Best Practices for Michigan Local Government Business Processes

MICHIGAN MUNICIPAL SERVICES AUTHORITY | 09/08/2014

plante moran

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VERSION CONTROL

Version	Date	Version Contributions
1.0	3/29/2013	• Plante Moran
2.0	5/3/2013	• Feedback from Project Executive Steering Committee (including Grand Rapids and Kent County representatives) • Payroll and Human Resources Sections added
3.0	5/31/2013	• Feedback from Grand Rapids Staff • Feedback from Kent County Staff • Feedback from financial institutions (including JP Morgan Chase, Huntington, 5th 3rd Bank), • Feedback from Local Jurisdiction Advisory Group (including representatives from the Cities of Lansing, Romulus and Warren) • Additional feedback from Plante Moran
4.0	6/10/2013	• Project Executive Steering Committee (including Grand Rapids and Kent County) finalize for distribution
5,0	9/8/2014	• Add cash receipting content based on input from Wayne County

1 Executive Summary

1.1 PROJECT BACKGROUND

The MMSA was formed in July 2012 and is a new public-private partnership, serving at the request of local communities in the State of Michigan. The MMSA in partnership with the City of Grand Rapids has initiated a collaborative effort to replace the City of Grand Rapids' financial management software (FMS) system as well as adopt best practices related to financial management, accounting and management reporting, cost allocation, and key performance indicators. Through this collaborative effort, several communities are engaged to provide input on the best practices, and Kent County is engaged deeply, similar to the City of Grand Rapids, to provide ownership of the project. The MMSA, Kent County and the City of Grand Rapids anticipate that the selected software solution will be available for other Michigan communities to use for their financial management operations, will support staff in the delivery of government services and activities, will take advantage of best practices, and will significantly improve the efficiency and effectiveness of customer service and business processes.

1.2 PURPOSE OF REPORT

This report is intended to provide local governments in the State of Michigan with a compilation of best financial practices available through participation in the MMSA ERP program.

The State of Michigan is embracing technology as a tool to increase transparency and reduce costs for all levels of governmental organizations. The State of Michigan has 2,893 local governments[i], all of which can benefit from best practices and/or a common financial information system. Local governments in Michigan range in population from 10 (in Pointe Aux Barques Township) to approximately 706,500 (in the City of Detroit).[ii] Smaller governments typically require much less formal technology and processes to manage citizen demands. Further, local governments provide a large variety of services to residents, which may or may not include transportation, libraries, marinas, airports, utilities, etc. We recognize that the needs and practices of local government vary significantly.

The best practices identified in this report are intended to document the types of practices and processes available through the MMSA supported technology.

1.3 PROJECT SCOPE

1.3.1 Types of Business Processes

The table below lists those processes that are applicable to a financial management and human resources software provider for governmental organizations. The scope of this review primarily focused on the following areas.

• Accounts Payable	• Financial Reporting	• Performance Management/ Business Intelligence
• Accounts Receivable & Cash Receipting	• General Ledger	• Project, Grant, and Cost Accounting
• Budget Development & Budget Control	• Human Resources	• Purchasing
• Capital Assets	• Inventory Management	
• Debt and Investment Management	• Payroll and Time/Attendance	

Other business processes outside of the scope of this document include government financial processes such as Property Tax Administration, Income Tax Administration, Utility Billing and others.

The financial and human resource process areas listed above are offered as part of Enterprise-Wide Resource Planning (or "ERP") systems. Software modules for each process area may be purchased separately, and may be integrated together when compatible with one another, creating an ERP software system. The integration of the software modules enables users in various process areas to access information in other process areas, increasing the flow of information and reducing time lags. Utilizing the functionality of ERP systems enables many of the best practices described in this report.

As necessary, organizations may find greater benefit utilizing functionality in a software solution that has additional features developed for certain business needs (e.g., customer service software for services such as property taxes, income taxes, parks and recreation, etc.). These software solutions are referred to as "Best of Breed." Interfaces can be created to automate the flow of information between these software solutions and an organization's ERP. However, staff cannot access information in real-time or "drill" from one application to another.

1.3.2 Overview of Best Practices

As organizations and technologies evolve, certain processes can be labeled as "best practices." These stand out because of their ability to reduce risks, streamline operations, reduce costs, realize revenues, improve customer service, and other identifiable benefits. For example, some general, straight-forward, time-tested best practices include:

Using best practices can reduce risks, streamline operations, reduce costs, realize revenues, improve customer service, and provide other less quantifiable benefits.

- Quantify the costs and benefits of potential commitments that the organization is pursuing, in order to ensure that the commitment is truly in the organizations best interest and to plan for future costs.
- Clearly define the roles and responsibilities of parties entering into an agreement, as well as the rights and responsibilities of each party upon termination of the agreement.
- Pursue any outstanding collections to the extent that they exceed the cost of conducting the collections process itself.

It is important to keep in mind that processes and best practices can change over time as organizations develop and adopt newer technologies or means for pursuing strategies. Accordingly, some best practices may be "emerging" while the market is still testing the feasibility for a certain practice. Some presently emerging best practices include:

- Use of cloud-based information technology services.
- Activity based budgeting.
- "Paperless" processing.

Organizations should strive to use current, known best practices in an aim toward continuous improvement. Because of funding constraints, complicated and/or outdated laws and agreements, a lack of time or skills, and a variety of other reasons, organizations may choose not to use emerging best practices. When funding becomes available, laws change, or other certain events take place, organizations may be able to leap to the latest or develop their own best practices. In the absence of these events, organizations may need to make incremental changes toward continuous improvement.

In any case, it is important to assess the expected benefits and costs of changing, in order to seek the most value for organizations' resources. Financial analyses, such as calculating the net present value (NPV) or return on investment (ROI) of implementing certain changes, can be utilized to determine and communicate the importance of investing in such changes. They can also assist management with determining the appropriate level of effort to use toward certain investments. For example, an ability to effectively manage and train the parties involved and propose recommendations and gain approval can minimize the investment needed and thus increase an organization's NPV and ROI. Organizations should plan for significant up-front investments relative to subsequent years with greater realization of benefits.

1.3.3 Format for Business Process Best Practices

For this report, we have separated each process area in Sections 2 and 3 into the following sub-sections for discussing best practices:

- **Overview:** Each process area is defined, including the scope of the function, core concepts, and other background or context, such as statutory requirements. This section includes samples and representative Key Performance Indicators for the process, where applicable.
- **Typical needs:** For each process area, a representative list or narrative of requirements is presented which specifies operational outcomes, system requirements and other factors which have a significant influence on the effective and efficient processing of transactions for the process area.
- **Common best practices:** Best practices have been deployed among a significant number of organizations and have, with some consistency, demonstrated superior results over other approaches. The documentation of these common best practices provides a standard approach that governments can benefit from, either by validating their current approach or by identifying process areas which may provide opportunities for improvement.
- **Emerging best practices:** Where applicable, financial practices are described which have been deployed more recently at a fewer number of organizations and are promising in that they indicate preliminary evidence of new or increased effectiveness over common best practices. They may be founded in newly available technology, focus on approaches that mitigate barriers towards deployment, or other factors.
- **Potential barriers to best practices:** Where applicable, we have identified potential barriers to best practices that fall within technological, cultural/educational, economic, or policy/legal constraints. In general, economic constraints are based on a need to consider the costs of any new practices in comparison with the benefits. Economic constraints also include consideration for incurring additional costs to customize software systems. These potential barriers are not repeated throughout the report.

1.3.4 Overview of Key Performance Indicators

As mentioned above, each section in the report includes a listing of sample Key Performance Indicators, or "KPIs." KPIs are used to monitor how well organizations are achieving their objectives, whether qualitative or quantitative, financial or operational.

The KPIs in this report were chosen with an aim of minimizing complexity and providing a targeted list of indicators that can be easily measured. In order to appropriately use KPIs, organizations should take the 5 steps listed in this section.

The KPIs were chosen with an aim of providing a targeted list of indicators that can be easily measured and that staff can directly impact. This was done with an understanding that too much complexity in a performance measurement system can be counter-productive. However, organizations may find that other measures are important or even necessary in order to achieve overall desired outcomes.

In order to appropriately use KPIs, organizations should take the following steps:

1. Determine which measures they want to manage/use, ensuring that these measures are linked to the government's budget and strategic objectives
2. Develop baseline measures for these KPIs (e.g., based on benchmarks and/or long-term goals).
3. Determine short-term achievable targets.
4. Determine what changes can be made within the short-term to reach these targets.
5. Regularly reassess the government's performance and adjust its targets.

The sample metrics in this report can be used for comparisons against benchmark organizations, or as internal measures of efficiency. Each community's results will differ based on the number of FTEs involved in the process, their level of expertise, and specific policies.

1.4 TIPS FOR READING THIS REPORT

Governmental organizations with significant resident demands typically operate Enterprise-Wide Resource Planning systems (ERP systems), which can include financial, procurement, human resources, payroll, and other functionality. Those organizations that have implemented ERP systems may wish to focus on the "Emerging Best Practices" within each section of the body of the report.

Smaller governmental organizations may track their operations with less formal accounting software and other software modules. These organizations may wish to focus on the "Common Best Practices" within each section of the body of the report.

We expect that judiciously applying the best practices in this report will lead to improved customer service, improved employee morale, and reduced overhead costs, among other benefits.

2 Best Practices for Financial Processes

2.1 PERFORMANCE MANAGEMENT / BUSINESS INTELLIGENCE

2.1.1 Overview

Governments play a crucial role for their communities. They face increasing service demands with simultaneous funding cuts and scrutiny over their expenditures. In order to effectively provide the most important services, governments need to proactively create strategic plans with specific goals/objectives and indicators for measuring performance. Ultimately, organizations, departments, and employees can use the specific indicators to measure the efficiency and effectiveness of their performance.

Efforts to create such strategic plans, of varying scales, based on financial and non-financial data, have recently been referred to as:

- Performance Management
- Business Intelligence
- Managing for Results
- Outcomes & Objectives
- Service, Efforts, and Accomplishments

The use of a performance management approach improves alignment of limited resources with the delivery of services to most effectively achieve the organization's goals. In addition, through measuring outcomes, organizations can identify areas for, and pursue, improvements. In the absence of such measurements, organizations cannot gauge their performance and are risk wasting valuable resources, which could alternatively be put to use serving constituents and other customers.

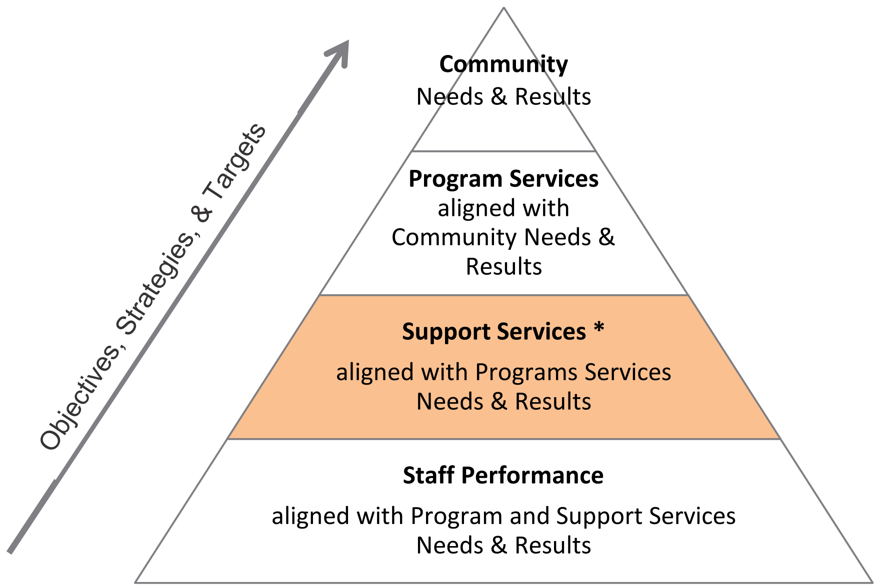
In the absence of strategic plans with specific goals/objectives and indicators for measuring performance, organizations cannot gauge their performance and may be wasting valuable resources, which could alternatively be put to use serving constituents and other customers.

Organizations and people tend to manage what they measure. By using KPIs, measuring organizations' current-state, and considering the desired future state, organizations can identify areas in need of improvement and establish and pursue plans for reaching their desired future state. It is also crucial to identify the appropriate KPIs, so that organizations do not manage inappropriate behaviors.

The chart below shows a hierarchy for determining indicators to measure. This hierarchy, referred to as "a cascading system" in A Performance Management Framework,[iii] shows how community needs align with staff performance.

Cascading Systems

Aligned objectives, strategies, and measurement at all levels



In such a framework, leadership develops an understanding of the community's need and then establishes its goals, strategic plan, budget and other available resources, and high-level KPIs. Then, program and support services' objectives, strategies, budgets and other available resources, and KPIs are developed to align with the government's overarching objectives and strategies. Typically Department Directors are held accountable to meeting the related performance targets. Finally, individual staff performance objectives, strategies, and KPIs can be aligned with their departments and included within their HR performance reviews.[iii]

*For purposes of better defining best financial business practices in local government, Plante Moran added a dimension to the Cascading Systems framework for support services, to illustrate the importance of ensuring that the performance objectives and measurements of internal departments, such as Finance and HR, support those departments that directly serve citizens.

2.1.2 Common Best Practices

There has been an increased awareness of performance management concepts in the public sector in recent years and, accordingly, select organizations in the vendor marketplace have allocated resources to begin to provide solutions. ERP vendors are increasingly incorporating functionality for measuring and managing KPIs within their software systems. For example, certain ERP software systems can capture, track, and report non-financial statistical performance such as labor hours and units processed. They can also assign dollars to these metrics for budgeting and reporting purposes. In some cases, ERP systems need to be interfaced with other systems in order to capture data to align with financial information. The information can then be presented in the form of a "dashboard," with graphs and charts that can be customized for users.

Certain ERP software systems can capture, track, and report non-financial statistical performance such as labor hours and units processed. They can also assign dollars to these metrics for budgeting and reporting purposes.

Common themes for using key performance indicators have been identified.[iv] These include:

- **Ratios are needed to "normalize" governmental organizations.** As mentioned, above, governmental organizations come in many shapes and sizes, based on various characteristics. Even if governmental organizations are grouped by similar populations, their operations can differ because of the types of services that their populations have sought from them over time. As a result, it is important to consider ratios for targets, such as the workload handled by staff in certain functional areas. This can assist in identifying commonalities between organizations and provide a benchmark to assess the level of current and desired future performance.

  Throughout this report, we quantify the number of staff in certain functional areas as full-time equivalents, or "FTEs." This denominator could also be replaced with population, total number of employees, total budgeted or actual expenditures, number of funds within the financial statements, or other measures.
- **Continuous improvement is an iterative process.** Organizations may have an idea of their long-term targets, but realistic targets need to be used in the short-term to guide the path to the long-term targets. This helps ensure that the goals are achievable and that staff are not overwhelmed during the process.
- **Indicators must represent the system as a whole.** Taking a holistic look at performance measures is a key to ensuring success. If organizations only focus on certain types of metrics, such as workload per FTE, they may strive to maximize such metrics to demonstrate their rate of completing work, while forgetting that minimizing the workload may lead to greater efficiencies. For example, an accounts payable clerk might process an exceptional number of payments to vendors, including multiple payments to vendors in the same month. It's important to also ensure that the number of payments per vendor is minimized, in order to create capacity for other tasks.

2.1.3 Emerging Best Practices

- **Current Initiatives.** Governments are increasingly identifying and measuring their KPIs. These KPIs are then used as a tool for the government's management team. In some cases the governments also publicize the results on their websites. As discussed below, technology limitations make the use of KPIs a challenge for many organizations.
- **ERP Vendor Marketplace.** Although public-sector software vendors are beginning to build performance management functionality into their ERP systems and/or are beginning to create applications for business analytics (also referred to as "Business Intelligence" or "BI"), the majority of public organizations have not yet acquired such software. Those organizations that use KPIs frequently track them manually. Further, because tracking KPIs within organizations is not yet fully automated, finding useful comparisons among organizations is even more challenging.

2.1.4 Potential Barrier(s) to Best Practices

- **Technology.**
  - Organizations are currently limited in what they can accurately and efficiently measure. For example, software systems do not provide statistical information for all of the performance indicators that are desired. For those metrics that are tracked within "best of breed" or other software systems (e.g., number of potholes filled, some IT network performance measures), the ERP systems need to be integrated or interfaced in order to automate analyses with KPIs, share the results with others to allow comparisons and, perhaps, to encourage friendly competitions for improvement. For those metrics not provided by software systems, staff may need to manually calculate the results. Whether the results are automated or manual, supporting documentation and audit trails are necessary for ensuring accuracy.

Benefiting from the use of key performance measurements requires strong and persistent leadership and cooperation. Leaders, management, and staff must also realize that this is part of a continuous improvement process, requiring changes to targets over time.

- **Culture/Education.**
  - **Aligning Community Needs with Program Services.** Determining communities' various needs can take significant effort, especially because they can change significantly over time. Further, it is challenging to determine which services to provide in order to impact communities' overall health and vitality. These challenges fall upon Councils or Commissions, Administrators, and Department Heads, and should result in key performance indicators for the customer-facing departments. The KPIs identified in this document are focused on core / common financial and human resource processes across organizations.
  - **Sponsorship and Involvement:** Benefiting from the use of key performance measurements, best practices, and functionality provided by newer ERP systems requires strong and persistent leadership and cooperation. Locally elected officials may need to help provide support and remove barriers in order to implement any related organizational changes as quickly as possible. Leaders, management, and staff must also realize that this is part of a continuous improvement process, requiring changes to targets over time.
- **Policy/Legal.** Without strong information systems in the past, governing bodies relied on their organizational documents (e.g., charters, codes, ordinances, and policies) to establish policies and procedures for the organization. These policies and procedures become quickly obsolete, and do not always follow today's best practices or match the capabilities of information systems. Now, certain policies and procedures can and may be more appropriately defined in information systems, such as through the use of workflow approvals and document retention settings. Governing bodies will need to review their organizational documents to identify and approve of changes. In general, organizational documents should focus less on procedures and more on policy matters.

