Child Care Bureau

Child Care Administrator's Improper Payments Information Technology Guide

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PREFACE

The Improper Payments Act of 2002 directs Federal agencies to initiate actions to identify and prevent improper payments in all Federal programs and to measure and report on their progress. In response to this challenge, the U.S. Department of Health and Human Services (HHS) and other Federal agencies continue to implement initiatives aimed at preventing and identifying improper payments in their programs, including the subsidized child care programs implemented by States using funds from the Child Care Development Fund (CCDF). These initiatives include changes in policy, increased monitoring, the implementation of financial incentives and penalties, establishing measurements, and support for automated system solutions.

To support the reduction of improper payments in subsidized child care programs, the Child Care Bureau (CCB) in the Administration for Children and Families (ACF) at HHS initiated several projects to understand current State efforts and to assist States in analyzing and addressing their improper payments. Through an ongoing dialogue with States, the CCB determined that State child care administrators needed additional information on potential automated solutions that can assist in the prevention or identification of improper payments and guidance about information technology (IT) investment approaches and procurement practices.

In response, the CCB commissioned the writing of this *Child Care Administrator's Improper Payments Information Technology Guide* to provide State administrators the following:

- A description of the major software solutions used by States to identify and prevent improper payments;
- The advantages and disadvantages of the various approaches to information systems investment; and
- Guidance on procuring IT to support automated solutions that prevent or identify improper payments.

Chapter I profiles a number of current information technology solutions used by States to prevent and identify improper payments in the subsidized child care program. These solutions include automated support for intake and eligibility determination, provider management and payment, reporting, data mining, and time and attendance tracking.

Chapter II discusses the major conceptual approaches to IT investment, and offers advantages and challenges of each approach. Additionally, Chapter II offers guidance on identifying and evaluating alternative solutions.

Chapter III focuses on the procurement of IT products and services including guidance on important steps involved in constructing a high quality Request for Proposals (RFP), guidance on how to prevent driving up the cost of bids, and tips for evaluating proposals.

Automated systems can provide valuable support to States' efforts to address improper payments. The information, analysis, and recommendations contained in this guide are intended to highlight possible IT solutions and to provide a framework to assist child care administrators in making prudent IT investment decisions. CCB recognizes that States best understand their clients, business processes, and information systems environments and anticipates that the guide will serve as a valuable resource, not specific guidance. As an additional tool, a Glossary is provided to assist child care administrators with a quick reference of commonly used IT terms. These terms apply to the acquisition, development, implementation, or support of automated systems.

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I. SYSTEM SOLUTIONS TO PREVENT AND IDENTIFY IMPROPER PAYMENTS

A. Introduction

New or enhanced information systems can assist State administrators in preventing, identifying, and recouping improper payments in their subsidized child care programs. Information systems can support many of the processes involved in the administration of subsidized child care programs, including intake, eligibility determination, case management, provider management and payment, and reporting. Automated systems can help staff to perform their jobs more efficiently. They can also improve program integrity by assisting in the enforcement of program rules such as income thresholds for eligibility and by leveraging data from different sources for use in preventing and identifying improper payments.

The level of automation in the child care subsidy program varies widely across the States. Some child care subsidy programs currently benefit from modernization efforts of State information systems that provide a broad scope, such as including the child care subsidy program in a new eligibility determination system that may encompass other major benefit programs including Temporary Assistance for Needy Families (TANF), Food Stamps, Medicaid, or the State Children's Health Care Insurance Program (SCHIP). In other States, modernization efforts are not yet underway or do not include the subsidized child care programs. In these States, child care administrators may consider taking a proactive approach and advocating for inclusion of their programs into the modernization effort.

Solutions addressing the challenge of improper payments have emerged in the child care subsidy program and other benefit programs sharing similar processes. These solutions include screening tools, eligibility automation, data matching, electronic activity tracking, and reporting. This chapter profiles a number of different information system initiatives that prevent or identify improper payments in the child care subsidy program or other human service programs. While the list of system solutions is not exhaustive, it is representative of the different types of efforts used by States.

B. Profile of System Solutions

This section presents the profiles of system solutions used to address improper payments. Each profile contains:

- A general description of the solution;
- How the solution addresses improper payments;
- An example system name and State using the solution;
- An implementation overview from the example State(s);
- Cost information (when available);
- Challenges; and
- Benefits.

