did not perceive any significant challenges to fuller adoption of performance analytics but also did not see any significant incentives to doing so. Finally, enthusiasm for performance analytics is generally low outside of government (civil society) but is much higher within government.

We divided the four departments surveyed based on the coercive nature of their role and on the use of technology and found significant differences using this typology. Among other things, these differences were seen based on usage of workload and cost-efficiency measures (police departments significantly more advanced), collection of responsiveness and outcomes (police departments more advanced), collection and analysis of satisfaction measures (police and parks and recreation departments more advanced) and use of public sentiment measures (public works more advanced). None of the departments reported significant differences with technology or human challenges to implementing performance analytics and all were also enthusiastic about the usage of performance analytics.

We also examined the maturity of performance analytics across departments. We were pleased to note that a significant number of local governments had already achieved the “appreciative” level of maturity and a significant number of police departments had gone further and achieved the “organized” level of maturity. With the exception of police departments, other departments were generally behind.

It is important that local governments make the collection and usage of performance analytics into an operational priority and good models exist to emulate and guide further development. By following these models, better usage of performance analytics is likely and this provides significant benefits throughout government.
INTRODUCTION
The use of data and evidence for management has never been more important for the management of government than it is today and the evidence suggests that this usage will continue to rise significantly over the coming decades. The application of performance analytics, which we define as the usage of statistical modeling to discover, understand and communicate patterns within data, can increase efficiencies in internal operations, conduct more effective interventions to address problems and encourage innovation to address challenges and realize opportunities. Far from simple hunches, performance analytics provide a rigor and structure to understand and take advantage of patterns in the data.

In many ways, the usage of performance analytics can be seen as a reaction to previous decision-making which were reliant on a single individual or a small number of individuals with expertise and experience in a particular area to spot trends and recommend actions. The problem was that these individuals were scarce and their decision-making capability could not scale to meet the ever-growing demands for effective government. Further, these individuals were often making decisions in the absence of supportive data and this impacted their accuracy and timeliness.

Broadly speaking, performance analytics rely on four distinct but interrelated components:
- Data – Having access to accurate and relevant data from a wide variety of sources
- Analytics – Having the ability to analyze and mine data to discover patterns, associations and trends within the data
- Assessments – Understanding the mined data within its relevant context to create actionable knowledge
- Actions – Conducting actions within the appropriate timeframe in an optimal manner to achieve organizational performance goals.

While the desire to make data-centric decisions has long existed, the technology has only recently become available at a price point that makes it practical for local government. Further, the sheer explosion of data sources, such as the omnipresent use of sensors throughout the country, has considerably enriched the volume of potential data. And, in the use of performance analytics, the size of the potential data stores is critically important. However, coming with the explosion of data and the ready availability of technology, is a rise in expectations. Communities throughout the country are now grappling with heightened citizen demands to transform the data into assets for both the local government as well as the communities they serve.

Numerous stories of the value of performance analytics exist throughout the country but the majority of these examples are from the private sector. Clearly, the public sector is missing out by not yet having embraced performance analytics.

The purpose of this study is to understand the state of performance analytics at the local government level. While some anecdotal stories exist, little is known about the state of practice within this community. This study addresses this gap by collecting data to enable local governments to benchmark themselves against other local governments and to understand the most critical areas in which to invest in order to see positive results.

In this report, we analyze the state of performance analytics within local government. In the next section, Methodology, we summarize our findings from Phase I of this effort and discuss our approach
to conducting this second phase of the study. In the third section, Findings, we present our overall results from the study and break down the findings into smaller classification (e.g. department size etc.). We also array the findings along the maturity scale and address key areas for improvement. In the fourth section, Implications, we discuss the key points to be learned from this analysis and present a strategy for local government to improve its usage and application of analytics. Finally, in our fifth section, Conclusion, we offer some final thoughts on performance analytics in local government.

**Methodology**

This effort is the second of a multi-phase effort to understand the state of performance analytics in local government. In Phase I, we interviewed over two dozen public managers to understand their knowledge of performance analytics across government as well as gaining any insights they had about efforts to employ performance analytics. Based on those interviews (and other data collection from Phase I), we had the following critical findings:

- **Awareness** – There is very wide disparity about the use and awareness of performance analytics across communities.
- **Perceptions** – In those communities where analytics were used, we almost always found a strong champion who we see as critical to the successful implementation of analytics. In other communities with low usage, analytics were perceived to be negative and could be used for punitive purposes.
- **Tool usage** – In a few communities, exploration was underway to find and deploy appropriate tools. But in most other communities, there were considerable struggles to get data out of current systems and so analytics were primarily done by linking multiple spreadsheets together.