2.2 FINANCIAL REPORTING

2.2.1 Overview

Governments are providers of a variety of community services. These are often organized within specific "funds." These funds can be financed by property taxes and other funding sources (governmental funds), created to account for internal business support (internal service funds), or created with an intent to be self-sustaining (enterprise funds, such as water and sewer funds). Each type of fund has different financial reporting requirements. In addition to differences among funds, the Government Accounting Standards Board (GASB) demands that governments present their financial statements from both a short- and long-term perspective, with a reconciliation between the two (referred to as the "GASB 34 reconciliation"). As a result, government financial reporting requirements are complex. Standard year-end financial reports contain financial statements (such as balance sheets, income statements, and the reconciliations between the short- and long-term bases), a "Management's Discussion and Analysis" section, and required supplemental information. If desired, a government can issue a Comprehensive Annual Financial Report, or "CAFR," which includes additional supplemental information.

Further, monitoring results throughout the year requires interim financial reporting, which may be reported on a separate basis than the annual financial statements (i.e., cash basis instead of modified- or full-accrual basis).

In order to fulfill their financial reporting responsibilities, state and local governments are required to:

- Maintain an accounting system adequate to provide all of the data needed for timely preparation of financial statements in conformity with Generally Accepted Accounting Principles (GAAP);
- Have those financial statements independently audited in accordance with either Generally Accepted Auditing Standards (GAAS) or Generally Accepted Government Auditing Standards (GAGAS or GAS), as appropriate.[v]

The following key performance indicators are typical for measuring the efficiency of the financial reporting process:

Key Performance Indicator	Sample Metric
CAFR distributed within 180 days of fiscal year end	Yes[vi]
Days to close the books – year-end	30-45 days
Days to close the books – monthly	5 [business] days[vii]

Shorter time periods for finishing month-end and year-end procedures, or "closing the books," may indicate that financial systems are more automated.

2.2.2 Typical Needs

Because of the complexity of government financial reports, governments have relied heavily on Microsoft Excel and/or other software systems to create financial reports, including performing additional calculations or adding data outside of the main accounting software system. In order to efficiently prepare financial statements, meet key performance benchmarks, and make preparation of financial statements more understandable, governmental entities are interested in the following overarching capabilities:

- Maintaining accounting information in sufficient detail for management purposes, while allowing aggregation for reporting to the governing body or external users.

- Prompt preparation of financial reports throughout the year (monthly or periodic management reports).
- Quick preparation of the annual financial report (CAFR or basic financial statement), including ability to record journal entries for the GASB 34 reconciliation within the system, different internal processes for different business units (e.g., joint ventures, enterprise funds, or fiduciary funds), and flow of information to footnote disclosures.

In addition to ERP functionality, organizations also need to determine who is responsible for the organization's internal controls, the accuracy of its information, and its operational performance.

2.2.3 Common Best Practices

Today's ERP systems, properly implemented, are capable of meeting many financial reporting needs. The information for governments' complicated financial statements can be prepared with pre-developed and configurable reports delivered as part of ERP vendor software packages; separate report writer tools, either independent of or integrated into the ERP offerings; or pivot tables and other functionality offered within Microsoft Excel.

Financial reporting is highly dependent on the structure of governments' general ledgers, also referred to as the chart of accounts. The string of fields used for each account defines various summary-level reporting needs, such as by type of expense or the particular department or fund that the expenses are recorded within. As the foundation to the financial structure, the chart of accounts must be mapped appropriately in order to minimize the need for human intervention in financial report creation. Chart of Accounts topics are discussed further in the following "General Ledger" section.

Much of the information for governments' financial statements can be prepared with pre-developed and configurable reports; however, the chart of accounts must be mapped appropriately in order to minimize the need for human intervention in financial report creation.

The typical needs described are addressed by ERP vendors through major functionality such as:

For interim financial reporting:

- High-level reporting analyses for the governing body.
- User security that defines which data elements are displayed on reports based on users' defined department, function, etc., such that a single report definition can deliver personalized reporting results.
- Dashboard tools that allow reporting on key metrics of financial and non-financial information specific to the various departments.
- Real-time inquiry screens that allow access to budget-to-actual information and available balances for each fund / account.
- "Drill-down" and "drill-around" abilities in the system which allow users to make routine inquiries and perform research of historical transactions by drilling from summary balance information within the system to the detailed source transactions in the various functions (aka "subsidiary ledgers") in the integrated ERP system, mitigating the need to print a report to paper.
- An organized library of pre-defined report templates, including user security that defines which users have access to the report templates in the report writer library.
- Custom report configurations to be saved for future use, including user-friendly tools such as:

  - Options for parameters
  - Ability to drag-and-drop groups of data to desired places in reports, such as columns, reports, or filters
  - Ability to personalize specific users' displays
  - Graphical displays of information
- Central repositories for sharing reports.
- User-defined and scheduled reporting.
- Ability to generate "exception reports" on-demand, which indicates accounts with transactions requiring additional scrutiny (e.g., using data mining or business intelligence tools).
- Ability to inquire on specific account balances or user-defined ranges of accounts and view transactions on a daily, weekly, monthly, quarterly, yearly, or other basis (current and prior periods).

The timelines for completing interim and annual financial reporting can be improved by using standard accounting-related procedures to enhance controls and minimize delay.

For year-end financial reporting as-well:

- Consolidation of governmental funds and the separate presentation for proprietary and fiduciary funds.
- Short-term ("modified-accrual") and long-term ("full-accrual") bases of accounting and the reconciliation between the two ("GASB 34 reconciliation") recorded within the ERP system.

For example, during the year governments may find it easier to operate with more funds than are necessary to present in the annual external financial statements. Using additional funds can enable greater tracking and oversight, as certain divisions may be responsible for particular funds that do not need to be shown at their division-level detail within the financial statements. Certain ERP systems can enable division-level funds to be consolidated into department-level funds, or other such scenarios, for financial reporting purposes.

The timelines for completing interim and annual financial reporting can be improved by using standard accounting-related procedures to enhance controls and minimize delay. In addition, other best practices include using accrual-basis accounting throughout the year or, minimally, leaving the previous year end's accruals within the system as a starting point for the current year. If the organization only reports cash-basis during the year, a 3-month report may only show 2 months of expenditures, for example. The remaining month's expenditures are not recorded until the payments are actually made, resulting in misleading interim financial reports.

Finally, financial reports contain a significant amount of written content describing governments' background, financial analyses, and financial policies, to name a few examples. This content is typically written outside of the ERP system using tools such as Microsoft Word. Software packages exist for writing content within a tool that is mapped to real-time data in the ERP system.

2.2.4 Emerging Best Practices

Audit Committee and Internal Audit. Governing bodies, such as elected officials, Councils, Commissions, and any designee established by law or charter, are responsible for their organization's internal controls, the accuracy of its information, and its operational performance. The governing body may form a sub-committee (an "audit committee") to focus on overseeing financial reporting, internal controls, and auditors' activities. The audit committee should include several members of the Council or Commission and several members of the community. The members should be independent of management. At least one member of the audit committee should have financial experience.[viii]

Further, internal audit functions should be established to monitor internal operations, stay abreast of changes in IT system security and functionality, and provide recommendations for improving operational performance. Someone other than the Chief Financial Officer or equivalent position should be designated as a Chief Audit Executive or equivalent, although this does not need to be a separate employee position (the responsibility can be given to a current position). The employee with the role of the Chief Audit Executive should report directly to the audit committee for its related responsibilities, with a "dotted-line" reporting relationship to a senior executive in the organization.[viii]

Additional information regarding audit committees and internal auditors can be found in the American Institute of Certified Public Accountants' ("AICPA's") Audit Committee Toolkit for Government Organizations, which can be purchased through the AICPA's website.

2.2.5 Potential Barrier(s) to Best Practices

- **Policy/Legal.**
  - Summarizing divisions, departments, and funds for financial reporting purposes requires the use of designated codes (e.g., "chartfields") in order to map the information appropriately. Depending on the capabilities of the ERP system, changes to active codes/chartfields may take a significant amount of time and may prevent users from viewing historical information with the previous mapping. This becomes a particular concern when reorganizing divisions and departments. As a result, organization's leadership and management may need to plan for such limitations when choosing to reorganize departments and divisions. Further, organizations should incorporate potential for future growth into any chart of account redesign efforts.
  - Financial reporting requirements may differ among states making it challenging for software vendors to provide common functionality as part of their standard software systems.
- **Culture/Education.**
  - Leadership, management and employee understanding and availability and/or willingness to learn and use new tools are potential barriers. For example, it can take a significant amount of time and energy to determine appropriate summary-level information to measure for interim reporting and financial statement purposes, and then to implement any changes throughout the organization. Further, organizations should proactively consider any positive and negative results of implementing changes, such as an inability to view comparative financial information.
  - Because of financial reporting's reliance on the chart of accounts, organizations tend to focus on developing their financial reports after their new ERP systems are live and processing financial activity. With this prioritization, it is important for governments to provide ongoing and sustained support and funding for the deployment of financial reporting requirements, to more fully realize the benefits of the system.

2.3 GENERAL LEDGER

It is recommended that organizations minimize the number of manual interfaces with the general ledger.

2.3.1 Overview

An entity's general ledger functions like a body's skeleton; it supports the whole structure of the organization. The general ledger is the house in which all transactions, or journal entries, are recorded. The accounts that are used in the general ledger are referred to as the “chart of accounts.” Various fields make up each account, which are used for summary-level reporting needs, such as by type of expense or the particular department, function or fund that the expenses are recorded within. A summary of the account description, number, and current balance is known as a “trial balance.” The trial balance data is mapped to summary-level information for presentation in an entity’s financial statements.

Different industries have created standard reporting structures for comparability across organizations. The same is true for different states, countries, and other jurisdictions. As a result, certain characteristics are necessary for entities’ charts of accounts. In Michigan, the State provides a recommended Uniform Chart of Accounts for governmental entities. The only requirement, however, is that governmental entities complete an “Annual Local Unit Fiscal Report,” commonly referred to as Form-65 or “F-65”. Within those guidelines, each governmental entity can establish a chart of account structure that will enable it to track financial and operational information that is as useful as possible, considering:

- The ability to aggregate costs by the individual(s) who is (are) responsible for certain areas (such as department- or division-level budgets), while at the same time allowing for aggregation of costs by function or program (to determine the costs of providing each significant function or program).
- Levels of detail necessary for tracking (such as tracking “office supplies” versus “paper and pencils”).
- Methods for aligning groups of costs with activities in order to perform activity-based costing, including the allocation of overhead costs.
- Non-financial data that can be used for analyses of summary-level financial data.
- The ability to aggregate costs on projects and grants that cross fiscal years.
- The ability to monitor the accuracy of inputs to the general ledger (“quality control”).

In addition to the layout of the general ledger, the posting of transactions to the general ledger is a significant activity for organizations. Integrated financial software systems are increasingly simplifying the posting of transactions, including functionality for establishing automatic, recurring journal entries that calculate and allocate amounts to certain accounts based on formulas.

The level of integration of sub-ledger / sub-system activity to the general ledger is influenced by the overall software architecture that each local government may choose to deploy. To the extent that an organization utilizes a financial software system designed around providing an integrated series of software modules (e.g. Accounts Payable, Cash Receipting, etc.) from a single vendor, these organizations can benefit from the “out of the box” integration provided in the product. On the other hand, if an organization implements niche software systems for these sub-functions, which may provide for incrementally improved functionality for their comparatively limited scope, the necessary integrations to the financial system / general ledger need to be built by the government or managed manually. The number of interfaces or integrations that need to be developed to communicate with the general ledger has a significant impact on the performance of the ERP system. It is recommended that organizations minimize the number of manual interfaces with the general ledger.

Regardless of the system architecture, the following key performance indicators should be considered for measuring the efficiency of the general ledger process as implemented in a financial system:

Key Performance Indicator	Sample Metric
Percentage of system generated entries	As high as optimal[ix]

Manual journal entries per FTE processing journal entries	As low as optimal[ix]

Ideally all entries would be either 1) entered only once during the initiating transaction (such as receiving a payment from a citizen) or 2) posted automatically based on a recurring rule.

2.3.2 Typical Needs

In order to efficiently post transactions, prevent errors, enable efficient researching of transactions after-the-fact, and meet key performance benchmarks, governmental entities are interested in the following overarching capabilities:

- Automated journal entries.
- Centralized approval of journal entries for quality control, including limiting access to prepare adjusting journal entries to only a few users, ensuring appropriate security settings (i.e., audit trail), and a timely review and approval of adjusting journal entries.
- Support for “roll up” accounts.
- Capability to “drill” from a transaction in the general ledger to the supporting documentation within the system (rather than needing to find physical documentation in a filing cabinet).
- Validation of account information to prevent users from posting transactions to incorrect accounts.
- Subsidiary systems for projects, grants, and other functional areas, in order to minimize the amount of detail included directly within the general ledger.
- Ability to roll current year balance sheet accounts to their specified destination for the following year during the year-end closing process (e.g. current taxes receivable accounts roll to a delinquent taxes receivable account, fund equity accounts are combined and rolled to a beginning fund balance).
- A regular review of account codes to determine those that are necessary for financial analyses, as part of a continuous improvement process.
- Ability to enter transactions in the current accounting period while the prior accounting period is still open.

2.3.3 Common Best Practices

The typical needs described are addressed by ERP vendors through major functionality such as:

- Automated journal entries for recurring and reversing entries, including the use of formulas for calculating allocations.
- Journal entry templates for easily creating new entries based on pre-saved details.
- Ability to upload journal entries from systems such as Microsoft Excel for occasions when journal entries are more efficiently prepared outside of the ERP system.
- Workflow routing for journal entry approvals, including capability for approvers to reject or reroute workflows with comments.

The organization’s leadership and management should review the account structure at least annually to ensure that it is meeting the organization’s needs. Following the review, changes should be implemented and unused accounts should be archived or inactivated.

- Security settings such as audit trails and limiting who may prepare and approve adjusting journal entries.
- Ability to attach electronic or scanned supporting documentation to journal entries.
- Ability to drill and query from the general ledger to subsidiary ledgers, including attached supporting documentation.
- User-based account code security, such as restricting users' ability to only post to accounts within their department or division.
- Account validation, such as ensuring that transaction details are appropriate for a given account number (for example, only allowing payments for utility bills to be posted to utility receivable accounts).
- Shortcuts, such as "posting codes" within subsidiary modules, in order to minimize the number of characters needed to select a general ledger account.
- Integrated subsidiary systems for projects, grants, and other functional areas.
- Ability to roll current year balance sheet accounts to their specified destination for the following year during the year-end closing process.

In addition to ERP functionality, the organization's leadership and management should review the account structure at least annually to ensure that it is meeting the organization's needs. Following the review, changes should be implemented and unused accounts should be archived or inactivated. A Finance Department and/or Comptroller's Office may be in the best position to take responsibility for this annual review.

2.3.4 Emerging Best Practices

Electronic Journal Entry Supporting Documentation. Through native ERP functionality or through integration to external document management systems, certain ERP systems now enable supporting documentation to be retained within the ERP system. As it is easy to "drill" through transactions to see the supporting documentation, it is no longer necessary to retain physical documentation in order to review the details of the transactions. Workflow approvals should serve as a step to confirm that all necessary documentation is attached to transactions in the system. At year end, external auditors can be given view-only access to the ERP system for any necessary audit procedures.

2.3.5 Potential Barrier(s) to Best Practices

- **Culture/Education.** Technological capabilities, resources, and collaboration are needed to create a new chart of account structure and to garner willingness to effectively use the new chart of accounts and corresponding KPIs. Redesigning the chart of accounts takes significant effort, as governments need to determine:
  - What information is important to be monitored?
  - How does the information need to be summarized for various reporting needs?
  - What "high-level" structure will the departments need to conform to?
  - How will the organization obtain employee buy-in and communicate the changes to employees?
  - How will the organization "crosswalk" prior year's information to the new information for comparison purposes?
  - How will the organization prepare its chart of accounts to handle future growth/restructuring, and what minimum criteria will necessitate changes to the chart of accounts (e.g., considering the level of effort needed)?

It may take months to redesign a chart of accounts. The timing of the redesign needs to take into consideration the resource requirements and the appropriate time to begin using the new chart of accounts, such as at the beginning of a new budget year.

- **Policy/Legal.** Similar to the potential barrier in the financial reporting section, chart of account requirements may differ across states, making it challenging for software vendors to meet particular users' needs.

2.4 ACCOUNTS RECEIVABLE & CASH RECEIPTING

2.4.1 Overview

Assessing and collecting fees and taxes, and managing the related cash on hand, is critical to funding government operations. Based on the type of government entity and services provided, typical receivables for governments may include:

- Real and personal property taxes.
- Income taxes.
- Revenues provided by the State [e.g., State-shared revenue, Economic Vitality Incentive Payments ("EVIP"), funding for major roads and streets ("Act 51")].
- Charges for services
    - Water and sewer
    - Permits and licenses
    - Fire, police, and ambulance use.

Separate software systems for departments' accounts receivable and cash receipts constrain users of government services from paying for multiple services at a time and limit employees' ability to access information real-time, sometimes frustrating both citizens and government employees. Additionally, this makes it extremely difficult to understand, at an enterprise level, the current level of outstanding accounts receivable.

As governments face declining revenues from property taxes, their main source of funding, the assessment and collection of fees is playing an increasingly important role. Further, expediting the receipt and processing of payments can further enable the provision of valuable government services. With a focus on providing services that support residents' quality of life, such as public safety and community development, in many cases governments' ability to collect revenues is most likely not as strong as that of a third party collection agency. Governments should consider the costs and benefits of policies for incentivizing different types of payments and/or using third party collection agencies for delinquent accounts receivable. For example:

- Water shut-off policies and appropriate security deposit levels can incentivize prompt payment for water bills.
- Delinquent real property taxes are typically collected by counties throughout Michigan. In addition, other delinquent receivables, such as water bills, may also be placed as a lien on real property, depending on the municipality's ordinances. To the extent that the local unit or a third party collection agency can collect any receivables sooner or at a lower cost, the additional funding, net of collection costs, would be available to the local unit sooner for funding current operations.
- Personal property taxes and other receivables remain the responsibility of the local unit. Third party collection agencies may be valuable for collecting receivables, especially after the local unit has exhausted its own resources.