1. Electronic Benefits Transfer

Electronic Benefits Transfer (EBT) systems track and report participant time and attendance at a physical location and facilitate payment to either a vendor or a participant. To track time and attendance, subsidy recipients swipe their cards at a point of sale (POS) device located at the site of service delivery. The system tracks time and attendance data to make payments to vendors and to produce reports useful for identifying improper payments. Oklahoma uses EBT technology to track time and attendance and to make vendor payments in the child care program. Kansas uses EBT technology to enable child care recipients to make payments to vendors, but they do not track time and attendance with their EBT system.

a. How the Solution Addresses Improper Payments

The solution addresses the challenges of preventing and identifying improper payments by:

- Providing an accurate and real-time record of the time and physical location of the child care services;
- Eliminating errors related to manual paperwork, including vouchers, invoices and attendance sheets; and
- Reducing errors related to issuing checks by using automated payments.

b. Example System Name and State

e-Childcare, Oklahoma

c. Implementation Overview

In 2003, Oklahoma developed and implemented e-Childcare, an EBT system for child care attendance tracking and provider payment. The e-Childcare solution addresses deficiencies in time and attendance documentation and timeliness and accuracy of provider payments. Building on the success of its Food Stamp EBT system, Oklahoma used the same EBT vendor for e-Childcare. Child care and Food Stamp recipients can use the same card for both programs.

Child care subsidy recipients use EBT cards that contain a magnetic stripe on the back. Each swipe of the card at a POS device verifies the cardholder's identity, dates, time-stamps and records a transaction of a child coming into or exiting care. Only recipients use EBT cards to check children in and out of child care provider facilities. Oklahoma has stringent State policies prohibiting vendors from keeping subsidy recipients' EBT cards or from swiping the cards when the recipient does not receive care on a given day.

The State issued the POS devices to all child care providers, limiting device use only to the child care program. For added security, recipients have a personal identification number (PIN) that they must use to complete a transaction. After swiping the card at the POS device, the device screen prompts the user to enter the assigned, discrete PIN number to record the transaction.

When the client swipes a card, the POS device transmits the data immediately to the EBT vendor system, which creates an electronic invoice based on the actual hours of care. Payment rates vary according to program eligibility and each EBT account associates the card information and PIN number with a recipient's confidential account holding the necessary program, rate, and demographic information.

All Oklahoma Department of Human Services (OKDHS) staff members can use the system to review attendance to ensure parental compliance with child care plans. In addition to online reporting for staff, Oklahoma developed a web site (https://apps1.okdhs.org/vendorlogin/) accessible for clients and providers to review their account status and transaction history.

e-Childcare increases payment accuracy and eliminates the previous manual voucher process, which was error prone and cumbersome for both providers and the State. The State reduced time between service delivery and payment from several weeks to two weeks, and providers receive payment on a weekly basis.

d. Costs
Appendix 1 summarizes the system implementation and maintenance cost information.

e. Challenges
Although Oklahoma did not report specific challenges for the purposes of this guide, most major systems initiatives face common challenges including:
- Identifying sufficient resources for up-front system investment and for ongoing system maintenance;
- Providing adequate training for system users;
- Testing to ensure that system defects are eliminated before system implementation; and
- Providing help desk support for users.

f. Benefits
Solution benefits include:
- POS device immediately updates the case record.
- Immediate notification of co-pay obligations to child care providers. Each swipe on the POS terminal records the co-pay collected, payment rate and amount paid for the child care service.
- Provider payments are more accurate and timely.
- e-Childcare calculates provider payments based on attendance and eliminates manual vouchers, invoices, and attendance sheets.
- e-Childcare creates real-time, on-line electronic attendance records for monitoring and audit activities.
- Savings achieved by e-Childcare implementation have resulted in child care staff reductions of 14 full-time equivalents (FTEs).

- Since statewide implementation in November 2003, OKDHS reports a savings of more than $10 million.

2. Eligibility Determination and Case Management Systems

Many States automate child care intake, eligibility determination, and case management functions to increase accuracy and timeliness. Automated case management systems perform several functions, including:
- Collecting demographic data;
- Calculating eligibility determination;
- Enforcing program policies;
- Tracking the eligibility periods; and
- Sending notifications to clients and workers.