Using this information, we proposed a five-stage model to assess the maturity of performance analytics within a community:

- **Ad-hoc level** – No defined or standardized process for performance analytics and individuals are left to their own devices to perform their tasks.
- **Reactive level** – Basic performance analytics functions are done but generally only as a reaction to external pressure.
- **Appreciative level** – Recognition and embracing of the need to create an evidence-driven data culture and exploration of tools and strategies to implement it.
- **Organized level** – System and defined program underway that is focused on gathering and applying performance analytics.
- **Optimizing Ad-Infinitum level** – Fully functioning performance analytic function that is consistently evaluated and enhanced through continuous improvement.

This effort, Phase II, moves to the interview stage and gathers detailed data on the types of performance analytics that are captured, the frequency of use, and the outcomes of their usage. Using the information gathered from Phase I as well as the authors’ direct experience with performance analytics, a survey was created to capture the following information:

- Frequency of collection and analysis of performance data (never, four times per year, bi-monthly/monthly or routinely)
- Usage of performance analytics results (never, once/twice per year, quarterly, more than four times per year)
- Impact of performance metrics (not used much, presentation only, informs but does not dominate decision-making or significantly influences decision-making)
- Management of analytics
• Organizational barriers and incentives to the implementation and usage of analytics
• Stakeholder enthusiasm for analytics

A pilot survey was created and sent to six city managers who distributed the survey to the heads of the four departments for completion. Once their comments were incorporated, a full survey was sent out using SurveyMonkey. The survey was sent by senior staff at the Alliance for Innovation to 280 counties and cities. In particular, we asked for four specific departments within each city/county to respond to the survey: police department, streets / public works department, code compliance unit, and parks and recreation department. These four departments were selected because they fit into a general model of how to divide city services (see Table 1).

<table>
<thead>
<tr>
<th></th>
<th>Coercive Services</th>
<th>Non-Coercive Services</th>
</tr>
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<tbody>
<tr>
<td>Highly Technical</td>
<td>Police</td>
<td>Streets / Public works</td>
</tr>
<tr>
<td>Not highly technical</td>
<td>Code compliance</td>
<td>Parks and recreation</td>
</tr>
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</table>

Table 1 – Model of city services

In this model, the term coercive services refers to the use of “forceful persuasion” to convince citizens to behave in a way consistent with what government requires while technical level refers to the amount of technology that is needed to perform the work. Thus, the four departments surveyed cleanly mapped into each quadrant. Our response rate was 21%, which we considered to be good considering the length and complexity of the survey. In total, we captured data from 132 departments (not all departments in all communities responded).

**FINDINGS**

We first present some overall themes that emerged from the data and then address the themes on a departmental level.

**Overall Themes**

**Overall Theme #1 – Great disparity in the collection and use of performance measures (data-related theme)**

As seen in Figure 1, Figure 2, Figure 3, and Figure 4 there is great disparity in the collection and analysis of performance measures.

Figure 1 shows that workload measures and outcomes measures are routinely collected but responsiveness and cost efficiency measures are much less frequently collected. The analysis of the measures is probably tied to certain reporting deadlines where workload measures likely need to be analyzed more frequently (perhaps weekly) while cost-efficiency measures are more likely needed on a monthly or even semi-annual basis.
Figure 1: Performance Measures: Workload, Cost-Efficiency, Responsiveness, & Outcomes

Figure 2 shows a similar “as-needed” usage pattern as those measures in Figure 1. Highly sensitive measures, like complaints and public sentiment, are likely to be needed on a more urgent basis, which explains why they are collected and analyzed more frequently than other measures. Surprisingly, satisfaction / perception data is collected but is only analyzed infrequently. Complaints and public sentiment data is collected and analyzed more frequently compared to other measures.

Figure 2: Performance Measures: Satisfaction, Citizen Complainants, Public Sentiments, & Time Trend

Figure 3 displays the same pattern as the other measures and we would expect benchmarking to be done relatively infrequently due to both the time and effort involved with doing a thorough benchmarking. However, we were surprised by the number of communities that never collected or compared themselves to either peer government agencies or national standards. We suspect that this is due to a belief that it would highlight how far behind the particular community is as compared to others,
but this is exactly why it needs to be done: to have a realistic understanding of actual performance. Then, by understanding current performance, successful performance enhancement is made easier by sufficient models that can strategically guide departmental improvements.