In addition, cash collections and accounts receivable (or “revenue management”) often is a decentralized process throughout governments. As highlighted in the General Ledger section, to the extent they are not implemented through the ERP software, various departments of the government may tend to have their own software systems for their particular operations (such as for property taxes, water and sewer, library, recreation, or airport software systems), each having different platforms and interfaces for receivables management and cash receipts. These separate systems constrain users of government services from paying for multiple services at a time (often referred to as “one-stop shopping”) and limit employees’ ability to access information real-time, sometimes frustrating both citizens and government employees. Additionally, this makes it extremely difficult to understand, at an enterprise level, the current level of outstanding accounts receivable.

The following key performance indicators are typical for measuring the efficiency and effectiveness of accounts receivable and cash receipting processes:

Key Performance Indicator	Sample Metric
Accounts Receivable	
Percent of uncollected revenues $\frac{\text{(Expected revenues – Collected revenues)}}{\text{Expected revenues}}$	As low as optimal[ix]
Days receivable ratio (alternatively, Accounts Receivable Turnover) (Average receivables balance x 365) ÷ Credit sales	30 days
Number of transactions per FTE processing receivables	As high as optimal[ix]
Percentage of receipts in electronic form	As high as optimal[ix]
Cash receipts processed per FTE processing receivables	As high as optimal[ix]
Cash Management	
Days from receipt to deposit	1 day
Percentage of bank reconciliations prepared and reviewed within one week of month end	100%

The comprehensive nature and/or integration of the billing components of the ERP system directly impact the speed of collecting and reconciling receipts. In addition, accepting electronic payments can reduce labor needs for cash receipting and potentially increase revenues. Additional KPIs to consider, such as the percent of uncollected revenues, can indicate a need for using third party collections agencies. Costs per accounts receivable transaction is also a valuable KPI.

In addition to the KPIs above, governments may also find value in calculating their ability to raise revenues, using indicators such as:

- Effective tax rates
    - Property tax revenues ÷ Assessed property value
    - Sales tax revenues ÷ Total retail sales
    - Income tax revenues ÷ Total Personal income
- Effective fees, charges, or other funding for services

These ratios can then be compared with the government’s historical results and neighboring or other benchmark communities.[iv]

2.4.2 Typical Needs

In order to collect revenues and manage receivables efficiently and effectively, governmental entities are interested in the following overarching capabilities, practices, and policies:

Accounts Receivable

- Sharing accounts receivable and citizen information with other departments (e.g., amounts owed, current contact information, bankruptcy notifications, and employment information).
- Minimizing disparate cash receipting systems, striving for a reduced number or customer-management systems.
- Ability to track receivables and generate bills.
- Ability to accept citizens' payments for multiple services with only one transaction (e.g., internet payment, ACH, wire, or check).
- Ability to efficiently process returned, or non-sufficient funds ("NSF"), checks.
- Minimizing the time between receiving and posting revenue, such as through the ability to accept payments via credit cards and the internet.
- Tracking detailed information related to accounts receivable, such as discounts, days outstanding ("aging analysis"), date the receivable was collected, and payment plans for residents who have been granted an exception to paying their bills in full on their due dates. The date the receivable was paid is important for determining which receivables were collected within 60 days of year-end,[x] for including on the modified-accrual basis of accounting.
- Calculating interest and penalties in accordance with local ordinances.
- Calculating and posting allowances for doubtful accounts and write-offs of uncollectable accounts.
- Audit trail capabilities.
- Accurate, flexible, and user-friendly reporting (e.g., for cash flow forecasting).
- Ability to attach files to transactions within the system, in order to minimize the effort to substantiate or research details of transactions.
- Common approaches to charging fees for services.
- A write-off policy for bad debts approved by the Board, Council, or Commission, including:
    - Limitations on the authorization to perform write-offs and
    - Consideration for the likelihood of collecting outstanding receivables and the related cost.

Cash Management

- Appropriate segregation of duties between authority, custody, and recordkeeping.
- Appropriate handling of cash, given risks and costs.
- Prompt reconciliation of bank accounts by an independent individual.
- Minimizing the number of bank accounts.
- Reducing the amount of reconciliations with shadow systems and bank accounts.

2.4.3 Common Best Practices

The typical needs described are addressed by ERP vendors through major functionality such as:

- Integrated accounts receivable and cash receipting functionality for billing functions supported by the ERP system, enabling citizens to pay for multiple types of services at the same time (e.g., with the same cashier or online).
- Functionality to accept payments made online, via automated-clearing house ("ACH") and electronic funds transfer ("EFT"), and from 3rd parties such as financial institutions and/or lockboxes. Certain ERP systems include the ability to import files from external systems containing receipt information directly into the software systems, with minimal human intervention.
- Ability to attach files to transactions within the system, in order to minimize the effort to substantiate or research details of transactions.
- Ability to track receivables and generate bills; and efficiently process returned, or non-sufficient funds ("NSF"), checks.

In addition to ERP functionality, governments can improve their efficiency and effectiveness by ensuring that they are using the best internal controls feasible and updating policies and procedures through an ongoing "continuous improvement" process.

- Tracking detailed information related to accounts receivable, such as discounts, days outstanding ("aged accounts receivable"), date the receivable was collected, and payment plans for residents who have been granted an exception to paying their bills in full on their due dates.
- Calculating interest and penalties in accordance with State laws and local ordinances.
- Calculating and posting allowances for doubtful accounts and write-offs of uncollectable accounts.
- Audit trail capabilities.
- Accurate, flexible, and user-friendly reporting (e.g., for cash flow forecasting).

In addition to ERP functionality, governments can improve their efficiency and effectiveness by ensuring that they are using the best internal controls feasible and updating policies and procedures through an ongoing "continuous improvement" process. For example:

- Receivables should be recorded as soon as they are identified (i.e., when the government has provided services or incurred the related expenditures), in order to inform other users of amounts owed to the organization. These receivables can be recorded to subsidiary systems (such as those for property taxes, water billing, or other miscellaneous receivables), and then integrated or interfaced with the general ledger system.
- Cash receipts should be posted to financial systems immediately and deposited within 24 hours.
    - To make the process more user-friendly and thus more likely to be followed, governments could use hardware from their financial institutions or other vendors for scanning remittance advices and checks and depositing the funds directly from departments' teller windows (referred to as "remote deposit capture" or "remittance processing"), reducing the amount of time between receiving and depositing funds.
    - Organizations may also be able to have correspondence scanned along with deposits receipted by financial institutions, which would then be retained with their transactions on the financial institution's servers for up to 10 years.

    - Short of utilizing electronic scanning capabilities for receitping, organizations could use new automated safe technology (discussed in the "Emerging Best Practices" section below) or contract with a courier to take deposits from departments directly to financial institutions. Both of these have the added benefits of minimizing risk, creating electronic images of checks to transactions at the point of entry, and otherwise reducing workloads for Treasurers' Offices.

  Costs and benefits should be evaluated for determining the appropriate approach and balance of roles and responsibilities for each organization, department, and activity.

- When possible, it is recommended that governments minimize their number of bank accounts, using internal processes to separately account for funds instead. Use of a pooled cash fund can also eliminate the need for significant "due to" and "due from" journal entries throughout the year. Separate bank accounts may be legally required at times, but otherwise may not always be necessary.

- Typically, governments should strive for receipts to come from the following sources, based on priority:
    - Online
    - Via financial institutions and/or lockboxes
    - Mail or in-person, entered into:
        - ERP systems
        - Best-of-breed software systems

  This is based on the common finding that transaction costs for payments made online and via lockboxes are less than the cost of employee labor per transaction. In other words, fees for online transaction or lockbox payments and financial institutions' labor cost per transaction, given their economies of scale, tend to be comparatively low.

  In addition, barcodes or scan lines can be placed on payment stubs to assist lockboxes and tellers with quickly opening citizens' records and processing transactions. Files can also be shared between the organization and the financial institution, for the financial institution to attempt to look up any necessary customer billing information or for the organization to view and resolve any payment errors online, eliminating the need to send physical documents to one another for those transactions that result in "exceptions."

  Barcodes and scan lines can also be used to combine bills from multiple departments or organizations onto one invoice in order for financial institutions to process multiple bills with only one payment. Otherwise, citizens need to create separate payees for each department. This is discussed further in the "Emerging Best Practices" section below.

- Procedures and other documentation for ensuring appropriate segregation of duties should be continuously updated to incorporate advances in technology that enable greater reliance on controls within the software systems. For example, processes that may have required multiple human interactions or manual reconciliations in the past could possibly be streamlined given interfaces between software systems, user security settings, limiting the authority and ability to adjust receivables, and automated communications and reconciliations with financial institutions. In addition, standard internal controls to follow include requiring each teller to have his or her own cash drawer that other tellers are prohibited fromaccessing and requiring tellers to leave personal belongings (e.g., jackets, purses, and backpacks) in a locker away from the work area.

2.4.4 Emerging Best Practices

- **Government-wide fully-integrated ERP**. Including all government departments on one integrated ERP system is currently a significant challenge for governments. ERP systems to-date focus on providing standard processes for back-office functions such as accounting and human resources. In some cases, they have begun to establish standard processes for certain types of departments, such as water and sewer, and community development. Other departments such as libraries, courts, and child support services, for example, tend to use software provided by other vendors for their unique needs. This can limit governments from having access to all of their accounts receivable in one place. To the extent that a local government's ERP provides adequate integrated billing functionality for departmental functions, the government can realize benefits by deploying it and should consider it first before non-integrated alternative systems.

- **Third-Party Payment Processing Vendor.** An alternative to a government-wide fully-integrated ERP, which is not currently available, is using a third-party payment processing vendor. In this scenario, governments provide the 3rd party, such as a designated governmental department or agency, financial institution or other vendor designed particularly for this function, with file formats needed for aggregating citizen information and collecting data to process cash receipts for particular departments. The third party vendor can then enable customers to create an onlilne account that can be used to setup future payments. Payments can be made online, over an automated phone system (Interactive Voice Response or "IVR"), or call center. The vendor can also use its data to determine the level of effort necessary for pursuing particular citizen receivables, such as whether to write-off certain accounts or send other accounts to a third-party collections agency. The vendor can then process all payments and send each particular department a file to upload into their system. This can reduce redundancies, creating cost savings for governments and improving customer service for citizens.[xi] In some cases, for example, the vendor may be able to provide a link for the government's website that enables citizens to setup payments for any type of government service, rather than needing to visit or pay each department separately. These vendors may also be able to provide devices for departments' counters, so citizens can pay other departments' bills at the same time.

- **E-Lockbox.** Although citizens may submit payments via on online bill payment service, the payments may be remitted to organizations via paper checks that require manual processing. Through organizations' financial institutions, organizations can register with processing clearing networks for consumer bill payment service providers. Processing clearing networks consolidate citizens' ACH payments from various bill payment service providers to ensure that citizens' online payments are processed electronically and with a single transmission, rather than remitted as physical checks or multiple electronic files. Further, organizations can establish validation rules for payments (e.g., account number length and format) to minimize citizen errors, review and resolve exceptions online, and return any remaining payments submitted with errors to the online bill payment service provider for resolution. E-lockboxes may also enable organizations to view/query receivables information across multiple departments, create reports, and attach and retain documentation related to receivables.

Some credit card transaction fees can be passed to citizens, based on recent court decisions.

- **Enhancing billing information.** Aiming toward streamlining the processing of payments, governments can make every practical effort to minimize the number of invoices sent to citizens. Governments may want to maintain a minimum frequency for sending invoices, such as monthly or quarterly, in order to help citizens remember to pay their outstanding amounts. However, reducing the quantity of invoices sent (e.g., combining invoices for property taxes and utilities) can streamline the processing of receipts. For example:
  - **Summary bills.** Governments could aggregate as much customer receivable information as possible in one central database, including information prepared in the

ERP system as well as information brought into the ERP system via an interface, in order to prepare a single invoice with receivables for multiple types of services. The government could subsequently process a single payment (e.g., check) toward each type of service. The government would need to set priorities for applying payments in the event that citizens send partial payments, taking into consideration due dates and liens, for example.

- **Scan lines and barcodes.** Invoices can be prepared with scan lines or barcodes for multiple types of receipts, which can all be recognized by the government's or its financial institution's scanning hardware, enabling it to apply one payment toward receivables for multiple types of services.

- **Standardizing invoice information across organizations**, In addition to providing scan lines for multiple departments' receivables on a single invoice, governments may wish to create standard scan lines or bar codes across their departments or other organizations, enabling financial institutions to process individual payments toward multiple departments' or organizations' receivables. This standardization may enable financial institutions to streamline their processes for establishing lockboxes, potentially enabling the financial institutions to pass any savings back to the governments. Such an effort would require agreeing to standards among the departments and other governmental organizations involved, updating ERP and any other software systems, and negotiating with the financial institution, but may be worth the related benefits.

With appropriate internal controls, staff in departments can both record transactions and accept payments.

- **Credit card machines and regulations.** Credit card machines, provided and managed by third parties, can enable governments to accept credit card payments while also complying with security requirements ("Payment Card Industry, or "PCI", compliance). With the provided hardware and software, citizens can pay for transactions over-the-counter, and the government receives the payment from the third party without having access to the citizens' credit card information. In addition, recent court decisions allow governments to pass some credit card transaction fees to citizens.[xii, xiii]

- **Use of "inventory" in software systems.** Many government organizations require citizens to initiate transactions at the related department (e.g., Building or Water), and then pay for the service at the Treasurer's Office. The logic for citizens needing to visit two departments is related to "segregation of duties." However, based on the nature of the transaction, if appropriate internal controls are established and implemented within software systems (e.g., those staff who collect receipts cannot adjust fees or receivables balances) and appropriate monitoring is taking place outside of the software systems (e.g., managers are reviewing "exception reports"), staff in departments can both record the particular transactions and accept the related payments. This may reduce labor needs by reducing involvement from two employees involved in the majority of transactions to only one employee. "Inventory" can be established for many types of services by utilizing meter readings, creating pre-numbered tickets that are reconciled with receipts, or other logical approaches. To the extent that the cost of this method is less than the cost of the second employee who would otherwise be needed to accept payments, it is worth the effort.

- **Increased reliance on financial institutions.** Some Treasurers believe that it is necessary or critical for all receipts to be verified by the Treasurer's Office. If the department and the government's financial institution(s) are both handling the receipts, the Treasurer's Office is essentially triple-checking. Financial institutions can be relied upon to double check departments' receipts and inform the Treasurer if receipts do not match deposit tickets. With this approach, the Treasurer will have more time to verify receipts within the accounting system and follow-up on any issues (e.g., if the receipts do not agree with the receivable balances). Government organizations will want to consider the size and complexity of receipts when determining if they should be sent directly to financial institutions. For example, it is not prudent for departments to walk with significant amounts of cash to the Treasurer's Office, but a bundle of checks may be deemed as low enough in risk. Armored courier services may be desirable for transporting significant cash deposits.

- **Cash Recyclers.** Organizations can seek means to increase internal controls around cash handling such as through utilizing a Cash Recycler, third party hardware that can:
  - Accept cash, make change based on a reading of a scanned barcode on the invoice stub, and provide a printed receipt for the customer,
  - Minimize the time that cash is available outside of a secure safe,
  - Scan cash to detect counterfeit bills,
  - Reduce the transaction time between the tellers and the customers, and also reduce the time needed to balance cash drawers, and
  - Allows staff to deposit their starting drawer cash at the end of each day and withdraw the authorized amount of starting drawer cash at the beginning of each day.
- **Automated Safes.** In addition to the features of a Cash Recycler, Automated Safes electronically deposit funds into the organization's bank account, at which time it becomes the property of the financial institution. A bank deposit slip is readily available for the organization. The financial institution tracks the funds in the safe and can determine the optimal time to send a courier to pick up the funds. Depending on the financial institution's prices for its automated safes, only those departments with high volumes of cash transactions and/or concerns with transferring funds to the financial institutions may be interested in automated safes.
- **Kiosks.** Several government organizations are beginning to test the efficiency and effectiveness of providing kiosks, similar to Automated Teller Machines ("ATMs"), for citizens to use for making payments. As more organizations adopt this approach, it may become more acceptable and/or cost effective for others.

2.4.5 Potential Barrier(s) to Best Practices

- **Technology.**
  - **Segregation of duties.** Various departments/divisions within governmental entities may be using spreadsheets (e.g. MS Excel) or personal database software (e.g. MS Access) for creating billings and tracking receipts. A billing/receipting approach using these unstructured software tools does not provide the automated internal control features built into ERP systems, as they have limited security features intended to manage which specific users can perform certain functions. They also are limited in providing an audit trail of transactions and changes by those users. For example, the software may not be able to prevent an employee from accepting payments and also adjusting or deleting the related bill. Further, many factors (e.g., cost, complexity, and culture) may be delaying the department's/division's conversion to software with greater security capabilities. Without the ability to segregate the adjustment of receivables and the collection of payments, organizations will need to consider further separating billing and collection responsibilities.
  - **Charges for Services**. As governmental entities impose new fees or taxes or change the related calculations, customizations may be necessary for calculating fees and reporting totals. If governmental entities are able to simplify these processes through identifying common calculations for taxes and fees, for example, software vendors may be able to incorporate these into their standard software systems. Otherwise, costs to incorporate unique calculations into software systems could be prohibitive. The cost to perform the calculation manually should be considered as well. Both of these potential costs should be considered and compared to the potential benefits of assessing new fees.

- **"Best of Breed" software.** As mentioned above, current ERP systems do not always have appropriate software tools for particular departments, such as for public safety departments, case management or membership tracking for courts, child support services, libraries, etc.. In the meantime, the vendors that provide the software packages that these departments use compete in the vendor marketplace and are referred to by some to be "Best of Breed." These "Best of Breed" systems or other 3rd party systems need to be interfaced with the ERP system where feasible and appropriate, such as through an import-export process. As the ERP vendor marketplace evolves, certain Best of Breed software solutions may be acquired and incorporated into ERP systems. In the meantime, governments should consider:
    - Using the functionality that is provided
    - Staying abreast of changes to functionality that can be incorporated when the timing and costs are appropriate
    - Using 3rd party vendors for payment processing to reduce costs and improve customer service. In these cases, governments also need to monitor vendor performance and may need significant effort to implement new interfaces.