Workers or clients may enter data into the application. The system verifies the data by integrating internal and external data sources to verify information and perform an eligibility calculation.

a. How the Solution Addresses Improper Payments

The solution addresses the challenges of preventing and identifying improper payments by:
- Eliminating eligibility calculation errors;
- Using system edits to prevent data entry errors;
- Interfacing with other program automated systems to verify eligibility information;
- Tracking eligibility timeframes and triggering recertification notices; and
- Voiding payment authorizations for any non-licensed or closed provider facility.

b. Example System Names and States

Keying in Data Accurately, Reliably, and Efficiently (KIDCare), Arkansas
Kansas System for Child Care and Realizing Economic Self Sufficiency (KsCARES), Kansas

c. Implementation Overview
KIDCare (Arkansas)

The Keying in Data Accurately, Reliably, and Efficiently (KIDCare) system was implemented in July 2005 as part of Arkansas' effort to improve program integrity and reduce improper payments in the child care subsidy program. KIDCare system functionality includes:
- Up-front error checking through built-in edits;
- Interfacing with external data sources, including TANF and the Social Security Administration (SSA) databases;
- Tracking the eligibility period for clients; and
- Excluding payments to non-approved or closed child care providers, even if a participant received services at the facility.

KIDCare maintains interfaces to the systems supporting the State's TANF, Child Support and Social Security Administration (SSA) programs in order to verify Social Security Numbers (SSNs) or other reported income information. Accessing data from other program sources during eligibility determination and re-determination allows workers to reduce the use of fake SSNs, and to verify current reported income.

KIDCare improves the accuracy of eligibility determination through the following system functionality:
- Uses program-specific guidelines to accurately determine eligibility;
- Triggers re-determinations for clients when changes occur that affect eligibility;
- Tracks case status, program and periods of eligibility;
- Provides interfaces with other systems, reduces data entry, maintains data integrity, and validates information;
- Facilitates business processes for workers and supervisors by using system alerts, which are messages sent to workers either on-screen or via email that inform them of required actions; and
- Supports worker activities and provides management with critical data by providing reports and notices.

KIDCare also supports budget management by automatically formulating and allocating funds for 75 counties. The system prevents expenditures that exceed allocated amounts assigned to each local jurisdiction, yielding significant time savings for State staff.

KIDCare uses a server-client configuration and uses SQL Server and Visual Basic software.

KsCARES (Kansas)
The Kansas System for Child Care and Realizing Economic Self Sufficiency (KsCARES) has played a significant role in preventing and identifying improper payments in the subsidized child care program. Kansas obtained the system from Wyoming and then modified it extensively to fit its policy requirements.

KsCARES has extensive edits that help enforce policies and perform the calculations used for eligibility determination, including:
- Indicating whether income is countable based on income type;
- Enforcing maximum hours for child care service plans during a month;
- Preventing duplicate benefit issuances; and
- Determining the reimbursement rates automatically, based on the child's age, provider's individual rate, and the State's maximum rates.

In addition to strengthening the eligibility processes, KsCARES offers helpful reporting and case management capabilities that assist in identifying improper payments and managing claims against improper payments. KsCARES tracks

both case eligibility and payments and then automatically runs reports to identify possible instances of overpayment when benefits are issued for extended periods of time (e.g., beyond eligibility re-determination) or after a case is closed. Once Kansas identifies an improper payment, KsCARES provides functionality to establish and track claims.

The software and hardware used by the KsCARES includes Natural, COBOL programs, IBM mainframe, and ADABAS Database Management System (DBMS).

d. Costs
KsCARES cost an estimated $2.3 million to develop.
Arkansas was not able to provide development costs.

e. Challenges
Training and meeting accessibility requirements constitute two important implementation challenges. To effectively use the system, all existing staff and any new staff must participate in hands-on KsCARES training. Additionally, the State continues to enhance the system to meet the accessibility requirements contained in Section 508 of Rehabilitation Act.

KIDCare was designed to consider the management of the child care budget process, including allocating all child care funds across counties, using an allocation formula. A design challenge was to allow prioritized spending of funds while tracking allocated, obligated, available, billed, and paid funds. Another challenge was to ensure compatibility with the State's accounting system, the Arkansas Administrative Statewide Information System.

f. Benefits
Solution benefits include:
- Automating rate determinations to prevent many payment errors;
- Reporting to enable staff to identify possible payment errors after benefit issuance; and
- Eliminating manual processes related to eligibility determination, monitoring, and claims tracking.