**Figure 3: Performance Measures: Benchmark with Peer Government Agencies and National Standards, & GIS distribution**

Figure 4 shows that local governments are seldom or less frequently using performance data for casual modeling and predictive analytics modeling. This result is not surprising given that many local governments are not collecting and analyzing data on various performance measures.

In all these areas, the key opportunity for improvement is to find ways to include analytics outside of the normal timing and pressures to ensure that performance analytics are treated as a process rather than a sporadic event.

**Figure 4: Performance Measures (Analysis): Casual & Prediction Analytics Modelling**

**Overall theme #2 – General alignment between frequency of use and perceived impact (analytics-related theme)**

In most cases, the frequency of use of analytics and their perceived impact are relatively in sync (see Figure 5) but there are some interesting and significant mismatches.
In the first five areas (routine program management and planning, budgetary planning, strategic planning with elected officials, strategic planning with managerial leadership and program evaluation/monitoring) the impact from analytics significantly outstrips its usage. This points to a clear area where the community is putting in some (likely significant) effort to capture and report various performance analytics but many communities are simply not taking advantage of the insights that these measures may provide. These areas could represent an “easy win” for those with responsibility for the advancement of analytics within the community.

In the other areas, there is relative balance between the impact from the analysis and the frequency of usage. This suggests that enough effort is being exerted relative to the amount of value received for performance analytics to be fruitful.

The key opportunity for improvement is to regularly tout the impact that analytics bring to other areas and broaden their usage.

Overall theme #3 – Significant divide in the management and governance of analytics (assessment-related theme)

While the management and governance of analytics takes place, it appears to be highly divided and without the valuable “big tent” approach (see Figures 6 and 7).

In a culture that fully embraces analytics, we would expect each of these groups to be fully involved in analytics and Figure 6 likely reflects the fact that analytics is still emerging as a discipline within various communities. Still, it is encouraging to see the penetration into different areas as this will likely increase over time as performance analytics increasingly proves its value. With the departments surveyed, we were surprised to see how uninolved the Information Technology (IT) staff and the Geographic Information Systems (GIS) analysts were in using performance analytics data as this would seem to be a sweet spot for analytics.
As shown in Figure 7, we were also surprised to see how uninvolved the departments surveyed were in tending to issues of data security and data privacy. Given the importance of such items to performance analytics, this is disappointing. The key opportunity for improvement is to continue to tell the success stories that result from the use of performance metrics and, as the value of analytics becomes better known, the involvement should increase.

Overall theme #4 – Local governments do not face significant challenges in terms of implementing performance analytics, but they also do not have high incentives to implement. Figures 8, 9, and 10 display key concerns reported by respondents’ for implementing performance analytics.

As Figure 8 shows, overall, departments reported that their city and their specific department promote innovation driven culture, i.e. promote bottom-up innovation, anticipatory change, and learn by doing.
Further, local governments in the sample noted that they do not feel pressure in terms of negative consequences (budget cuts, punitive consequence) and positive rewards (monetary benefits, public recognition). Lack of negative consequences is a relief and may provide a safe space for local governments to experiment with performance analytics. But lack of positive rewards is a concern as providing some incentives could encourage local governments to develop their performance analytics capacity. Interestingly, respondents in the sample also reported that they are not concerned with Information Technology issues such as: data security, reliability, and outdated systems.

As Figure 9 shows, respondents generally view performance measurement as a continuous improvement and right thing for public accountability. Respondents also reported that they do not face a challenge in terms of convincing the city’s budget staff and elected officials about the value of performance measurement. The attitude of local governments toward performance measurement is a good thing and may likely promote them to adopt and use performance measurement in the future. Surprisingly, the respondents reported that they do not feel public pressure to implement performance measures.
On average, local governments reported that they do not face significant challenges in Information Technology in terms of human and technical capacity (see Figure 10).