- **Culture/Education.**
    - Governments still face many instances in which residents prefer to make payments in-person or via mail with cash and checks, such as in communities that have demographics in which residents tend to not heavily utilize the internet or prefer to transact business in cash. Over time, the use of debit- and credit- cards and online payments has been increasing. In the meantime, governments may need to educate their citizens on the benefits of these methods and forms of payment and/or provide incentives and/or disincentives, to the extent that these actions do not outweigh the benefits of changing citizen behavior.
    - Incorporating receivables information into shared systems will require departments to implement new processes and will make this information available to others within the organization. This may require proactive change management, including directives from the organization's leadership.
    - Financial reports prepared in accordance with the Governmental Accounting Standards Board's (GASB's) requirements, referred to as a Comprehensive Annual Financial Report (CAFR), are not required to include an aged accounts receivables listing. We recommend that governments publish the totals of their aged receivables for the public, as part of a strategy for demonstrating governments' effectiveness at collecting receivables and also encouraging citizens to pay any outstanding receivables. Clearly communicating delinquent receivables and write-offs with the public can help create an understanding of governments' challenges with funding its operations.
- **Policy/Legal.** State law presently states that any collection costs for property taxes, including fees paid to collection agencies, must be incurred by the governmental entity responsible for collections. In other words, the governmental entity that collects for other jurisdictions within its boundaries (e.g., schools and libraries) cannot charge these jurisdictions for their share of the collection costs. Regardless, utilizing a third party collections agency at a lower total cost for collections may benefit the governmental entity that is responsible for collections. Further, the collecting governmental entity and other jurisdictions may wish to increase their collections costs for an increase in revenues net of costs. Although the costs cannot be charged to the other jurisdictions, the other jurisdictions may be able to compensate the collecting governmental entity by allowing it to keep a portion of the penalties and interest from the additional funds collected.

- **Economic.** Credit card transaction fees tend to be based on a percentage of the transaction amount, which may be feasible to pay out of government funds when the total transaction fee is less than the cost of paying an employee to process a cash receipt. However, the credit card transaction fee for property taxes can easily be higher than the cost of labor per transaction. Further, accepting credit cards may be beneficial for increasing participation in some services, such as parks and recreation activities; but may have no impact on services such as water and property taxes. As a result, at the time of this writing it may make sense for governments to accept credit card payments for only those transactions that are lower in dollar values.[xiv] However, governments may wish to allow citizens to make payments via credit card if they are willing to cover the transaction costs themselves.

2.5 DEBT AND INVESTMENT MANAGEMENT

2.5.1 Overview

Governments tend to have many types of debt and investment instruments that require significant planning and tracking efforts for ensuring that sufficient funds are available to pay bills on time and in accordance with legal agreements.

Typical types of debt and investment instruments within governments include:

Debt	Investments
Bonds • General obligation bonds • Revenue bonds • Tax Increment Financing bonds Tax Anticipation Notes Installment purchase agreements / Capital leases	Money market accounts U.S. Treasury bills, notes, and strips Commercial paper Bonds Certificates of deposit Short-term investment pools

The following key performance indicators are typical for measuring the performance of debt and investments, the efficiency and effectiveness of these instruments, and organizations' overall health:

Key Performance Indicator	Sample Metric
Investments	
Percent of available cash that is invested	Highest possible[ix]
Net investment income (Interest earned plus market value changes) compared to benchmark rates	As high as optimal[ix]
Debt	
Administrative costs as a percentage of total debt	As low as optimal[ix]
Debt Ratio $\frac{\text{Total Liabilities}}{\text{Total Assets}}$	As low as optimal[ix]
Bond rating	Highest possible[ix]
Cost of debt issuance and ongoing interest expense	Monitor against prevailing rates
Funding of pension and Other Post Employment Benefit (OPEB) systems	As high as optimal[ix]
Fund Balance	$\geq$ 2 months[xv]

Key Performance Indicator	Sample Metric
Unrestricted Fund Balance* / Monthly General Fund operating expenditures *Note that, in general, funds within a community's "Budget Stabilization Fund" are unrestricted. Unrestricted funds include all of those funds that are *committed, assigned, and unassigned*, as defined by GASB Statement No. 54.	

Governments may also find value in calculating the ratio of their debt to other economic factors such as:

- Debt per $100 of assessed property value,
- Debt per $1,000 of personal income,
- Debt per capita, family, or other relevant indicator of activity (e.g., FTEs),
- Risk exposure ratio (percentage of unrestricted property tax revenue needed if other revenue sources decrease), and
- Tax leverage ratio (percentage of unrestricted property tax revenue needed if operating expenses increase).[iv]

2.5.2 Typical Needs

For both debt and investments, significant details need to be monitored and reported on, including:

- Type of debt or investment
- Due dates and maturity dates
- Balances, additions, and reductions
- For variable rate debt, monitoring of index rates and, if applicable, swap values
- Interest rates
- Net investment income, including market value gains and losses
- Compliance with Covenants
- Compliance with State laws, ordinances, and investment policies

In the absence of a software module dedicated to this purpose, governments and other entities generally track this information in software products like Microsoft Excel and Microsoft Access. These products lack built-in features for debt and investment management that could make them more efficient and effective, such as:

- Ability to restrict or limit user access and ability to track user changes with an audit trail, both of which impact the integrity of the data within the database.
- Standard user-friendly tools for reporting and performing "what-if" analyses.
- Tracking new bond issuances and proceeds (e.g., in debt management module).
- Cash flow forecasting.
- Ability to initiate financial transactions within the system (e.g., debt service payments and investment transactions)

Use of these tools also introduces the potential for error due to the use of complex formulas used within these spreadsheets.

In addition to ERP functionality, organizations also need staff to monitor and act on changes in interest rates, such as trading investments and identifying opportunities to refund (i.e., refinance) bonds.

2.5.3 Common Best Practices

Many ERP vendors suggest the use of a 3rd party software system that can be integrated with the ERP system. The typical needs described are addressed through major functionality such as:

Overall

- Tracking and managing debt and investments, including additions, reductions, types, etc.
- What-if scenarios.
- Interfaces with financial institutions.
- Cash flow forecasting.
- Automated recurring funds transfers.
- Reporting on historical and projected performance.
- Required compliance reporting.

Debt

- Initiating debt payments.

Investments

- Tracking pooled investments.
- Automatic allocations of interest to multiple funds for pooled investments.
- Providing for interest accruals.
- Facilitating interest earnings projections.

2.5.4 Emerging Best Practices

Governments could also consider outsourcing certain debt and investment management to a third party, so long as the benefits outweigh the costs. For example, some counties already offer investment pools to the cities, villages, and townships within their jurisdiction, commonly referred to as a Local Government Investment Pool or "LGIP."

2.5.5 Potential Barrier(s) to Best Practices

Economic. The cost of software solutions for debt and investment management can easily outweigh the value provided if the organization's debt and investment needs are relatively simple. In these cases, it may be best for the organization to continue using shadow systems such as Microsoft Excel.

2.6 BUDGET DEVELOPMENT & BUDGET CONTROL

2.6.1 Overview

Budgets are a form of strategic plan - a roadmap for achieving the goals of governments, their departments and divisions. At its core, a budget grants management the authority to undertake a level of service approved by the governing body. In granting this authority, the governing body makes staffing decisions and allocates resources to programs and services. Budgets also assist in effectively monitoring spending and performance measures to demonstrate accountability to citizens. As a result, the budget process is one of the most important financial management processes undertaken. The quality of decisions resulting from the budget process and the degree to which they are implemented rely on the structure of the organization, the consistency and stability of processes, and the tools/technology utilized to support them.

The State of Michigan's General Appropriations Act, within its Uniform Budgeting and Accounting Act (P.A. 2 of 1968), requires governing authorities to adopt budgets and makes it illegal for spending to exceed the budgeted amount. Governments' leaders can decide whether to hold staff accountable to either fund, department, or line-item budgets. If line-item budgets are chosen, employees frequently request budget amendments to re-allocate spending for particular types of transactions or items. If department budgets are chosen, management has more flexibility to change the makeup of their spending plans, reducing the need to initiate amendments.

Budgets are a form of strategic plan - a roadmap for achieving the goals of governments, their departments and divisions. Budgets also assist in effectively monitoring spending and performance measures to demonstrate accountability to citizens.

The National Advisory Council on State and Local Budgeting (NACSLB) has identified four essential principles of effective budgeting: (1) set broad goals to guide decisions, (2) develop strategies and financial policies, (3) design a budget supportive of strategies and goals and (4) continually evaluate the government's success at achieving the goals that it has set for itself (i.e., performance).

The following key performance indicators are typical for measuring the efficiency and effectiveness of budgeting processes:

Key Performance Indicator	Sample Metric
Percentage of approved budget adjustments entered into software system within 2 days	99.59%[vi]
Budget amendments processed per FTE processing budget amendments	243[vi]
Total budget and analysis cost as a percent of revenues	0.04%[vii]

Clearly, it is critical to communicate the strategic direction of the organization, in the form of the budget, as quickly as possible. The KPIs strive to minimize the amount of time spent between identifying and implementing changes.

2.6.2 Typical Needs

In order to budget efficiently and effectively and increase departments' involvement in managing their budgets, governmental entities are interested in the following overarching capabilities:

- Reduced frequency of budget amendments.
- Real-time budget-to-actual comparisons with general ledger details and an ability to indicate if expenditures and planned expenditures will exceed the budgeted amount.
- Budgeting for and tracking multiple employee types, including full time, part time, temporary and seasonal.

- An interface between the budget and payroll modules for budgeting employees' salaries and benefits based on number of employees, pay scales, etc.
- Version control / audit trail capabilities.
- Streamlined processes for establishing the current-year budget, minimizing the need for shadow systems such as Microsoft Excel and Word.
- Workflows to route budget requests and approvals from the end-user to the appropriate parties for approving and posting (e.g., Finance Department) during budget planning periods and for adjustment requests, and ability for non-approvers to have view-only rights.
- Ability to include comments in budget requests, with access to enter comments and ability to roll-forward comments from previous years.
- Ability to make government-wide budget adjustments, such as increasing/decreasing all employee salaries by a certain percentage.
- Inclusion of KPIs along with budgeted financial activities, for setting and monitoring performance management expectations.
- Ability to track budgeted and actual revenues and expenditures across multiple years for projects and grants, eliminating the need to "close" projects and grants for the current year and roll-forward budgets and encumbrances to the subsequent year.
- Ability to create budget projections and forecasts for multiple scenarios and/or years (real-time scenario analyses), based on a variety of assumptions.
- Ability for system warnings to be provided when financial activity is nearing, at or exceeding established budget levels.

2.6.3 Common Best Practices

The typical needs described are addressed by ERP vendors through major functionality such as:

- Real-time budget-to-actual comparisons with general ledger details.
- "Position control," which is the budget for and tracking of all employees, whether permanent or temporary.
- An interface between the budget and payroll modules (position control) for budgeting employees' salaries and benefits based on number of employees, pay scales, etc.
- Version control / audit trail capabilities.
- Ability to roll forward the budget from the previous year, including comments, to be the starting point for the current year budget and to be updated based on changes in priorities and funding.
- Ability to roll forward unexpended prior year encumbrances to the current year, when approved by the appropriate governing body (e.g., the Board, Council, Commissioners, or Finance Department).
- Workflows to route budget approvals from the end-user to the appropriate parties for approving and posting (e.g., Finance Department) during budget planning periods and for adjustment requests, and ability for non-approvers to have view-only rights.
- Ability to make government-wide budget adjustments, such as increasing/decreasing all employee salaries by a certain percentage.
- Inclusion of KPIs along with budgeted activities.

- Ability to track budgeted and actual revenues and expenditures across multiple years for projects and grants, eliminating the need to "close" projects and grants for the current year and roll-forward budgets and encumbrances to the subsequent year.
- Ability to create budget projections and forecasts for multiple scenarios and/or years (real-time scenario analyses), based on a variety of assumptions.

In addition to ERP functionality, governments can (and should) improve their efficiency and effectiveness through considering the costs and benefits of their policies and procedures. For example:

- Department budgets should be developed using the ERP system, to minimize duplicate data entry (e.g., calculating once in Microsoft Excel and then rekeying into the ERP system).
- Budgeting at the department level can minimize the number of times Councils or other governing bodies need to approve budget changes (i.e., governing bodies would only approve budget changes that legally limit the amount of spending per department, not line-item spending). This would likely require governing bodies and department heads to hold staff accountable to budgets through other means, such as evaluations of departments' achievement of their performance objectives, and would reduce the use of governing bodies for overseeing day-to-day operations. The governing body should determine the appropriate level for budgeting based on its level of concern related to achieving its objectives, which tends to be at the department level.
- Standard processes can be set to further improve the use of governing bodies' time, such as including language: 1) for budget amendments along with grant requests/resolutions and 2) approving the roll-forward of encumbered funds and carry-forward of available funds for which goods were not received by year end, in order to reduce the amount of times governing bodies and/or Finance Departments are asked to approve requests.

Results-Based Budgeting can help governments prioritize those services to offer.

2.6.4 Emerging Best Practices

Results-Based Budgeting (aka "Budgeting for Results") is emerging as a new best practice. The general idea is to base budgets on revenues available and citizens' demands as a starting point, rather than beginning with the prior year's budget. In other words, governments ask themselves which services they can provide with the funding they have. Such an approach can help governments prioritize those services to offer, instead of attempting to cut away at line-items while still offering services that are not as highly valued by citizens (i.e., spending time in the weeds versus the trees, or not seeing the big picture).[xvi, xvii]

2.6.5 Potential Barrier(s) to Best Practices

- **Culture/Education.** Those attempting to change long-held practices can face significant resistance. It may take time and effort to develop a concerted communications plan and build buy-in to adopt best practices for budgeting processes. In addition, standards may need to be communicated for providing departments with greater responsibilities while also holding them accountable, such as including related results-measures in HR performance reviews.
- **Technology.** Some ERP systems are incapable of enabling users to use a variety of assumptions when creating budget projections and forecasts. For example, these systems may not allow particular accounts to be calculated based on expectations for other accounts (e.g., interest expense as a percentage of debt outstanding). In these cases, it may be better for organizations to complete calculations of budgets for specific accounts in Microsoft Excel or other software systems, and then upload/input the final numbers into the ERP system.

2.7 PROJECT, GRANT, AND COST ACCOUNTING

2.7.1 Overview

Cost accounting is a process of collecting, analyzing, summarizing and associating costs to a specific activity. Its goal is to advise management on the most appropriate course of action based on cost efficiency and capability. Cost accounting provides the detailed cost information that management needs to control current operations and plan for the future.

All types of organizations, whether service, manufacturing or trading, require cost accounting to track their activities. Cost accounting has long been used to help managers understand the costs of running a business. Modern cost accounting originated during the industrial revolution, when the complexities of running a large scale business led to the development of systems for recording and tracking costs to help business owners and managers make decisions.

Most of the costs incurred by a business are what accountants call "variable costs" because they vary directly with the amount of production or services. Managers could simply total the variable costs for a product and use this as a rough guide for decision-making processes. Some costs tend to remain the same even during busy periods, unlike variable costs, which rise and fall with volume of work. Over time, the importance of these "fixed costs" has become more important to managers. Examples of fixed costs include the depreciation of facilities and equipment, and the cost of departments such as maintenance, information technology, purchasing, and accounting.

Failure to comply with grant requirements can result in a loss of the funding, even if the funds have already been committed – forcing the government to incur the costs instead.

Unlike the accounting systems that help in the preparation of periodic financial reports, cost accounting systems and reports are not subject to rules and standards like the Generally Accepted Accounting Principles. As a result, there is wide variety in cost accounting systems of different organizations and sometimes even in different parts of the same organization.

Common uses for cost accounting in municipalities include:

- **Project Accounting** – tracking costs for large projects, frequently (but not exclusively) public works type projects. Examples would include road projects, water and sewer construction projects, facility construction, utility projects, etc.
- **Grant monitoring** – many departments receive grants from federal, state and private sources. Frequently, these grants require tracking and reporting of specific costs for reimbursement. Funding from sources similar to grants, such as the State's reimbursement for maintaining highways, roads, and streets, is subject to similar requirements. Failure to properly monitor grant funds and associated costs can result in forfeiture of funds or other sanctions.
- **User Fees/Cost Recovery** – local governments provide a host of discretionary services to residents and to neighboring municipalities. Examples might include various park services, utilities, and shared services such as public safety. Cost accounting data at the activity level can serve as the basis for pricing these services.

Emerging trends and uses for cost accounting data in local governments include:

- **Activity Based Budgeting** – tracking costs at an activity level and using the data to drive budget development.
- **Balanced Scorecards** – The balanced scorecard performance management tool that can be used by managers to keep track of the execution of activities by the staff within their control and to monitor the consequences arising from these actions.

- **Performance management** – A variety of approaches have been developed following the introduction of the balanced score card method for monitoring organizational performance. Typically, these methods include specifying organizational goals and monitoring results in statistical and financial terms.