3. Edits on Existing Applications for Authorization and Payment
A number of States address improper payments by placing edits on the authorization and payment functions. These software edits match the demographic characteristics of the household against the State policy and approved rates to ensure the accuracy of benefit issuance.

a. How the Solution Addresses Improper Payments
The solution addresses the challenges of preventing and identifying improper payments by:

- Eliminating manual updates to client and provider information;
- Providing global viewing capabilities for case and provider-related reports;
- Using edits during the intake process to ensure accurate data entry;
- Maintaining waiting lists when funding is not available;
- Capturing data for Federal reporting requirements;
- Monitoring budget allocations;
- Managing caseload functions such as case reviews and recertifications; and
- Communicating client and provider changes to other offices, including State, county, and vendors, such as. MAXIMUS, Inc. (Georgia's child care program subsidy program contractor).

b. Example System Name and State
MAXSTAR, Georgia

c. Implementation Overview
Since July 2000, the Georgia Department of Human Resources, Division of Family and Children Services (DFCS) contracted with MAXIMUS, Inc. to manage and issue child care subsidy payments to child care providers. This service is known as Child Care and Parent Services (GACAPS) and is currently in 134 counties throughout the State.

Within the GACAPS counties, DFCS case managers determine eligibility manually and authorize DFCS subsidy payments by entering client and provider information into MAXIMUS' automated system called MAXSTAR®. After the DFCS case manager authorizes the payment, MAXIMUS monitors the use of allowable providers, facilitates invoicing of service costs, issues payments to child care providers, and provides data for State and Federal reporting requirements. MAXIMUS also works closely with the Office of Family Independence, Child Care Unit to ensure compliance with State and Federal policy requirements.

The GACAPS service or system does not provide case management capability. The MAXSTAR system issues payments and provides monitoring and compliance reporting capability only; it does not determine client eligibility, authorize payments or provide interfaces to other systems. Georgia plans to expand the GACAPS service from 134 counties to all 159 counties during 2007.

d. Costs
Georgia was unable to provide cost information for MAXSTAR.

e. Challenges
Although Georgia did not report specific challenges for the purposes of this guide, most major systems initiatives face common challenges including:
- Identifying sufficient resources for up-front system investment and for ongoing contract monitoring;

- Providing adequate training for system users;
- Testing to ensure that system defects are eliminated before system implementation; and
- Providing help desk support for users.

f. Benefits
Solution benefits include:
- Issuing payments according to policy and regulations;
- Increasing payment accuracy and timeliness;
- Saving State staff time spent processing payments;
- Compiling and tracking client and provider information for program and payment accuracy monitoring; and
- Processing and handling providers' monthly invoices, payment, and billing calls.

4. Data Mining
Data mining refers to searching large volumes of data using automation in order to identify possible improper payments. States are beginning to use data mining tools to search for and analyze data from multiple sources to assist in identifying patterns or anomalies that indicate potential improper payments. The data mining technology extracts information from multiple systems, transforms it into a common format, and loads it into a database or data warehouse for analysis.

a. How the Tool Addresses Improper Payments
The solution addresses the challenges of preventing and identifying improper payments by:
- Assisting fraud workers with investigations and ongoing monitoring;
- Providing reporting capabilities to assist case workers in identifying anomalies;
- Enabling fraud detection and recovery activities; and
- Providing data for program and fiscal analysis.

b. Example System Name and State
Decision Support System (DSS), Arkansas

c. Implementation Overview
Arkansas uses a data-mining tool called the Decision Support System (DSS) to identify possible instances of improper payments. DSS compiles data from several sources, including: KIDCare (the child care automated eligibility system), the child care licensing unit, pre-kindergarten program, and the State's food programs administered on behalf of the U.S. Department of Agriculture. DSS is user-friendly and adaptable to changes in the production systems environment. Arkansas uses DSS information to look for anomalies that indicate a potential error, including:
- Participation in multiple programs with conflicting eligibility requirements;

- Inconsistencies in reported demographic information;
- Inconsistencies in reported service providers (e.g., reporting different child care providers for the subsidized child care program and the food program);
- Overuse of services across programs; and
- Provider license violations.