**Figure 10: Key Barriers: Information Technology Human & Technical Capacity**

**Overall theme #5 – Enthusiasm is low within civil society but significantly higher among different government entities (actions-related theme)**

Significantly varied levels of enthusiasm towards performance analytics is reported between civil society and government. There is a widespread lack of enthusiasm for the usage of performance analytics within every aspect of civil society (see Figure 11).
As shown in Figure 12, throughout city governments, enthusiasm for analytics is quite high with one striking exception: enthusiasm is lacking at the departmental level. We suspect that lack of departmental collaboration and support is a likely reason behind this lack of enthusiasm. This is where the work needs to get done and it is critical to promote inter-departmental collaboration on data analytics. Fortunately, the support for analytics exists throughout the city government and this likely means that additional support (and demands) should be attainable.

The key opportunity for improvement is in providing awareness among civil society about the value of performance analytics. Also, there is a need to promote a culture of collaboration to increase enthusiasm across departments in each community.
Departmental Themes

Below we present our departmental themes and interpret them relative to the overall departmental models that we discussed in the previous section.

Departmental theme #1 – Significant variance among departments use of workload and cost-efficiency measures.

As shown in Figure 13, the departments in our sample vary considerably in their use of workload and cost-efficiency measures. For workload measures collection and analysis, police departments are clearly the most advanced in their usage of measures. We suspect that this may be due to strict police union practices that are likely far more scrutinized than for other departments and the advanced performance analytics requirements for most state and federal police grants. Strong collection of workload measures is done with all departments, but police departments use the information the most. This finding aligns with the coercive and highly technical nature of these roles.

Cost-efficiency measures are much less important to all the departments with the exception of parks and recreation departments who collect them rigorously. We believe that this aligns with the idea that parks and recreation does not need to focus on the coercive and highly technical issues and so that allows a stronger focus on cost-effectiveness. However, the analysis of these cost-efficiency measures is rarely used by public works and code compliance departments.

![Figure 13: Workload & Cost-Efficiency Measures (By Department)](image)

Departmental theme #2 – Collection of responsiveness and outcomes is high but analysis is generally much less frequent, except for police departments who frequently collect and analyze responsiveness and outcomes measures.

As shown in 14, while every department prioritizes the collection of responsiveness measures, the police department is the widest user of the data and a similar pattern is seen in outcome data. In both cases, we suspect that the police department’s collection and usage of these measures is most closely tied to their role in providing highly technical and coercive services. Given the similarity in the collection and usage by other departments, we suspect that it is the combination of technical and the coercive dimensions that drive this theme.
Departmental theme #3 – Collection and analysis of satisfaction and complaint data significantly differ among departments

Figure 15 displays that police and parks and recreation departments – opposite ends of the coercive/technical model – collect more data on satisfaction and perception measures compared to public works and code compliance departments. Code compliance departments collect the least amount of data on satisfaction and perception measures. In terms of data analysis, respondents from parks and recreation departments reported that they analyze more data on a routine basis. Further, code compliance departments analyze the least amount of data compared to other departments in the sample.

Parks and recreation, public works, and code compliance departments do not collect citizen complaint data. Interestingly, police department respondents fall into two categories: frequent collectors and non-frequent collectors of citizen complaint data. Given the disparity among police departments (i.e. frequent and non-frequent) citizen complaint data collection, it is not surprising that they analyze complaint data at varying levels: both frequently and non-frequently. Other departments spend less time analyzing citizen complaint data, particularly, code compliance departments who analyze the least amount of data on citizen complaints.
Departmental theme #4 – Public sentiment is most important for police departments

In our sample, police departments collect public sentiments on a regular basis followed by parks and recreation departments (see Figure 16). Code compliance departments collect the least amount of data on public sentiments. In terms of data analysis, we find that police departments frequently analyze data on public sentiments and hot topics in social media compared to other departments. Code compliance departments analyze data on public sentiments less frequently.

All four departments do not frequently collect time trends of performance data. Of the four, police departments collect time trend data most frequently. Again, code compliance departments spent the least amount of time analyzing time trends of performance data.
Department theme #5 – GIS used moderately but benchmark data rarely used

As shown in Figure 17, only the police department routinely uses GIS data.

Similarly, only police departments use benchmark data regularly (see Figure 18). All the other departments rarely collect benchmark data to compare themselves with other departments within the city and national standards. Code compliance departments do not collect and analyze data on benchmarks with peer agencies. In terms of data collection and analysis of benchmarks with national standards, police departments reported that they frequently collected and analyzed data on benchmarks. Again, code compliance departments collect and analyze data on benchmarks less frequently than other departments in the sample.