2.7.2 Typical Needs

In order to efficiently track projects, grants, and overhead costs, governmental entities are interested in the following overarching capabilities:

- Workflows that route project and grant approvals, expenditures, and receipts to the appropriate personnel based on the type of grant and internal governance policies and procedures.
- Centralized document management, for finance, legal, and department staff to have access to grants, contracts, and other related documentation.
- Software modules for grant and project management that minimize the activity in, or "strain on" the general ledger.
- Ability to track project, grant, and overall department budgets, revenues, expenditures, and balances over multiple years.
- Ability to assign overhead and labor costs to projects and grants based on time tracking in time and attendance software modules or metrics in other software systems.
- Minimal use of shadow systems.
- Tools for calculating and reporting on overhead amounts by categories such as department or activity, to be used for full, activity-based-cost accounting.
- Allocating expenditures over multiple funds and/or to other parties, such as participant communities.
- A hierarchical structure with phases, sub-projects, tasks, work orders, etc.
- Ability to partially close a grant/project or phase of a grant/project, in order to prevent users from erroneously posting transactions to 'closed' projects.
- Tracking:
  - labor costs and other charges related to grants/projects (minimizing or eliminating the use of time studies)
  - budgets, budget adjustments, funding sources, and in-kind matching sources
  - spending requirements (e.g., deadlines)
  - phases, progress, status, deadlines, demographic data, notes, and historical information
  - subprojects and sub-recipients
  - matching requirements
  - cash flow, such as for reimbursement grants
- Notifications when expenditures will exceed budgeted amounts.
- Notifications when fixed-term positions are nearing their end dates (i.e., when funding will no longer be available to support the positions).
- Flexible reporting formats and parameters for various funding agencies.

- A standard, auto-populated report for the “Schedule of Expenditures of Federal Awards” which is required for organizations subject to the Single Audit Act.
- Tracking grant opportunities to increase the likelihood of successfully applying for and receiving grant funds.

2.7.3 Common Best Practices

The typical needs described are addressed by ERP vendors through major functionality such as:

A Grant Compliance Officer, within the Finance Department, can provide appropriate oversight for approving grants and ensuring grant compliance.

- Workflows that route project and grant expenditures and receipts to the appropriate personnel, based on the type of grant and internal governance policies and procedures.
- Ability to assign overhead and labor costs to projects and grants based on time tracking in time and attendance software modules or metrics in other software systems.
- Centralized document management, for finance, legal, and department staff to have access to grants, contracts, and other related documentation.
- Subsidiary modules for projects and grants, enabling the tracking of additional details and minimizing the need to create additional general ledger accounts.
- “Pools” for overhead costs and the ability to assign activity-based drivers/metrics for allocating costs to particular services. These activity-based metrics are set and can be changed within tables, which then drive automated journal entries.
- Multi-year tracking of project and grant budgets, revenues, expenditures, and balances.
- Integration with other software modules within the ERP system in order to drill between revenues, purchases, payroll, and other financial data. This integration also enables employees to charge their time and materials to individual projects and grants, and minimizes or eliminates the need for time studies.
- Ability to designate multiple sources for project cost reimbursements and have the system calculates the invoices for each respective source.
- Ability to partially close a grant/project or phase of a grant/project, for interim reporting each fiscal year and in order to prevent users from posting transactions to ‘closed’ projects.
- Notifications when expenditures will exceed budgeted amounts.
- Notifications when fixed-term positions are nearing their end dates (i.e., when funding will no longer be available to support the positions).
- Flexible reporting formats through the use of report writer tools.
- A standard, auto-populated “Schedule of Expenditures of Federal Awards.”
- Ability to track grant opportunities to increase the likelihood of successfully applying for and receiving grant funds.

2.7.4 Emerging Best Practices

In addition to ERP functionality, governments can improve their efficiency and effectiveness by determining appropriate governance over projects, grants, and cost allocation. For example:

Grant Compliance Office

- A Grant Compliance Officer, within the Finance Department, can provide appropriate oversight for approving grants and ensuring grant compliance. The Grant Compliance Officer should have sufficient training in Federal grant requirements (such as the Office of Management and Budget's Circulars and Compliance Supplements) in order to understand typical grant requirements. The Grant Compliance Officer should also become familiar with typical State grant requirements, in order to differentiate approaches toward ensuring compliance. Federal requirements tend to be more stringent and require more effort than State requirements.
- Grant applications should be approved by the Finance Department or governing body prior to committing any resources toward fulfilling grants. This would ensure that the organization is not entering into agreements that do not align with its priorities, such as committing to hire and retain staff beyond the duration of the grant. To implement such a practice, staff should be instructed to submit grant requests to a Grant Compliance Officer before preparing and submitting a proposal.
- Throughout the duration of the grant, expenditures should be routed to the Grant Compliance Officer for review and/or approval. The Grant Compliance Officer would verify that all necessary supporting documentation is attached to the expenditure within the ERP system.
- Staff within the departments that are fulfilling the grant requirements would be held accountable for any technical knowledge, and conveying the information appropriately to the Grant Compliance Officer, external auditors, and others.

Project Management Office

- The significant scale of projects can lend them to be heavily scrutinized by the public. Projects should be overseen by those with sufficient knowledge of the activities in order to determine appropriate budgets and timelines, and then completing the projects within expectations.
- A Project Management Office (PMO) can be structured on a permanent basis, or as a virtual team (most common).
- A “Cost Team” can be developed on a virtual basis to ensure appropriate cost accounting methods and allocations are developed as new projects are brought on line. These are often associated with the PMO, budget department and/or accounting department.

Cost Allocations

- Overhead costs in governments include costs for support services (e.g., finance, accounting, human resources, and treasury departments) and costs that cannot be easily assigned to services within departments (e.g., management and administrative activities, and office equipment and supplies). These costs can be assigned to activities based on a variety of methods (i.e., denominators), such as number of hours spent on each activity, labor dollars spent on each activity, total dollars spent on each activity, or other measurements.
- Organizations can create “indirect cost allocation plans” to aggregate those costs that cannot be directly assigned to particular activities. The costs are then typically assigned to activities based on an “indirect cost rate,” which is the proportion of the organization's total indirect costs to its total direct costs. These cost allocations need to be coordinated within ERP systems. Costs that are not included within the cost allocation plan then need to be aggregated and assigned to activities based on reasonable methods.
- As ERP systems become more flexible, the allocation of overhead costs can become increasingly appropriate. The organization's leadership and management will need to determine appropriate drivers to use, considering the costs and benefits of such drivers.
- Establishing definitions/vocabulary to be used by managers has been found to be extremely helpful in ensuring accurate cost accounting data. Terms such as “direct costs”, “indirect costs”, “overhead”, etc. should be defined for common use.

- Cost accounting data is typically collected, and used, on a distributed basis. Establishing a single point of authority, such as a budget department, to authorize cost accounting designs, will ensure consistency and accuracy in the collection and reporting of cost data.
- Labor costs in a service organization can be difficult to capture at an activity level. Traditionally, labor hours are "allocated" to specific activities. Newer time and attendance systems are allowing staff to enter time at an activity level, increasing accuracy and reporting compliance.

2.7.5 Potential Barrier(s) to Best Practices

- **Technology.** Functionality for cost accounting is increasingly improving in ERP systems, but is not yet highly-sophisticated in typical ERP systems.
- **Culture/Education.** Utilizing functionality within ERP systems for project, grant, and cost accounting will impact a significant number of employees. Training, communication plans, and other direction from leadership will be necessary to fully utilize and realize the benefits of best practices.

Proactively maintaining up-to-date records can minimize efforts to update records at the end of each year, resulting less time needed for the organization's capital asset processes.

2.8 CAPITAL ASSETS

2.8.1 Overview

"Capital Assets," also commonly referred to as "Fixed Assets," are those assets that have an expected useful life greater than one year. For accounting purposes they are treated differently than other purchases because of their expected useful life. Because capital assets benefit more than one year, the government- wide statements allocate the cost to the years benefitted via a depreciation charge. This helps organizations to better measure the cost of providing services in any given year. In the governmental fund statements, the capital outlay expenditures are often presented separately from current operating expenditures, because of their different character.

In practice, organizations set dollar thresholds for which expenditures to capitalize, based on the type of asset. This is done to reduce the time and expense involved with capital asset recordkeeping and tracking. The threshold is typically based on the amount whereby the cumulative amount of assets not reported would influence a financial statement reader's opinion of the financial condition of an organization; this is also referred to as "materiality." The capitalization threshold can also be influenced by other factors, such as grant requirements. In practice, organizations tend to only capitalize those items that cost more than $5,000 and will last at least 2 years. These organizations believe that showing the full cost of purchases less than $5,000 in one year will not impact financial statement readers' opinions. In addition, a minimum threshold can minimize time spent tagging and tracking items with low dollar values.

The following key performance indicators are typical for measuring the efficiency and effectiveness of capital asset processes:

Key Performance Indicator	Sample Metric
Administrative costs per capital asset class (e.g., labor and insurance)	As low as optimal[ix]
Net Book Value (Historical Cost – Accum. Depreciation) / Historical Cost	50%
Capital assets added at time of entry	100%

These KPIs measure the cost of maintaining the assets and the overall health of the assets. KPIs in the purchasing process area are also applicable for purchases of capital assets.

The ratio of book value to historical cost indicates an estimate of the useful life remaining for the government's assets. A low ratio can indicate that the government's assets are not being replaced on a timely basis. On the other hand, a high ratio can indicate that the government is using newer assets or possibly not utilizing their assets to the fullest.

Comparing maintenance costs to the historical costs of assets can indicate when a government is spending the same amount to maintain an asset as it did to purchase it – a sign that it may be time to purchase a new, healthier asset.

2.8.2 Typical Needs

The fixed asset process has tended to be manual in many organizations, with staff responsible for the process requesting information from departments at year-end regarding which assets to capitalize. This approach is reactive and provides significant opportunity for fixed asset purchases to be overlooked (i.e., expensed rather than capitalized). To the extent that fixed asset purchases and disposals are entered into the ERP system at the time that the actual transaction takes place, reactive and comparatively inefficient efforts to update records at the end of each year can be minimized.

In order to address capital assets proactively, governmental entities are interested in the following overarching capabilities:

- Ability to flag purchases (e.g., purchase orders or invoices) as capital assets.
- Ability to use standard descriptions for majority of assets.
- Ability to track information specific to capital assets, such as asset number, condition, department owner, physical location, and, if applicable, whether staff are borrowing/utilizing a certain asset.
- Ability to report all expenditures greater than a certain threshold and recorded to maintenance and capital outlay accounts (e.g., all invoices over $5,000) to determine whether any fixed asset additions are improperly recorded as expenditures.
- Workflows that can be initiated by departments for the retirement or impairment of capital assets.
- Ability to flag capital assets that were funded by federal grants and therefore subject to compliance requirements.
- Ability to summarize assets by various categories for financial reporting (e.g., by source, function, and activity)

In addition, construction projects result in the capitalization of assets, but their assets would not be individually capitalized as invoices are paid. Instead, individual invoices will be grouped as a capital item called "construction in progress," ultimately resulting in one or many larger assets when the construction is complete. These assets may be related to several different departments or funds within the organization and its financial statements. There may also be parent-child relationships with assets. Governmental entities need capabilities in their ERP systems to track construction projects and the related process nuances.

Further, construction projects tend to be tracked in separate software systems or, increasingly in ERP systems, as their project management functionality is incrementally improving over time. These software systems need to be able to inform the general ledger/financial statements of whether construction is still in progress or complete, and provide the appropriate amounts, descriptions, and fund designations for each asset.

A capital asset policy can communicate the necessary information and expectations for handling additions and disposals.

2.8.3 Common Best Practices

Today's ERP systems are capable of meeting these needs through the following process:

- When staff process requisitions and the related purchase orders, they can populate the asset class or otherwise flag the purchase, indicating that the purchase will be for a capital asset. This creates a "shell" for the capital asset and enables other fields necessary for tracking the asset.
- When the invoice is paid, a workflow routes to the capital asset coordinator for approving the invoice as a capital asset.
- The "asset class" and other information assigned when the expenditure was approved ensures that the asset is recorded to the appropriate asset account in the general ledger and can be included in reports as needed.
- For construction-in-progress asset classes, staff can enter an expected completion date to inform capital asset coordinators of expected dates that assets should begin being depreciated.
- During the life of the asset, if improvements are made to extend the life of the asset, the value and the useful life of the asset can be increased within the system. Also, if assets are transferred to other departments or locations, or for similar situations, the assets' meta-data can be updated in the system to maintain up-to-date tracking and custodianship information.
- At year end, staff can report all expenditures greater than a certain threshold and recorded to maintenance and capital outlay accounts (e.g., all invoices over $5,000) to determine whether any capital asset additions are improperly recorded as expenditures.
- When the asset is removed from service, or if it is determined that the value of the asset has been impaired (requiring a "write-down" or "impairment"), the department or capital asset coordinator can initiate a workflow to retire or write-down the asset within the system.
- Cash receipts related to the sale of assets may also initiate or be included in the workflow for the disposal of assets.

In addition to these steps within the information system, it is also important to establish appropriate operational and organizational controls over capital assets. These include:

- Ensuring that staff understand the importance of and process for identifying capital assets.
- Performing year-end audit processes for identifying capital asset additions, such as reviewing those vendors and large dollar amounts for expenditures not capitalized (e.g., vendors that typically supply furniture and equipment).
- Exercising control over assets/inventory, regardless of whether they are capitalized or expensed fully in one year.
- Performing routine physical verifications/counts to ensure capital assets are accounted for and that any missing, sold, or otherwise-disposed-of assets are removed from capital asset listings.

A capital asset policy that describes each of the organization's controls above can communicate to staff the necessary information and expectations for handling additions and disposals. Capital asset policies will typically include expectations for "tagging" capital assets with numbered stickers where feasible to help with physical counts. Thresholds for tagging assets should correspond to the organization's capitalization policy.

Physical inventories/counts of capital assets may take place annually or semi-annually. Proactively maintaining up-to-date records can minimize efforts to update records at the end of each year, resulting less time needed for the organization's capital asset processes.

2.8.4 Emerging Best Practices

Work Orders. Capital assets have many components that may not be physically tracked as capital assets. For example, furnaces and water heaters that are included in the cost of real estate may not be individually tracked as capital assets. However, maintenance staff need to plan and prioritize their activities for maintaining and replacing such items. Software modules for these activities exist and are commonly referred to as "work order systems" or "enterprise asset management systems." It is typical for these items to be tracked in an inventory software module, with an interface to or an integration with a work order software system/module. Work order software modules are also discussed in the Inventory section below.

The efficiency of purchasing and accounts payable processes significantly impacts governments' ability to do business. Governments, like all organizations, need to complete these processes efficiently and effectively in order to be a desired business partner.

2.9 PURCHASING AND ACCOUNTS PAYABLE

2.9.1 Overview

Governments make purchases throughout the year to fulfill their goals. The purchasing process can become quite complicated, with different types of workflows and requirements needed for different dollar thresholds and types of transactions (such as purchases of goods/commodities, services, capital assets, construction, and long-term contracts). Further, controls for helping governments monitor their commitments create additional steps for transactions. The process typically begins with a requisition, which "pre-encumbers" funds. At this point, there is no commitment to spend the funds, but the financial system will inform users that a part of the budget is expected to be spent. The second step in the process is typically the issuance of a purchase order to a vendor, which then creates a commitment to spend the funds and an "encumbrance" in the system. Finally, when the goods are received or the services have been provided, the government would reclassify the "encumbrance" to an "expenditure" and have a resulting vendor account payable.

As shown above, the terminology within purchasing and accounts payable processes is technical. It can become even more complicated as organizations develop terms to use for different scenarios (i.e., award types) or based on terms used by other parties they work with (e.g., ERP vendors). The terms used in this section aim toward providing clarification and maintaining consistency. Standardizing the terminology used and processes followed, and building processes into ERP workflows, can increase employee and vendor understanding, leading to increased efficiency.

2.9.2 Typical Needs

In order to standardize and streamline the processes for purchasing and accounts payable, governmental entities are interested in the following overarching capabilities:

- Vendor self-service for managing vendor files.
- Streamlined procurement of goods and services, including:
    - Reduced use of petty cash for purchases
    - Automated alerts or limits that prevent purchasing if purchasing would exceed budgets or result in negative cash
    - Streamlined use of purchase requisitions and purchase orders (e.g., automatically recurring purchase orders, appropriate bid thresholds, use of workflows)
    - Templates for recurring payments (e.g., debt service, utilities, payroll deduction payments)
    - Ability to allocate purchase orders and invoices between accounts and funds based on a set formula and/or percentages
    - Streamlined processes for one-time vendors
    - E-procurement abilities.
- Centralized processing of invoices to pay vendors timely and accurately.
- Clear and concise contract management procedures and terms and conditions for professional services.
- Ability to track details for contracts such as department, expiration date, and remaining balance; and have an alert that notifies staff when a contract is approaching expiration.
- Increased oversight and controls over purchases and payments.
- Efforts to maximize discounts offered by vendors.
- Ability to use competitive bidding to attain the best possible price on goods and services.
- Ability to track and weigh favorable criteria when evaluating vendor bids.
- Ability to monitor vendor performance for comparison to service level agreements and warranty tracking.
- Streamlined processes for travel expense reimbursements.
- Improved processes for handling emergency purchases (such as increasing controls).
- Use of National Institute of Governmental Purchasing Commodity Services Codes (“NIGP codes”) for tracking and identifying inventory purchases and suppliers (such as for inviting suppliers to bid), at an appropriate level of detail.

As a result, the following key performance indicators are typical for measuring the efficiency of purchasing and accounts payable processes:

Key Performance Indicator	Sample Metric
Purchasing	
Average number of days from purchase requisition to purchase order	As low as optimal[ix]
Percent of purchase orders and revisions distributed electronically	92.00%[vi]
Purchase orders issued per FTE processing purchase orders	As high as optimal[ix]
Solicitation opportunities published per FTE involved	7,015[vi]

Key Performance Indicator	Sample Metric
Cost per purchase order	$12[vii]
Accounts Payable	
Percent of invoices paid within 30 days	88%[xviii]
Percent of invoices paid without error	99.40%[vi]
Invoices processed per FTE processing invoices	26,214[vi]; 12,122[vii]
Accounts payable department cost per vendor invoice processed	$2.64[vii]
Liquidity Ratios ("Current Ratio" or "Quick Ratio") $\frac{\text{Current Assets}}{\text{Current Liabilities}}$	As high as optimal[ix]
Percentage of invoices received electronically	100%
Percentage of payments made electronically	100%

If multiple invoices can be consolidated into fewer payments, KPIs for payments processed (i.e., cost and workload) would also be valuable.

The efficiency of purchasing and accounts payable processes significantly impacts governments' ability to do business. Governments, like all organizations, need to complete these processes efficiently and effectively in order to be a desired business partner.