DSS is a client-server application that uses business objects software for the query and reporting functions. Arkansas also uses Microsoft's SQL Server software for data mining and Microsoft's Business Scorecard for Managers for strategic planning and performance indictor tracking and/or monitoring.

d. Costs
There is no cost information available at this time.

e. Challenges
Obtaining the essential data from the other production systems posed a significant challenge for the initial implementation of DSS in Arkansas. The initial extract, transformation, and load (ETL) process requires an enormous amount of State effort and resources.

f. Benefits
Solution benefits include:
- Ad hoc reporting capabilities that identify risk factors by using benchmark criteria, such as indicating that transactions occur during nonworking hours for a specific provider using the time-date stamp;
- Flexibility in report design and monitoring capabilities that enables managers to predict and identify improper payments; and
- Use of commercial off-the-shelf (COTS) software; therefore, reducing costs for special programming or training.

C. Other Software Products from the Human Services Field
This section describes additional software solutions currently used in the human services field that States can leverage across programs to reduce improper payments.

1. Document Imaging and Electronic Case Files
Document imaging involves the transformation of paper documents into electronic documents through scanning and storing. Document imaging and electronic case files offer several advantages, including:
- Allowing insertion of electronic documents into a client's case file along with other required information;
- Reducing the costs of purchasing paper, printer ink cartridges, and storage capacity for paper documents;
- Allowing States to alter business processes associated with eligibility determination and case management to increase accuracy and efficiency; and
- Sharing case management workload across disparate locations.

Electronic case files allow States, including Florida and Washington, to use call centers for eligibility determination and case management of benefit programs. Call centers receive and efficiently process application information from clients over the phone, by mail, by fax, and via the internet. Call center processing increases standardization, efficiency, timeliness, and customer service, reducing staff time.

a. How the Solution Addresses Improper Payments
The solution addresses the challenges of preventing and identifying improper payments by:
- Increased availability of case information including pay stubs, applications, identity verification documents required for eligibility determination, and payment authorization;
- Improved efficiencies in quality assurance, monitoring, and fraud investigations through retrieval of electronic case files; and
- Reduced staff time by centralizing processing of large volumes of applications via mail, internet, fax, and phone.

b. Example System Name and State
Florida Department of Children and Families
Washington Department of Social and Health Services

c. Implementation Overview
The implementation of document imaging and electronic case files represents a major enterprise investment that crosses multiple programs. A complete implementation overview from one or more States exceeds the scope of this guide. However, any State considering a move to document imaging and electronic case files needs to consider the following:
- Moving to electronic case files represents a major change in business process for eligibility determination and case management. Gathering stakeholder needs and clearly defining user requirements is an important first step. States may choose to establish a steering committee including end-users, information technology staff, and vendor staff (if a vendor is used) to guide the system initiative.
- Storing files electronically requires sufficient hardware to store and retrieve large quantities of data in a timely fashion. States need to include record retention requirements (typically at least three years) when estimating storage needs.
- Document imaging requires high quality scanners and new business processes. Scanning options for States to consider include:
  - Using current staff to scan records from local offices;
  - Sending all documents to a central location for imaging; or
  - Providing self-service imaging services for applicants to scan verification documents as part of an on-line application.
- Imaging requires new software to manage the storage, organization, and retrieval of electronic documents. Some States develop this capacity in-house while others purchase software from vendors.

- Electronic case files require new business practices regarding security levels. States need to identify which staff members can have access to what information and create role-based security that authenticates users.
- States may choose to pilot document imaging to identify and address any system and business process issues.
- States may choose to conduct a phased implementation to mitigate risk.

d. Costs
Although specific costs are unavailable, the following list identifies the cost areas associated with this solution:
- Hardware (servers, scanners);
- Software (scanner software, document management software);
- Training; and
- New document imaging technician staff (optional).

e. Implementation Challenges
States face the following implementation challenges with the document imaging solution:
- Identifying a Statewide common taxonomy and case filing system presents challenges to many local offices to change their business practices and reorganize their cases.
- Redefining business processes associated with eligibility determination, change reporting, and case management is critical. Decisions regarding new roles and practices require careful planning that includes system end-users.
- Record conversion strategy requires decisions regarding which current or past case files to image and file electronically. Conversion of current cases can be time-consuming and costly.
- Adequate training for all staff to use the new system is important. if new document imaging technicians are not hired, existing staff will need training in document imaging.

f. Benefits
Solution benefits include:
- Streamlining work processes by automating the flow of paperwork;
- Providing important real-time information to staff electronically;
- Achieving gains in program integrity; and
- Eliminating the challenges of storing and retrieving paper records.