As Figure 19 displays, police departments frequently use causal and predictive analytics modeling. Other departments do not use causal and predictive analytics modeling on a regular basis.
**Departmental theme #6 – Little usage or impact seen in performance data**

In general, respondents in our sample reported that they do not use performance analytics results in their managerial processes (see Figure 20).

Of the four departments, police departments use performance analytics results more frequently in various managerial processes as compared to other departments. Parks and recreation, public works, and code compliance departments use performance analytics results less frequently in various managerial processes. Given the low frequency of data collection and analysis of various performance measures, the low usage of performance analytics results is not surprising.

Respondents in our sample reported that they do no collect and analyze various performance measures (except for few processes). Thus, it is more likely that they have not institutionalized the use of performance analytics, and subsequently the impact of performance analytics in various departmental functions. Therefore, the low impact of performance analytics in various departmental functions is not surprising (see Figure 21).
**Departmental theme #7—Management and governance analytics mostly done by police department, however other departments are improving.**

As shown in Figure 22, performance analytics capacity and collaboration vary across departments. Police departments have high analytical capacity compared to other departments in the sample. In particular, these departments have their own data analytics staff. Interestingly, respondents from the public works departments reported that they have their own Information Technology staff compared to other departments. But, a lower number of public works departments have their own GIS staff.

Again, police departments collaborate with peer organizations and universities on performance analytics, but not with civic hackers. However, none of the other departments frequently collaborate with peer organizations, civic hackers, or universities.

**Figure 21: Impact of Performance Analytics across Departments**

**Figure 22: Managing & Governing: Analytics & Collaboration (By Department)**
All four department are involved in interdepartmental task forces on data management, security, and quality (see Figure 23). This is a good sign and shows that all departments can leverage their interdepartmental task force’s involvement to further develop their use of performance analytics. Further, these departments can use their current inter-departmental task forces to strategize and collaborate to collectively move towards using data analytics.

As shown in Figure 23, police and parks and recreation departments frequently meet with central performance units, and parks and recreation departments rely the most on a central performance unit compared to other departments in the sample. Public works departments reported lower reliance on a central performance unit and meet less frequently with their central performance unit.

Respondents in our sample reported that they build capacity of their staff by providing them training on data management and analytics (see Figure 24). While all departments reported that they provide training, code compliance departments provided a lower number of professional development and training opportunities to their staff on data management though outside organizations.

As shown in Figure 24, of the four departments in our sample police departments have higher involvement in open data initiatives, followed by parks and recreation departments and finally by code compliance and public works.
Departmental theme #8 – Significant differences across four department in terms of challenges to implementing performance analytics, but none feel they have high incentives to implement performance analytics

Figure 25 displays significant differences in departments’ innovation culture. Code compliance reported the lowest level of innovation; much of this can be attributed to the nature of the work being done in these units. Among the other units, police departments were the highest given the nature of the work and the changing nature of the environments in which they operate. Parks and recreation and public works reported that their units did encourage bottom-up innovation and promoted an anticipatory culture, however, the encouragement of learning by doing was lower.

The two most technically oriented departments, police and public works, were more likely to feel that achieving performance goals were important when it came to being rewarded monetarily as shown in Figure 26 (e.g. having bonuses for staff or having more budgetary discretion). However, all departments
did not feel that achieving performance targets would result in public recognition of department leadership.

![Figure 26: Key Barriers: Benefits of Meeting Performance Goals (By Department)](image)

As Figure 27 shows, parks and recreation and public works departments felt strongly that performance measurement is important for accountability and continuous improvement. The other two departments did not feel strongly on this item, with code compliance being the least convinced that performance measurement was important when it came to accountability and continuous improvement. One explanation for this is that both the parks and recreation departments and public works departments provide non-coercive services and are hence less in the spotlight. Therefore, performance data, analytics, and assessments can be fully leveraged for continuous improvement and for showing value (e.g. accountability to their citizens through usage stats, etc.).

![Figure 27: Key Barriers: Attitude towards Performance Measurement (By Department)](image)

It is interesting to note that the four departments surveyed viewed public pressure on performance results quite differently (see Figure 28). Police departments were by far more likely to report that they experienced pressure on the department and the city to show performance results. In comparison, none
of the other three departments strongly agreed that neither their department nor the city faced pressures to show performance results. Public works departments reported the least amount of pressure faced.

In general, respondents in our sample reported that getting the budget staff and elected officials to understand and use performance measurements results is not a concern (see Figure 29). Respondents from police, parks and recreation, and code compliance departments expressed no concern in getting the budget staff and elected officials to understand and use performance data results. However, public works departments reported that they face some challenges convincing their city’s budget staff and elected officials about the value of using performance measurement results in decision-making.