2.9.3 Common Best Practices

Today's norms and technological advances, including ERP systems, are capable of meeting many of these needs. Best practices and major functionality desired and provided may include:

P-cards streamline purchasing processes and can even eliminate the need for petty cash.

- **Centralized Purchasing.** Centralizing purchasing can enhance buying power by enabling organizations to make larger and more effective purchases. For example, centralizing purchasing can help standardize processes and increase the use of blanket purchase orders. In addition, a central purchasing function can assess organization-wide inventory levels to determine whether departments' purchase orders can be fulfilled internally. Finally, organizations can analyze their purchases by vendor, commodity code, and cost center in order to identify additional opportunities to reduce costs by aggregating and consolidating purchases.[xix] In addition to obtaining multiple quotes/bids, purchasers should estimate their expected cost for purchases in order to negotiate with suppliers. [xix]
- **Vendor self-service.** ERP technology has made significant advances in the management of vendor records. Specifically, some modern systems will offer online vendor registration, payment status, and bidding functionality. These functions "push" certain record maintenance responsibilities to the vendor, and provide improved access to their account information – saving government employees significant time from responding to routine inquiries.
- **Centralized Accounts Payable**. Given the large amount of invoices that need to be paid within mid- to large-size government organizations, having staff dedicated to this process is frequently warranted. It can enable these staff to focus on creating efficiencies for this particular function, while also providing for appropriate segregation of duties (e.g., verifying that staff in the departments have the appropriate supporting documentation before invoices are paid). If staff in departments are expected to gather or pay invoices, there may be a greater likelihood of late payments or errors. To create efficiencies, central accounts payable employees can strive for the following, prioritized best practices:

  - Request that vendors send invoices electronically (e.g., via e-mail) to the accounts payable staff.
  - Strive to minimize the amount of invoices from any particular vendor, such as requesting that they aggregate monthly purchases, or only place monthly orders, at the least, with vendors.
  - Pay vendors electronically, such as via ACH or EFT.
  - Send checks to vendors, using Positive Pay security. Positive Pay involves sending an electronic file to the government's financial institution that lists check numbers, dates, and dollar amounts when checks are processed. The financial institution then matches this information against the check when it is received for payment, to minimize the risks of fraud. Financial institutions also offer similar security services known as ACH positive pay, reverse positive pay, and ACH debit block; and other security services such as security tokens and IP restrictions.[xx]
  - Determine the frequency of check runs based on the organization's volume and other factors.
  - Determine methods of payments to use, such as use p-cards for high-volume, low-dollar transactions, ACH payments for all other transactions when possible, and physical checks when ACH payments are not accepted. If the organization is a significant customer for a particular vendor that does not accept p-card or ACH transactions, the organization may want to suggest that the vendor accept these forms of payment in order to lower the organization's costs, especially compared to the vendor's competitors.
  - Within the ERP system, monitor available cash balances, after accounting for outstanding checks and deposits in transit, to know the amount of funds available for paying invoices.
- **Purchasing cards (aka "Procurement Cards" or "P-Cards").** P-cards streamline purchasing processes and can replace the use of petty cash, providing greater internal controls. They can be used with any vendor that accepts credit cards. The government can set dollar limits and restrict the use of P-cards to certain vendors or types of vendors. In some cases, financial institutions can generate different account information for individual transactions, providing increased security and preventing staff from attempting to use p-card information for unauthorized transactions. Further, 1099s are no longer required for vendors that are paid with p-cards.[xxi] Properly implemented with the appropriate internal controls, the use of P-cards can lower costs. According to the 2012 Purchasing Card Benchmark Survey, organizations saved an average of approximately $75 per transaction that used p-cards instead of the purchase order process.[xxii]
- **Contract Management.** The following best practices fall within contract management:
  - **RFP and RFQ language.** Organizations' RFPs and RFQs can influence whether suppliers respond to requests and their pricing estimations. Clear and concise RFPs and RFQs can increase the number of responses and provide other favorable benefits.[xix]
  - **Terms and Conditions.** Entities can spend a significant amount of time writing and negotiating terms and conditions for contracts. To the extent that templates can be used for standardizing as much of the language as possible, delays related to crafting and negotiating language can be minimized.
  - **Responsibility for particular types of contracts.** Certain types of purchases require particular areas of expertise. It is common for organizations to have a purchasing department that is responsible for purchasing goods and professional services, with guidance from legal counsel for contracts. However, these purchasing

departments may not have the expertise needed for selecting contractors or planning for large construction projects. In these cases, it is important to identify the appropriate balance between departments with this expertise (e.g., Public Works or Engineering) and the purchasing department/process. As a best practice, departments with particular expertise should be included in the related workflow approvals, such as for authorizing payments when milestones are met on large projects, with the payments still being issued from a central accounts payable department.

- **Selection and Monitoring Performance.** Certain ERP systems provide capabilities for managing responses to requests for proposals (RFPs). For example, the systems enable users to create and manage solicitation scoring (rating) sheets, which can include total prices offered, discounts offered, warranties, and even factors particular to communities, such as if a community would like to give preferences to local vendors or for other criteria. After contracts are awarded, the system enables users to track whether discounts were utilized and vendors' performance. Effective evaluations of vendor performance include three to five criteria, typically including on-time delivery, completeness of delivery, and quality.[xix] Assessments of vendor performance can be used to evaluate vendors if they bid on additional services for the organization.

Automated workflows and other controls within ERP systems can minimize time lags and ensure accuracy within the purchasing process.

- **"Blanket Purchase Orders"** (for recurring purchases)
  - For common purchases, such as high volume or low dollar transactions, steps can be taken to leverage the reduced risk related to these transactions. For example, if staff determine that a certain vendor for supplies gives them the greatest discounts, the governmental entity can approve a blanket purchase order, up to a certain dollar amount (e.g., the budget for that line item or a certain approved amount for that vendor), in order to minimize the approvals necessary. In cases like these, executive-level approvals for every purchase may be unnecessary and become only a formality, without providing value. When the organization actually places an order with a vendor, a purchase order is issued and part of the blanket purchase order is "released." The organization can release all or a portion of the blanket purchase order as soon as it prefers, depending on its level of certainty for example, in order to show that part of its budget is already encumbered.
  - Blanket purchase orders may be appropriate for emergency purchases as well. For example, if a fire department knows that it may need to contract often with a certain vendor to provide rescue services, such as for boats or helicopters, the department can negotiate in advance what the terms will be for use of the vendor's services on short notice. This will help the department comply with the appropriate order for the purchasing process (i.e., obtaining approval before incurring the costs) and can improve the government's position for negotiating with vendors. For those emergency situations in which a new vendor or service need is identified, the government would at least be able to address this or other particular cases proactively for future years.
- **Consistent Purchase Order Terminology.** The term "limited purchase order" may not be used consistently among organizations. Some use the term to describe a subset of blanket purchase orders, purchase orders with a dollar limit, purchase orders for vendors within the local geography, or standard purchase orders. We recommend striving for consistent terminology in this area.

  - **Master Agreements.** Another type of contract is a "Master Agreement," in which multiple vendors are approved to provide a service but may not be engaged to perform services until the organization initiates the work. "Delivery orders" or "Statements of Work" are the engagements to provide services and follow the encumbrance to expenditure process.

- **Workflows and Controls.** Automated workflows and other controls within ERP systems can minimize time lags and ensure accuracy within the purchasing process. For example:
  - Alerts can be set to notify or restrict expenditures or adjustment requests that exceed budgeted amounts or current levels of cash available. This can eliminate the need for approvers to spend time reviewing transactions that the system could have caught and automatically declined, or queue requests until room is available in the budget.
  - Workflows can be established and configured in ERP systems based on the level of risk or complexity of transactions. Dollar amounts and types of transactions, such as those requiring future maintenance (e.g., infrastructure and IT purchases), are typically used to determine the degree of information and approvals needed before making purchases. The following table provides a sample structure for the level of information necessary, depending on ranges of purchase prices and complexity. Workflows can be routed to particular departments as necessary.

Level of Risk and Complexity	Sample Purchase Items	Level of Information Necessary
Low Complexity and/or Dollar Value	Office supplies	**Workflow Path #1:** • Receive goods/services • Use petty cash or P-Card, or obtain invoice • Submit payment
	Furniture	**Workflow Path #2:** • Submit Purchase Order • *Receive goods/services* • *Obtain invoice* • *Submit payment*
	Small equipment purchases	**Workflow Path #3:** • Submit Purchase Requisition • Submit Request for Information (RFI) • Review informal quotes • *Submit Purchase Order* • *Receive goods/services* • *Obtain invoice* • *Submit payment*

- Long-term contracts
- Capital projects
- Large technology purchases

Workflow Path #4:

- *Submit Purchase Requisition*
- Submit Request for Quotes / Proposals (RFQ or RFP)
- Perform formal bidding process
- *Submit Purchase Order*
- Finalize Contract
- *Receive goods/services*
- *Obtain invoice(s)*
- *Submit payment(s)*

High Complexity and/or Dollar Value

Italicized items indicate similarities with the previously described workflow path(s).

The cost of obtaining information should be considered when setting thresholds for purchasing processes. For example, the number of approvals should be sufficient yet minimized, accounting for the steps discussed above, with no less than two approvers. In addition, the labor costs needed to create an RFP and review responses could easily exceed the purchase price of low dollar value items. Generally speaking, organizations should strive to have the value of purchases exceed the costs.

- With workflows, requests, routing, and approvals are able to be electronically tracked rather than lost via interoffice mail or buried on the approver’s desk.
- Staff and approvers can view their own and others’ workflow queues, as reminders for one another.
- Approvers can delegate approval to others, even via mobile devices, if they are out of the office or otherwise unable to approve the request in a reasonable amount of time.
- Supporting documentation, such as Microsoft Office files or scanned images, can be attached to transactions within the system, eliminating the need to route physical documentation.
- Purchase orders and invoices can be allocated between accounts and funds based on set formulas and/or percentages.

    - Two- or three-way matching can be setup to ensure that goods or services were received and are accurately reflected in payments to vendors.
        - Two-way matching can match packing slips or staff confirmation of goods/services received with purchase orders or invoiced amounts. If the goods/services received match what the organization ordered, a payment can be issued. Tolerance thresholds may be set for making payments that don't agree perfectly with purchase orders or packing slips, to allow for minor adjustments to shipping or other similar costs.
        - Three-way matching ensures that all three documents (purchase orders, packing slips, and invoices) match or fall within tolerable thresholds.
- **Travel advances and expense reimbursements.** Travel advances and expense reimbursements tend to take a significant amount of time, with the costs of administering travel expense reimbursements exceeding that of typical invoices, especially because of the increased scrutiny faced by public sector employees' spending. Governments typically reimburse staff via Treasurer's offices, accounts payable, or payroll. Given recent societal trends and technological capabilities, the following, prioritized best practices have been observed to be successful:
    - **Use of per diems.** Per diems, or maximum acceptable daily limits for meals, can significantly reduce transaction costs. For example, some governments require receipts for each purchase of food in order to scrutinize whether alcohol is excluded. This requires the government to expend employee time to review each receipt, regardless of how small. Setting a per diem to a limit that is reasonable for typical food consumption (e.g., without alcohol) can eliminate the need to expend time to review receipts. It also reduces the effort needed for steps such as approving travel advance requests and the after-the-fact reimbursement forms.
    - **Use of credit cards.** Financial institutions offer credit cards with internal controls and rebates that employees can use when traveling. Further, it is typical in the private sector now for employees to use their own credit cards when traveling, submitting their receipts for reimbursement and avoiding the need for an advance. If clear guidelines are provided to employees, it reduces their risk of not being reimbursed for an unapproved expense. Further, if the processing time is short enough (e.g., two weeks), employees will be reimbursed before the due date of their monthly credit card payment, preventing them from incurring interest on the employees' advances to the government. Certainly, exceptions can be made for transactions that cannot be processed with credit cards. Focusing on the norms and accommodating the exceptions will result in a better use of limited resources (e.g., consider "80/20 rule").
    - **Process within payroll (not accounts payable).** Travel expenses processed via payroll can minimize the need to setup employees as vendors, in addition to their role as employees in the system, and can eliminate the need for providing multiple checks to a single employee.
- **NIGP codes.** Governments need to decide the level of detail needed for National Institute of Governmental Purchasing ("NIGP") codes for tracking and identifying inventory purchases and suppliers (such as for inviting suppliers to bid). The 3-digit code differentiates office supplies into categories such as erasers, pens, and pencils. The 5- and 7-digit codes differentiate types of office supplies, such as various types of pens. Smaller organizations tend to use only the 3-digit codes. The benefits from tracking additional details should be evaluated against the additional costs.

2.9.4 Emerging Best Practices

- **Reverse auctions for procuring goods.** Organizations are leveraging the internet and ideas from online auction sites to host "reverse auctions," in which the organization states a maximum price it's willing to pay and vendors offer lower prices in a competition to win the business. Kent County began using reverse auctions in 2010, and has identified savings of over $200,000 in 2 years. It has even offered to host the service for free, given the increased competitiveness of larger purchases, that orders can be shipped to multiple locations, and that the County has not needed to add staff to support this process.[xxiii]

- **Additional Specifications.** As ERP systems evolve to meet common best practices, ERP vendors are incorporating additional features to further streamline processes. As a best practice, organizations should ask vendors whether certain functionality is available or may be available in the future. For example, some ERP vendors may be able to incorporate controls that prevent expenses for certain vendors from being posted to incorrect accounts, such as preventing expenses for inventory from being posted to professional service accounts. Such features can prevent errors and minimize reconciliations.
- **Electronic Invoice Packages.** "Invoice packages" contain the supporting documentation for two- or three-way matching [purchase requisitions, purchase orders, packing slips (or "receivers"), and invoices]. Since some ERP systems now enable supporting documentation to be electronically attached and retained within the ERP system (including downloading supporting documentation from vendors such as financial institutions), and it is easy to "drill" through transactions to see the supporting documentation, it is no longer necessary to retain or review physical documentation to substantiate purchase activities and decisions. Workflow approvals should serve as a step to confirm that all necessary documentation is attached to transactions in the system. At year end, external auditors can be given view-only access to the ERP system for any necessary audit procedures.
- **E-Procurement.** Supplier enabled e-procurement capabilities are increasing in availability and adoption. Emerging best practices for e-procurement include using ERP interfaces to suppliers' websites and/or subscriptions to a network of suppliers' catalogs. E-procurement functionality is best implemented after organizations have streamlined their purchasing processes and when there is sufficient user and executive support (including financial support and any necessary changes to policies).[xxiv]
- **P-card rebates.** Financial institutions may offer rebates for making purchases with p-cards. Further, communities may be able to create joint p-card accounts to increase their rebates as a percentage of their total transaction amounts.

Since some ERP systems now enable supporting documentation to be electronically attached and retained within the ERP system, and it is easy to "drill" through transactions to see the supporting documentation, it is no longer necessary to retain or review physical documentation to substantiate purchase activities and decisions.

2.9.5 Potential Barrier(s) to Best Practices

- **Policy.** Department Heads often have the autonomy to determine their departments' needs and approve of purchases that fall within the budgeted amount approved by the Council or Commissioners, resulting in poor coordination among departments. As a result, departments can miss opportunities to share resources with one another. In addition, departments may make purchases that require support from other departments without proactively obtaining the supporting departments' approval. For example, departments may purchase software systems to support their own needs, expecting the IT department to learn and support the new software. Further, departments may not know the requirements needed for the software to work with the rest of the organization's software. This practice creates significant demands and complications for staff. Organizations may need to require that workflows for such purchases route to the appropriate supporting departments, who can ensure that the proposed purchase can be accommodated by the current systems and staff.

2.10 INVENTORY MANAGEMENT

2.10.1 Overview

Inventory within governments can range from small items such as paper towels, to larger items such as technology, water meters and engineering replacement parts. The benefits and costs of maintaining inventory should be evaluated when considering the extent to which an organization should go to manage its inventory. For example, storing inventory may make it more readily available, but the costs of labor, space, obsolescence, and insurance for the inventory could exceed that benefit – especially when the time between placing orders and receiving them is becoming shorter and shorter.

The following key performance indicators are typical for measuring the efficiency and effectiveness of inventory:

Key Performance Indicator	Sample Metric
Inventory Costs	
Total cost of ownership for inventory item (e.g., include labor, storage space, and insurance)	Less than the cost of purchasing a new item[xxv]
Inventory Turn Annual total cost of inventory / Average inventory balance	12-16[xxv]
Warehouse Effectiveness[xxv]	
Space utilization Space utilized / Space available (in cubic feet)	As high as optimal, focusing on reducing space available
Order picking productivity Number of orders picked / Number of hours worked	As high as optimal[ix]
Warehouse damage ratio Number of damaged items / Number of items handled	As low as optimal[ix]

The cost of maintaining inventory, throughout the entire supply chain, should be used to evaluate whether to order inventory and dispose of existing inventory. Total costs include labor and other operating costs for identifying, ordering, receiving, and managing inventory; transportation; and even quality. For example, if the quality of an item is poor, it can lead to additional labor costs or a shorter lifespan for the item. Calculating the total cost of inventory can be done, for example, by assigning the salaries and benefits of staff who order and manage inventory to the respective “overhead pool,” in order to allocate the costs across the items of inventory ordered. The cost of storage space for inventory should also be allocated to the inventory “overhead pool.” Overall, organizations should compare an item’s value and its total supply chain cost to the cost of ordering the item when it will be needed,[xxv] considering anticipated volume discounts and expected pricing changes.[iv] If the cost of keeping the item is more than the value of the item, the item on hand should be disposed of.[xxv]

KPIs in the purchasing process area are also applicable for purchases of inventory.

To the extent that inventory costs are minimal and processes can be automated to minimize staff time, the benefits of ordering and storing extra quantities of inventory could outweigh the costs.

2.10.2 Typical Needs

In order to manage inventory efficiently and effectively, governmental entities are interested in the following overarching capabilities:

- Transparent communication of inventory amounts on hand.
- Minimal costs for managing and storing inventory.
- Automated processes for requesting inventory.
- Ability to track inventory items such as computers and tools assigned to staff.
- Ability to calculate different methods of costing inventory, such as first-in, first out (FIFO); last-in, first-out (LIFO); and weighted average.
- Notifications when inventory levels are too low.
- RFID codes for tracking inventory items such as library books.
- Ability to track proactive plans for maintenance and the actual performance of maintenance activities.