Interestingly, all departments in our sample reported that they are less concerned with managing security such as data security, reliability, and outdated Information Technology systems (see Figure 30).
than previously assumed by the researchers. Only respondents from code compliance departments indicated elevated levels of concern with outdated Information Technology systems.

As Figures 31 and 32 show, in general, respondents from all four departments are concerned with Information Technology human capacity (hiring qualified staff, providing staff training, and getting staff to understand data value) and technical capacity (adequate technology infrastructure, budget support, data support from peers, and data quality). Of the four departments, respondents from code compliance departments were the least concerned with Information Technology human capacity.
Interestingly, all departments in the sample reported that their department and manager do not face negative consequences for not achieving performance measurement goals (see Figure 33). This is not surprising given that many local government are in the early stages of developing their performance analytics capabilities. The fear of budgetary and punitive consequences may hinder local governments from experimenting with performance analytics.
Department themes #9: All four departments show enthusiasm about performance analytics, but they believe the community-at-large is significantly less enthusiastic about performance analytics.

In general, the respondents reported that their community stakeholders are not enthusiastic about various data initiatives: open, social media, mobile, spatial, and data analytics (see Figures 34 and 35). All departments consistently reported that they believe their stakeholders – businesses, neighborhood leaders, non-profits, and the public – are not enthusiastic about data initiatives.
Yet respondents from all four departments reported that they believe that diverse stakeholders from city government are enthusiastic about data initiatives, except for other departments (see Figures 36 and 37).

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**Figure 36: Respondents’ & Other Departments Enthusiasm (By Department)**

**Figure 37: Managerial Leadership & Elected Officials Enthusiasm (By Department)**
Assessing level of performance analytics maturity

As discussed in the introduction, performance analytics depend on four interrelated components: data, analytics, assessments, and actions. To understand the state of performance analytics, we assessed the maturity level — ad hoc, reactive, appreciative, organized, and optimizing ad-infinitum — of each component among the local government departments in our sample. Thus, we categorized local governments in our sample based on level of maturity as it relates to four components of performance analytics. In this section, we present the overall performance analytics maturity among local government departments and then subdivide the results by department type.

Figure 38 provides the overall level of performance analytics maturity in terms of data, analytics, assessments, and actions. As shown in Figure 38, a significant number of local governments fall under the appreciative maturity level. Particularly, these local governments are recognizing the need to create an evidence-driven data culture and are exploring tools and strategies to implement performance analytics (i.e. appreciative about performance analytics).

Fewer local government departments have achieved the organized maturity level in terms of using performance data, analytics, assessments, and actions. These local governments have developed systems and programs that are underway to gather and apply performance analytics. Further, only very few local governments in our sample fall under the optimizing ad-infinitum maturity level.

As shown in Figure 39, a significant number of departments in our sample are appreciative of performance data, analytics, assessments, and actions. Further, a significant number of police departments have achieved the organized level of maturity. This finding is consistent with previous sections, as respondents from police departments reported that they collect and analyze various performance measures on a routine basis. Moreover, given their technical nature, this finding is not surprising.

Parks and recreation, public works, and code compliance have a lower number of departments in the organized level of maturity in terms of performance data, analytics, assessments, and actions. Many of them have achieved the reactive and appreciative level of maturity when it comes to implementing performance analytics.
The key opportunity here is that many local governments are appreciative and organized with regards to performance analytics. The increased awareness among local governments about the benefits and opportunities related to the use of performance analytics will likely increase their involvement. Further, the increase in collection and analysis of data may help local governments achieve the optimizing ad-infinitum level of maturity: fully functioning performance analytics, which is frequently evaluated and advanced through continuous improvement.

Figure 39: Level of Performance Analytics Maturity across Departments
IMPLICATIONS AND CONCLUSION

There are several key takeaways from this report. Table 2 highlights these key findings as departments mature towards implementing performance analytics.

First, the usage of performance analytics is present in all departments but not all departments are evolving rapidly. We suspect that the speed of performance analytics adoption will change once the benefits of adoption are made clearer, therefore, the emphasis needs to be on better sharing of the analytics message.

Second, we are not surprised to see variation in the use of performance analytics across departments given our belief that the model of coercive / technical should drive analytics adoption. Since the police department is generally an early adopter, this means that they can serve as valuable markers for what works (and what does not work) within the community.

Three, the value of analytics is proving itself, but the story needs to be more widely shared. For most departments in most areas of measure, the value of analytics is being seen by management but the stories of these successes need wider distribution.

Four, a significant number of local governments in our sample have achieved the appreciative level of maturity in terms of performance data, analytics, assessments, and actions. Clearly, local government is realizing the value of creating an evidence-driven culture and embracing tools to improve their capacity.

Five, few local governments have evolved to the organized level of performance analytics maturity. These local government have developed systems and programs to collect and analyze data for evidence driven managerial decision-making. However, there is room for significant improvement as the level of maturity varies considerably across departments. Police departments have evolved to a higher level of maturity in terms of performance analytics as compared to parks and recreation, public works, and code compliance departments.

<table>
<thead>
<tr>
<th>Themes</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>Great disparity in the collection and use of performance measures</td>
</tr>
<tr>
<td></td>
<td>General alignment between frequency of use and perceived impact</td>
</tr>
<tr>
<td></td>
<td>Significant divide in the management and governance of analytics</td>
</tr>
<tr>
<td></td>
<td>No significant challenges in terms of implementing performance analytics, but no high incentives either</td>
</tr>
<tr>
<td></td>
<td>Enthusiasm is extremely lower within civil society but significantly higher among different government entities</td>
</tr>
<tr>
<td><strong>Departmental</strong></td>
<td><strong>Significant variance among departments’ use of workload and cost-efficiency measures</strong></td>
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<td>------------------</td>
<td>--------------------------------------------------------------------------------------</td>
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<tr>
<td><strong>Collection of responsiveness and outcomes</strong> is high but analysis is generally much less frequent</td>
<td><strong>Except police departments, the other three departments do not frequently collect and analyze responsiveness and outcomes measures.</strong></td>
</tr>
<tr>
<td><strong>Collection and analysis of satisfaction and complaint data differs significantly between departments</strong></td>
<td><strong>Police and parks and recreation departments collect more data on satisfaction and perception measures compared to the other two departments.</strong></td>
</tr>
<tr>
<td><strong>Public sentiment most important for police departments</strong></td>
<td><strong>Police departments reported that they collect and analyze public sentiments on a regular basis, while other departments in our sample reported that they do not frequently collect and analyze public sentiments.</strong></td>
</tr>
<tr>
<td><strong>GIS used moderately but benchmark data used rarely</strong></td>
<td><strong>Except for police departments, other departments did not collect and use GIS and benchmark data regularly.</strong></td>
</tr>
<tr>
<td><strong>Little usage or impact seen in performance data</strong></td>
<td><strong>All departments in the sample reported that they do use performance analytics for decision making.</strong></td>
</tr>
<tr>
<td><strong>Management and governance analytics mostly done by police department, however, other departments are doing better for the most part</strong></td>
<td><strong>Police departments are investing significant resources in management and governance of analytics.</strong></td>
</tr>
<tr>
<td><strong>No significant differences among four department in terms of challenges to implementing performance analytics.</strong></td>
<td><strong>All four departments reported that they do not have high incentives to implement performance analytics, but they also do not face significant challenges to implement performance analytics.</strong></td>
</tr>
<tr>
<td><strong>All four departments are enthusiastic about performance analytics, but they feel lower enthusiasm in the larger community</strong></td>
<td><strong>All four departments reported that enthusiasm among community members is lower about performance analytics, but stakeholders across city government are, in general, enthusiastic about performance analytics.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Performance Analytics Maturity</strong></th>
<th><strong>A significant number of local governments in our sample have achieved appreciative level of maturity</strong></th>
<th><strong>All four local government departments are realizing the value of creating an evidence-driven culture and embracing tools to improve their capacity.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A significant number of police departments have achieved organized level of maturity</strong></td>
<td><strong>Police departments have developed systems and programs to collect and use performance data, analytics, assessments, and actions.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Level of maturity varies considerably across departments.</strong></td>
<td><strong>Police departments in general have evolved to a higher level of maturity in terms of performance analytics compared to parks and recreation, public works, and code compliance department.</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2: Key themes & findings: Overall, Departmental, and Performance Analytics Maturity Level**
It is important that local government makes performance analytics a priority. All departments need to develop their internal performance measures in close consultation with internal and external stakeholders. Until and unless this is done, growth in the use of performance analytics will continue to languish.

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