The benefits and costs of maintaining inventory should be evaluated. For example, storing inventory may make it more readily available, but the costs of labor, space, obsolescence, and insurance could exceed that benefit – especially when the time between placing orders and receiving them is becoming shorter and shorter.

2.10.3 Common Best Practices

The typical needs described are addressed by ERP vendors through major functionality such as:

- Tracking inventory real-time in the system, so staff throughout the organization know what inventory is available for use.[xix]
- Tracking inventory assignments.
- Workflows for requesting inventory.
- Calculating costs of inventory used and on hand.
- Notifications triggered based on set reorder points (i.e., demand forecasting).

In addition, the following practices can further reduce costs of inventory:

- Standardizing products ordered
- Consolidating shipments
- Physical verification of inventory on-hand at least biannually by staff with no responsibility for the inventory.[xxv]

The State of Washington's "Supply Chain Management Manual" suggests that staff in inventory or supply chain management positions pursue training opportunities through professional groups such as the National Institute of Government Purchasing (NIGP) and the Institute of Supply Management (ISM). The Supply Chain Management Manual also has additional content and examples that can assist staff with improving the efficiency and effectiveness of inventory efforts.

2.10.4 Emerging Best Practices

Classifying Inventory. Classifying inventory according to their relative importance can assist with managing time and identifying items to dispose of. A general assumption is that 20 percent of items in inventory will account for 80 percent of usage, and these items will require the most attention. Further, 50 percent of items in inventory may account for only 5 percent of usage, and these items may be best disposed of. For physical inventory counts, greater effort would be placed on items of greater importance.[xxv]

Use of Inventory Software Modules. Smaller organizations may not have enough inventory on-hand to warrant sophisticated inventory tracking. These organizations may simply be providing the accounting or finance staff with a total amount of inventory on-hand when physical inventory counts are performed in order to update balance sheet and expense amounts. As details and planning for inventory become more complicated, these organizations may want to investigate the pros and cons of implementing an inventory software module.

Work Orders. Software modules for planning for and tracking maintenance activities exist and are commonly referred to as "work order systems" or "enterprise asset management systems." It is typical for items to be tracked in an ERP's inventory software module, with an interface to or an integration with a work order software system. The various work order software modules can be highly robust, but may not be specialized for particular items. For example, work order software modules may be specialized for fleet, fixed assets, or infrastructure. Organizations should strive to track their inventories and work orders in as few systems as possible, to minimize costs and redundancies, while ensuring that the appropriate amount of detail is available.

RFID Tags. Radio Frequency Identification (RFID) tags have become popular for tagging library materials and inventories, but are not in prevalent demand for other departments.

2.10.5 Potential Barrier(s) to Best Practices

- **Technology.** These best practices do not address "best of breed" or standalone systems that track inventory. In some cases, such as when inventory levels are significant, organizations may need software systems for managing warehouses, distribution and delivery routing, and forecasting sales and operations planning.[xix]

3 Best Practices for Human Resources and Payroll Processes

3.1 PAYROLL AND TIME/ATTENDANCE

3.1.1 Overview

Accounting for employees' salaries, wages, and benefits tends to be one of the most challenging tasks due to the nuances and shear number of contracts for various unions and other employee groups. Further, tracking employees' time and attendance tends to have the greatest variety throughout governments. For example, some departments may track a simple eight hours per day worked, while others have rules for how many days are allowed to be worked consecutively, complicated overtime rules, bumps in pay for working out of classification, and other union rules that impact pay, benefits, seniority tracking, and other calculations (e.g., public safety departments).

Appropriately tracking payroll costs is critical for understanding costs of services throughout organizations.

Typically employees enter their time manually or electronically and submit for approval. Time is then approved by a manager/supervisor and then sent to payroll staff each pay period. Time and other payroll related data are processed and checks, direct deposits, and other payroll output such as reports and vendor remittance files are produced.

Payroll information is then routed to accounts payable staff for processing payments to third parties for those items deducted from paychecks (e.g., income taxes and other withholdings, insurances, dues, etc.). Payroll output information is also needed for determining costs to allocate to grants, projects, and other activities, in order to substantiate funding needs.

The following key performance indicators are typical for measuring the efficiency of payroll and tracking time/attendance:

Key Performance Indicator	Sample Metric
Percent of payroll checks and mileage/travel reimbursements paid without error	99.80%[vi] (assumes mileage/travel reimbursement included)
Percent of personnel using direct deposit	92.00%[vi]
Payroll checks processed per FTE in the payroll department	15,052[vi]
Payroll and time/attendance cost per employee	As low as optimal[ix]

The tracking of time and attendance and ensuring the accuracy of earnings and other payroll costs is critical for understanding costs of services throughout organizations. To the extent that organizations can minimize the costs of managing and processing payroll, organizations may be able to allocate the resources to other value-added activities.

Some high-level examples of payroll and time and attendance goals include:

Mature Goals

- Accurate payroll with timely access to information
- Reduced costs to produce payroll, including the elimination of manual process (e.g., preparing and maintaining information in shadow systems such as Microsoft Excel)
- Ensure compliance with federal, state, local laws and employment agreements
- Provide direct deposit to employees

Emerging Goals:

- Increased utilization of workforce analytics for optimizing staff use (by location and hours, for example)
- Reduced labor costs by avoiding unnecessary overtime
- On-demand scheduling
- Elimination of paper paychecks
- Mobile entry of time/attendance

3.1.2 Typical Needs

In order to track time/attendance and process payroll efficiently and effectively, governmental entities are interested in the following overarching capabilities:

- **Online Timesheets and/or Time Clocks**
    - Ability for employees to clock in and out using time clocks (via separate hardware), and/or for employees or other staff in the department to document hours worked and other types of earnings in an online system.
    - Tools for tracking and managing employee absences (including online approval of leave requests).
    - Ability to assign hours worked to particular activities (including projects, grants, and other activity codes), for cost allocations, grant compliance documentation, and project management.
    - Automated pay rules and calculations.
    - Automated enforcement of time off and accrual policies.
    - Validation of pay and other codes used, including whether they are active codes.
- **Content Management and Workflows**
    - One source of data entry through self-service or HR that feeds to Payroll.
    - Exception reports for items such as accrued leave balances, employees not paid, etc.
    - Workflows for routing and approval of timesheets, reimbursement requests, and other supplemental pay.
- **Earnings, Deductions, and Contributions**
    - Automating and/or minimizing manual or complicated formulas for calculating unique earnings, deductions, and contributions.

  - Calculating variations in earnings, such as for pay during time off that falls within the Fair Labor Standards Act (FLSA) or for payouts of accrued time off (which may be paid out at a factor of the number of hours earned).
  - Incorporating reimbursements, such as for mileage and other travel expenses, in order to minimize the number of checks provided to employees.
  - Calculating retroactive pay if errors are identified.
  - Eliminating hardcopy checks for payroll, which require significant time to print, distribute, and track outstanding (non-cashed) checks.
- **Policies**
  - Minimizing rework in the payroll process, such as processing corrections to timesheets and any related “off-cycle” paychecks.
- **Reporting**
  - Automated calculation of accrued payroll and leave balances for inclusion in interim and annual financial reports
  - Quarterly and annual IRS reporting (e.g., Forms 940 and 941).
  - Preparation of statements of earnings for employees (W-2s).
  - Other reports as needed for third-parties, preferably to be provided via interfaces, such as state unemployment agencies, benefit providers, financial institutions, etc.
- **Other**
  - Use of Positive Pay for validating payroll checks, to minimize any theft.
  - Utilizing employee and manager self-service for looking up information, such as leave balances.

3.1.3 Common Best Practices

The typical needs described are addressed by ERP vendors through major functionality such as:

- **Online Timesheets and/or Time Clocks**
  - Ability to support charging time to activities (including projects, grants, and other activity codes).
  - Online scheduling and vacation requests.
  - One centralized location for time to be entered.
  - Integration between time clocks and payroll in order to eliminate the need to import or re-enter time.
  - Validation of pay and other codes used, including whether they are active codes.
- **Content Management and Workflows.**
  - Data is entered one time into the system and feeds to other necessary fields, tables, and modules.
  - Controls that prevent staff from changing their timesheets after they have been submitted, eliminating resulting rework.
  - Employee and manager self-service, enabling employees to download their own pay stubs, update direct deposit accounts, setup tax information, and change defined contribution percentages/amounts.
  - System flags when inaccurate data is entered.
  - Workflows for routing and approval of timesheets, reimbursement requests, and other supplemental pay.

- **Earnings, Deductions, and Contributions.**
  - A variety of formulas can be used for compensating various groups of employees, such as fixed amounts for commissioners or council members, standard hourly rates for employees, and overtime rates. In addition, governments often provide other forms of pay or deductions for their employees. This can include, for example, incentive payments for completing trainings and wellness programs, or premium pay for working out of classification or for less-desirable shifts (i.e., "shift differential"). Further, deductions can be established for insurances, dues, garnishments, contributions to retirement plans, etc. ERP systems are capable of calculating and tracking these and other types of pay, deductions, and contributions, to the extent that the processes are simple and reasonable.
  - Reimbursements for mileage and other employee expenses can be paid via employee paychecks, to minimize the number of checks provided to employees and the amount of information needed to be retained in the system (i.e., vendor files and employee files for each employee). Information systems are capable of separating those payments that are and aren't subject to income tax withholdings. Further, processing expense reimbursements through payroll can result in cost savings by reducing the number of checks/ACH deposits to be printed. The "Purchasing and Accounts Payable" section describes additional recommended best practices related to travel advances and expense reimbursements (e.g., use of per diems).
  - ERP systems can also simplify the processes for calculating retroactive pay by requiring retro-corrections to be entered/reversed in one location. An ERP system will automatically process any adjustments to accruals and to-date information as needed.
  - **Direct Deposit or Electronic Paychecks.** Use of direct deposit capabilities or pay-cards (i.e., prepaid payroll debit cards) can minimize the need for hardcopy checks. Currently, employers must provide options for direct deposit or pay-cards in order to fully eliminate paper checks. Otherwise, employees must have an option to continue receiving paper checks.[xxvi]

ERP systems are capable of calculating a variety of payroll formulas, deductions, contributions, reimbursements, and retroactive changes. They can also enable the elimination of paper checks.

- **Reporting**
  - Automated calculation of accrued payroll and leave balances for inclusion in interim and annual financial reports. If an organization reports on the accrual-basis of accounting at yearend, but uses cash-basis accounting during each year, its financial reports may provide an incomplete picture (i.e., a month of missing expenditures).
  - Improved pre-processing audit reports.
  - Reporting to support proactive auditing of QTD and YTD information.
  - Quarterly and annual IRS reporting (e.g., Forms 940 and 941).
  - Preparation of W-2s and the ability for employees to access W-2s through self-service.
- **Other**
  - Use of Positive Pay for validating payroll checks, to minimize any theft. Positive Pay involves sending an electronic file to the government's financial institution that lists check numbers, dates, and dollar amounts when checks are processed. The financial

institution then matches this information against the check when it is received for payment, to minimize the risks of fraud.

- The use of prenoting for new direct deposit accounts. While some organizations no longer prenote in an attempt to go completely paperless, prenoting should be setup and utilized when employees are able to manage direct deposit accounts through self-service.
- Compliance with federal and state laws. With the many changes coming out of the Affordable Care Act, governments may feel overwhelmed with the implementation of new regulations with respect to health care benefits. Over time, ERP vendors continue to develop fixes and patches to accommodate ongoing changes in legislation, reducing the work needed to be completed by organizations.

In addition to functionality within ERP systems, governments can adopt the following suggested policies to increase efficiencies and enhance effectiveness:

- **Payroll Schedule.** To the extent that organizations can gain the appropriate support for a policy, organizations may want to consider paying their employees in arrears (e.g., one pay period behind). Doing so would eliminate processes such as estimating time each pay cycle. Further, paying in arrears would give HR and Payroll departments more time to enter employee maintenance and proactively audit their changes.
- **Discontinue "Off-Cycle" Paychecks.** The majority of "off-cycle" paychecks are frequently for small corrections made to employees' timesheets or other minor changes. These adjustments could be included in the following payroll, in order to minimize distractions between periods. Whenever legally possible, small paycheck corrections should be made on the next regular paycheck.
- **Simplifying Calculations.** As governments negotiate new agreements with employees, they should strive to standardize and simplify calculations, with an aim toward ensuring that the benefits of such calculations outweigh the costs. For example, the cost of calculating particular pay codes, benefits, job classifications, or seniority levels may exceed the value that staff receive from these calculations. Depending on the intent of certain calculations, other HR practices may be able to achieve the same end at a lower cost or greater benefit for staff (e.g., increasing employee morale). In general, organizations should approach negotiations with an understanding of what the software systems can calculate, and refrain from agreeing to perform calculations that would require the use of shadow systems.

In addition, the following practices can further enhance the efficiency and effectiveness of managing and overseeing payroll and time/attendance.

- **Due Dates.** Due dates for timesheets and other payroll information (such as pay rate changes, supplemental pay, and reimbursement requests) are critical for ensuring that enough time is provided to accurately process payroll and that amounts are recorded in the appropriate period and available for reporting purposes (e.g., for granting agencies or budget vs. actual statements). Employees and leadership throughout organizations need to commit and be held accountable to meeting payroll deadlines.
- **Training.** Ensuring that staff understand the intent behind the use of certain pay codes and are trained on the appropriate codes to use, as well as reminded of the importance of following the organization's practices when errors are identified, can assist in minimizing errors.

- **Payroll Personnel.** Payroll processing has significant overlap between Human Resources and Finance departments. As a result, it is important for organizations to clearly specify which departments are responsible for particular payroll tasks in order to minimize confusion, rework, and redundant tasks. Because of the accounting and tax implications, payroll processing and the setup of deductions may be best performed by staff who tend to pay strict attention to detail and have a deep understanding of the related compliance requirements.
- **Proactive Auditing by HR and Payroll Departments.** Since HR and Payroll data is integrated in an ERP system, auditing of payroll data should be handled by both HR and Payroll staff. For example, benefit deduction changes should include an audit by HR department staff since they are more likely to know whether the change is legitimate.

Payroll departments can increase their efficiency and effectiveness by:

- *Paying employees in arrears*
- *Discontinuing "off-cycle" paychecks*
- *Ensuring that software systems can accommodate challenging payroll calculations*
- *Enforcing due dates*
- *Training staff throughout the organization*
- *Designating responsible parties (HR and/or Finance) for overseeing various payroll processes*

3.1.4 Emerging Best Practices

- **Eliminating Paper Paystubs.** With the self-service capabilities available in many ERP software systems, government organizations can minimize the need to print paystubs for employees.
- **Strategic Sourcing.** Third party service providers may be able to complete payroll and/or benefit processing at lower costs for governmental organizations. However, the complexity of pay codes and other calculations, which may be based on legal agreements, can make it cost prohibitive for third parties to provide payroll processing services.
- **Emerging Functionality.** Organizations are adopting the latest functionality, including enhanced workforce analytics for optimizing staff use (by location and hours, for example), in order to reduce overtime and other costs.
- **Mobile entry of time/attendance.** ERP vendors and their partners also provide timesheet and other workforce management capabilities via mobile devices. For example, employees can submit timesheet entries and time off requests, which can follow custom workflow paths for approval through managers' mobile devices.

3.1.5 Potential Barrier(s) to Best Practices

- **Policy/Legal.** Negotiations require balancing competing desires and considering parties' interests as a whole. The costs of some governments' previously negotiated payroll, seniority, and benefit calculations, including labor and technology costs for supporting the calculations, may outweigh employees' and the organizations' benefits. There may be a need to renegotiate union contracts in order to have automated, streamlined, and consistent calculations for employees. To the extent that the calculations are similar to other public sector entities, the formulas may already be built into standard ERP systems.
- **Culture/Education.** Staff may be reluctant to track their time according to the activities they perform. In some departments, entering this level of detail may be a challenge for staff who tend to spend their time "in the field," (e.g., inspectors and public safety officers).

Administrative assistants may need to enter staff time for such workers. The need to change to using activity codes may also require strong communications from the organization's leadership. As technologies evolve it may become more practical for fieldworkers and others to track their time, such as by using mobile devices while in the field.

- **Technology.** Pay and benefits in certain departments can be too complicated for typical ERP systems. For example, public safety departments' 24-hour schedules with a variety of pay codes often requires the use of third-party time and attendance software and time clocks. The third-party systems must then interface or integrate with the organizations financial and human resources systems.

3.2 HUMAN RESOURCES

3.2.1 Overview

Human Resources (HR) departments are increasingly expanding their reach and value throughout organizations. Information systems are evolving to go beyond managing employee information and benefits, to enable managers throughout the entire organization to better develop their staff into advancing roles. This increased ability to maximize workforce effectiveness can result in enhanced services and/or a greater amount of community population served.

Some high-level examples of human resource goals include:

<u>Mature Goals</u>

- Maintaining accurate employee demographic information (e.g., addresses, benefits, leave balances).
- Ensure compliance with local, State, and Federal laws.
- Increase efficiency in processing time for personnel action and other HR forms.

<u>Emerging Goals:</u>

- Understanding employee talent and how to leverage it (e.g., enhanced performance reviews).
- Identifying and providing opportunities for improving employee performance (e.g., trainings and supportive work environments).
- Proactively planning to fill retiring employees' positions (i.e., succession planning).
- Improving turnaround time for recruiting, screening, and hiring employees.

HR systems are evolving to go beyond managing employee information and benefits, to enable managers throughout the entire organization to better develop their staff into advancing roles. This increased ability to maximize workforce effectiveness can result in enhanced services and a greater amount of community population served.

Human Resources software modules provide organizations with the ability to have one comprehensive system of record, for increased accuracy and reduced manual effort needed to process and review employee transactions. As a result, management throughout the organization can focus more effort on preparing employees for advancing positions and increasing customer and colleague satisfaction/morale.

The following key performance indicators are typical for measuring the efficiency and effectiveness of human resources:

Key Performance Indicator	Sample Metric
Employee turnover	As low as optimal[ix]
Number of new positions filled, with qualified candidates, from within	As high as optimal[ix]
Duration of hiring process	As low as optimal[ix]
Number of data anomalies in benefit vendor files	As low as optimal[ix]
Number of FTEs per position code (e.g., there should be greater than a 1:1 relationship between employees and position codes)	As high as optimal[ix]
Number of employees per HR FTE ("HR Coverage")	As high as optimal[ix]

In addition, governments may also find value in calculating the following KPIs:

- Cost per hire
- Number of employee grievances and appeals per 100 employees
- Percentage of employee reviews completed on schedule
- HR cost per employee
- Open enrollment processing time (in hours)

Leveraging ERP systems can reduce time spent on administrative tasks, enable employees to obtain/access their own employee information, and provide increased capacity to maximize the effectiveness of the organizations' talent. Without up-to-date information and consistent processes and policies, organizations' employees, their most valuable asset and largest expense, may not be fully utilized. ERP systems can provide the foundation for increasing effectiveness throughout organizations. In addition to streamlined processes, strong leadership and policies are needed to maximize performance (e.g., training on available tools and goals of the organization).

3.2.2 Typical Needs

Currently, in organizations that have older human resources information systems, many human resource processes are paper intensive and have slow cycle times. As a result, Human Resources departments do not have the capacity to plan for trainings or filling positions, for example. In order to maximize HR staffs' value, governmental entities are interested in the following overarching capabilities and other organizational best practices:

- **Performance Management.**
    - Tools to develop employees and maximize their value (e.g., trainings, performance evaluations, appropriate incentives and disincentives).
    - Workflow to ensure that performance appraisals are completed in a timely manner.
    - Access to external resources and best practices that can be leveraged to develop guidance to create workplace environments that maximize employee value (e.g., promoting healthy employee morale).
- **Employee and Manager Self-Service.**

  - Automation of benefit enrollment for both open enrollments and life event changes.
  - Ability for employees to update their own changes to their address, benefit and dependent information, payroll deductions, etc.
  - Ability for employees and managers to access appropriate HR information such as addresses and leave balances without having to contact the HR or Payroll departments.
- **Employee Information and Benefits Management** (i.e., Content Management and Workflows)
  - Tools for tracking employee dates such as seniority dates.
  - Workflows for routing and approving online forms such as job requisitions, applications, personnel action forms, performance appraisals, requests for time off, etc.
  - Ability to track employee training, skills, and certifications and other HR information in a centralized location.
  - Central electronic locations for sharing up-to-date policies, procedures, and other guidance for completing activities within desired expectations.
  - Central location for employee benefits which directly interfaces with benefit provider systems and/or websites.
  - Data validation, such as for:
    - Assisting employees in determining the appropriate information to use (e.g., leave types, job codes, etc.).
    - Ensuring that all required fields are completed in the appropriate format.
  - Audit trails for employee data maintenance.
- **Position Management**

  <u>Recruiting, Position Control and Budgeting</u>
  - Ability to confirm that funds are budgeted for positions via workflow validation prior to filling positions.
  - Ability for managers to quickly identify vacant positions.
  - Ability to track recruiting documentation in a central location (e.g., job postings, applicants, exam questions, notes, etc.).
  - Ability for applicants to create and manage their online applications, using secure logins.
  - Ability for HR, Payroll, and Finance to access the same position control data in real-time.

  <u>Classification and Compensation</u>
  - Ensuring that the organizations' pay and benefits are similar to others in the industry and region.
  - Ability to enter mass changes to pay rates and benefits, for example, using future effective dates.

  <u>Employee Labor Relations and Discipline</u>
  - Many government organizations have multiple collective bargaining agreements, such as those for public safety employees (police and fire) and civilian

Organizations' employees, their most valuable asset and largest expense, may not be fully utilized without up-to-date information and consistent processes and policies.

(non-public safety) employees. This can mean a minimum of three different collective bargaining agreements, with additional agreements for types of positions, for example (e.g., Sergeants vs. Captains and Lieutenants). Some organizations negotiate these agreements without regard for the contents of other agreements or the capabilities of software systems. As a result, human resources and payroll employees may be required to manually perform many calculations. Striving for uniform statements that conform to software capabilities across the collective bargaining agreements can:
        - Ensure that the benefits from such negotiated terms exceed the cost of providing the benefits.
        - Lead to consistent employment terms for all employees.
    - Discipline
        - Track discipline information in one location.
        - Track dates for discipline related milestones such as discipline hearing dates, deadlines to appeal, etc.
- **Reporting.**
    - System generated reporting for:
        - Benefit and accrual information (including paid time off; retirement funds; and insurances such as life, health, vision, and dental).
        - Vacancies.
        - Compliance reports, such as those for EEO-4, OSHA, COBRA, FMLA, and others.
        - Workers' compensation claims.
        - Dates of service.
- **Integration or Interfaces.**
    - Ability for information to flow throughout the organization based on initial entry, rather than having redundant data entry (i.e., for human resources databases to be integrated or interfaced with other ERP software system modules / functions such as recruiting, payroll, accounts payable, and budgeting).
    - Ability to interface benefit information with benefit providers (e.g., through the use of "benefit carrier feeds"), to eliminate redundant data entry and maintain compliance with regulations such as HIPAA.

3.2.3 Common Best Practices

The typical needs described are addressed by ERP vendors through major functionality such as:

- **Employee and Manager Self-Service.** Manual benefit enrollment, especially annual open enrollment, can be time consuming and prone to error. HR information systems support electronic open enrollment which in turn improves cycle time and accuracy. Further, providing employees and their supervisors with electronic access to edit/view employee information for HR purposes can eliminate the need for departments to keep separate documentation and can reduce redundant data entry.
- **Employee Maintenance and Benefits Management** (i.e., Content Management and Workflows)
    - **Database.** ERP software can track employees' performance and length of employment (e.g., hire dates, seniority dates, rehire dates, benefit dates, reemployment eligibility, disciplines, grievances, etc.).

- **Data validation and audit trails.** Rules can be configured into ERP software to maximize the accuracy and consistency of data entered. Audit trails can also be used to track who has made changes and when the changes were made, in case any follow-up research is necessary, similar to other software modules.
- **Workflows.** Employees and managers can make updates to employee files electronically and submit any requests needing approval via automated workflows. The online forms and workflows can minimize the need for many hardcopy forms, such as personnel action forms, requests for time off, performance appraisals, etc.

Additional best practices include:

- *Creating training plans that align with employees' career paths to help them advance*
- *Evaluating/redesigning absence management programs to minimize absences*
- *Comparing salaries and benefits to surveys of other local organizations to ensure the Organization is competitive*

- **Central document storage.** Employees' documentation related to trainings, certificates, and other achievements or information can be attached to employee records in the information system, where it can be available on-demand. Some ERP systems may also be able to provide functionality for tracking organization-wide insurance information, such as type, carriers, certificates, claim information, status, resolutions, etc.

- **Position Management.**

<u>Recruiting, Position Control and Budgeting</u>

- **Funding.** Workflows or other features can be used to confirm that funds are available, as tracked in budgeting or other ERP software modules, without needing to contact and wait for responses from other departments (e.g., Finance).
- **Online Recruitment.** Using online recruitment functionality available in some ERP systems, employers can post open positions and prospective employees can complete applications and questionnaires, provide required documentation, and perform other pre-employment requirements. Employers can use workflows to route applications to the following steps, such as management approval and offer- or decline-letters. Overall, online recruitment can reduce recruiting cycle time through:
  - Assisting in screening candidates, based on specific qualifications, for example the use of blackout questions.
  - Validating candidate information, such as requiring certain fields and specific formats to minimize follow-up activities.
  - Differentiating internal candidates, in order to speed up their processing as desired.
  - Interfacing with on-boarding activities, such as populating information.
  - Interfacing with offer- and decline-letters, to minimize the need to recreate letters for each applicant.

<u>Classification and Compensation</u>

    - **Mass changes.** ERP systems are streamlining the ability to make mass changes throughout systems, such as providing a group of employees with a percentage pay increase/decrease based on a given effective date.
- **Reporting.** Without a robust and properly implemented ERP system, many organizations prepare financial reports (e.g., accrued leave balances) and complete mandatory compliance reports (e.g., OSHA and EEO) manually. Oftentimes, multiple sources such as Microsoft Excel spreadsheets and paper forms are needed to compile these reports. ERP systems have the capability to store critical data needed for financial reports and compliance reports in one location. Reports can then be generated on demand with limited need for manipulation.
- **Integration or Interfaces.** Interfaces or integration with other software modules (e.g., payroll and accounts payable) and benefit carriers enable minimized data entry (at initial point of entry, rather than multiple times) and compliance with regulations such as HIPAA, by limiting the number of users that need to view sensitive employee information.

In addition to functionality within ERP systems, governments can adopt the following suggested practices to increase efficiencies and enhance effectiveness:

- **Performance Management.**
    - **Mission and Values.** Determining an organizations' mission and values can enable it to communicate its expectations to employees through trainings, performance evaluations, and other opportunities. Employee expectations should be communicated to recruiters and candidates, such as through online applications and interview questionnaires, in order to streamline the hiring process. Employees should then be reminded of the organization's mission and values during performance evaluations.
    - **Timely and Recurring Evaluations.** Timely feedback for employees can help them in understanding that their contributions are appreciated and how to further leverage their strengths, with an aim toward continuously increasing employee effectiveness and morale. Feedback can also assist organizations' in guiding employees toward additional opportunities to learn and advance. Evaluations should take place at least semi-annually. Further, if discipline is needed, a comprehensive and centralized discipline record is established so corrective action can be taken swiftly.
    - **Training.** The Human Resources department tends to be viewed as the gatekeeper for developing employees. As employees in Human Resources and other departments identify valuable trainings, the Human Resources department can share this information throughout the organization, even possibly creating training plans that align with employees' career paths in order to help them advance in a reasonable timeframe. The establishment and ongoing maintenance of a centralized training and skills database can help organizations quickly identify employees with certain skillsets and licenses on an as needed basis.
    - **Tracking Employee Absences.** Employee absences have significant direct payroll costs and cause significant burden for managers and staff who need to accommodate absences. Organizations have taken steps to minimize absences; however, research indicates that there is a disconnect between employers' actions and what employees find effective.[xxvii] In addition, the rate of absences in the public sector tends to exceed that of the private sector.[xxvii] In order to minimize employee absences, employers need to monitor the reasons that employees are absent and determine cost effective approaches for managing the absences. This type of tracking can help organizations be proactive in identifying employees who may qualify for FMLA leave. Ultimately,

"the goal is to create a work environment where employees are motivated to return to work as soon as medically possible because they feel supported and they know their work is valued."[xxviii] It is recommended that evaluations of absence management programs take place when there are significant changes in the organization and at least every three to five years.[xxvii]

- **Employee Information and Benefits Management** (Content Management and Workflows)
    - **Policies.**
        - **Effective Dates.** Policies for effective dates can streamline activities. For example, policies stating that any changes to pay rates or benefits take place at the beginning of the following pay period can eliminate manual calculations during the middle of pay periods.
    - **Data Maintenance.**
        - Human resources data can grow quite complicated, including job codes, pay codes, classification codes, deduction codes, etc. Ensuring that the codes are as useful as possible and clearly communicated, including inactivating codes that are no longer in use, can minimize data entry errors as well as minimize inefficient use of time tracking at an unnecessary level of detail.
    - **Content Management.**
        - Maintaining up-to-date policies and procedures is critical for communicating evolving changes in technological capabilities and other opportunities to improve efficiency and effectiveness to employees. Policies and procedures documents should be considered "living documents," updated as changes take place and reviewed regularly to ensure that they are up-to-date.
        - Providing staff with access to as much information as possible, considering confidentiality and view/edit rights, can minimize delays in sharing information.
    - **Auditing.**
        - Depending on organizations' practices and controls, varying levels of auditing may be necessary. Staff in either or both the HR and Payroll departments should review exception reports and perform other auditing activities as necessary to detect errors (e.g., in changes to pay rates, benefit deductions, addresses, names, etc.).
    - **Benefits Administration.**
        - Organizations should consider conducting regular benefit audits to verify that dependents are in fact qualified dependents. Audits could be conducted by selecting a random sample of employee dependents and requesting supporting documentation such as birth certificate or marriage license. Or these documents can be requested from employees every few years.
        - Active open enrollment should be conducted by organizations. ERP systems can assist with this process by supporting open enrollment via self-service functionality.
- **Position Management.**
    - **Optimal Number of Job Classification Codes.** Over time, many governmental entities have developed lengthy lists of job classifications, sometimes having as many or more job classifications as there are employees. These classifications may have been based on collective bargaining agreements. The variety of job classifications can limit the effectiveness of staff if they are only supposed to perform activities within their job classification. Further, the number of job classifications can be inefficient to

manage. As a best practice, governments should strive to minimize their number of job classifications.

- **Wage and Benefit Surveys.** Certain industry-based organizations, such as the Michigan Municipal League, regularly publish surveys of pay and benefits across regions. As a best practice, organizations should compare their wages and benefits to those in the survey, to ensure that their organization is remaining competitive with other local employers.

3.2.4 Emerging Best Practices

- **Use of Third Parties.** Calculations of employee benefits have become common enough that third-party organizations have now established businesses which perform this function for employers. Organizations can compare their costs internally to the costs of third parties and negotiate service level agreements to ensure that the value they receive from third parties would exceed the value of the service provided internally, further enabling the organization to focus on activities that would improve its effectiveness.

Even with sophisticated HR functionality in ERP software, inadequate knowledge of how to leverage the information system can result in underutilization and even misuse of the system.

- **Workflows for Terminating Employees.** Workflows for terminating employees can assist organizations in ensuring that benefits are terminated for both the employee and its dependents, any property is returned, information technology departments are notified to remove the employees from the system(s), accruals are appropriately paid out, and other necessary actions are taken.
- **Linking Performance Management with Succession Planning.** Tying the performance management process to organizational succession planning is a process that governments are now in the process of adopting. By linking career goals to organizational succession plans, managers are able to identify emerging leaders and ensure that proper coaching and training is provided.

3.2.5 Potential Barrier(s) to Best Practices

Up-to-date policies and procedures are critical for communicating opportunities to improve efficiency and effectiveness. Policies and procedures should be considered "living documents."

- **Policy/Legal.**
  - **Collective Bargaining Agreements.** Many HR processes and policies are based on civil service rules, local ordinances, State law, and Federal law. There may be collective bargaining rules that limit how certain pieces of employee data are handled or how certain processes are established (e.g., calculations of time worked for determining benefit eligibility and seniority). Unique formulas for calculations may require customizations in software systems. In order to streamline their practices, governments may need to review collective bargaining agreements, civil service rules, and statutes prior to implementing new software systems, in order to identify potential changes to make or software customizations needed.
  - **Tracking Employee Absences.** Language to use for absence management can become quite detailed, given the need to define both various types of absences (e.g.,

scheduled vs. unscheduled) and various incentives/disincentives (e.g., progressive discipline and reward systems). The International Public Management Association for Human Resources has sample language available intended to prompt internal brainstorming considering each organization's circumstances.[xxix]

- **Culture/Education.**
  - **Updates to Policies and Procedures.** The value of updating policies, procedures, and other governing documents is often overlooked. Such an activity requires proactive discipline, and can be well worth the value when employees have a common understanding and shared knowledge. In addition to researching changes to make and editing policies, procedures, and other governing documents, governing bodies often need to approve the recommended changes. Proactive efforts to simplify the process for governing body approval can assist with adopting changes (e.g., preparing new language in advance along with high-level bullet points explaining the purpose for the recommended changes). In addition, changes to procedures should be incorporated into software systems to the greatest extent possible, to minimize the need for governing bodies' involvement in day-to-day activities and employees' need to refer to multiple sources determining appropriate practices to follow.
  - **Collective Bargaining Agreements.** Organizations that are striving to change collective bargaining agreements may face resistance from employees. To the extent that employees are engaged in the process and their concerns are addressed, organizations may be able to overcome this resistance and create efficiencies.
  - **Use of Information Systems.** Even with sophisticated HR functionality in ERP software, inadequate knowledge of how to leverage the information system can result in underutilization of the system and even misuse of the system. For example, employees may decide to use data fields for the wrong purpose, such as a workaround to track other important information, resulting in future data integrity issues and an inability to rely on certain reports. In addition, many canned, critical HR reports (such as EEO-4) rely on existing data in the system in order for the report to be generated successfully. During implementation, if an organization chooses to store certain pieces of data outside of the system, reporting capabilities will be limited and manual manipulation will be inevitable.
- **Technology.**
  - **Central storage for policies and procedures.** ERP systems do not typically provide storage for policies and procedures. Current best practices include using such systems as Microsoft SharePoint, organization-wide intranets, or other central storage systems.

4 Conclusion

This report provides local governments in the State of Michigan with an overview of best practices to potentially incorporate into their business processes and related information systems. This report also identifies sample key performance indicators that organizations can use as a benchmark for determining their own continuous improvement plans. The benefits of implementing the best practices within this report may vary in scale and type, but we expect that the value provided will be beneficial, to varying extents, for many governments.

In order to realize the value, however, governments need to implement their ERP systems to the greatest extent feasible. As practitioners exposed to many government ERP projects, we have observed that many organizations already have tools that would enable more efficient and effective practices, but employees have not been instructed or taught to effectively use the tools.

As practitioners exposed to many government ERP projects, we have observed that many organizations already have tools that would enable more efficient and effective practices, but employees have not been instructed or taught to effectively use the tools.

As indicated throughout this report, the benefits of using best practices are significant. These are typically enabled by ERP systems and include:

- Flexible, user-friendly, real-time reporting
- Ability to view information within other departments
- User- and department-based security settings
- Automated workflows for routing approvals
- Electronic storage of supporting documentation with the related transactions
- “Drilling” capabilities between the general ledger and subsidiary systems
- Reduced need for shadow systems
- Audit trails
- Improved service delivery and efficiency

{Thank You!}

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