2. Data Brokering
Data brokering enables data exchange between partnering applications regardless of the hardware or software used by the legacy applications or external systems. Examples of data sources accessed by data brokering solutions include: TANF (IV-A), Medicaid, Food Stamps, SCHIP, LIHEAP, Foster Care (IV-E), Child Support (IV-D), Child Care Subsidy Programs, SSA data sources, Departments of Motor

Vehicles, Vital Statistics, State Directories of New Hires, Unemployment Insurance (UI) Wage Data, and third-party employment and wage verification services.

a. How the Solution Addresses Improper Payments
The solution addresses the challenges of preventing and identifying improper payments by:

- Providing timely and accurate external sources of verification information to child care workers performing eligibility determinations; and
- Facilitating fraud investigations by providing accurate and timely data regarding household demographics, income, and expenses.

b. Example System Name and State
Systems Partnering in a Demographic Repository (SPIDeR), Virginia

c. Implementation Overview
Virginia realized productivity and efficiency gains with the implementation of its enterprise data brokering solution called Systems Partnering in a Demographic Repository (SPIDeR). SPIDeR improved accuracy in eligibility determination by enabling workers to access many databases to retrieve and verify information. SPIDeR has a user-friendly, web-based front end for multiple system inquiries. The legacy systems for the various business unit programs interface with SPIDeR and use its Common ID functionality. This functionality enables the users to see the customer's composite profile, which includes all cases, programs, associated individuals, and payments.

Matching client records across all systems via a Common ID to create a composite profile is an important tool to prevent and identify fraud in all programs. Workers access and control the composite views across programs by role-based security standards that ensure confidentiality. SPIDeR has increased security, improved audit capabilities, and reduced account management activities with respect to user IDs and passwords.

SPIDeR was a catalyst for changing the business/service processes associated with delivering human services. As a result, Virginia has enhanced audit and security capabilities, and is pursuing other web-based solutions to assist in identifying and preventing improper payments. This data integration model is hardware and software independent.

Virginia implemented this initiative using Java, J2EE, WebSphere, Oracle, EasySoft, and Business Intelligence Systems (BIS) technologies. The application resides on Fujitsu PP1500 and uses Transmission Control Protocol/Internet Protocol (TCP/IP).

d. Costs
SPIDeR was developed in-house using existing staff resources over a period of years, and no additional hardware or software had to be purchased for its development or implementation.

e. Challenges
Virginia noted that a project of this sort requires a dedicated team, adequate budget, and executive-level leadership at the onset.

f. Benefits
Solution benefits include:
- Increased ability to share data with stakeholders, State systems, other States, Federal offices, and local offices;
- Improved worker efficiency by reducing keying in online and batch systems;
- Improved data quality because the system facilitates cleanup, reconciliation, SSA, and common client IDs; and
- System availability to all localities regardless of size and resources.

D. Summary
This chapter provides a summary of different technology solutions States have used to meet Federal and State mandates, increase productivity, reduce, and prevent improper payments. These solutions touch on different business processes related to program implementation including intake, eligibility determination, provider payment, monitoring, and the investigation of potentially improper payments.

A summary of the benefits provided by the solutions described in this chapter include:

- States leverage new and enhanced technologies across programs to enhance services to recipients.
- Many solutions improve the timeliness and accuracy for payments to child care providers.
- Automation increases accuracy for program administration: paper-based systems lend themselves to human error.
- Paperwork is reduced significantly, thereby eliminating redundant data entry.
- These solutions provide online invoice verification and increased tools for providers to manage their accounts with the State.
- Significant time savings occurs because State staff members do not have to calculate payments and invoices.
- Some States are able to divert program savings to quality training activities and ultimately provide quality care to a greater number of families.

II. ADVANTAGES AND CHALLENGES OF DIFFERENT INFORMATION TECHNOLOGY INVESTMENT APPROACHES

A. Introduction

As discussed in Chapter I, there are many different information technology (IT) investments that can help States prevent and identify improper payments in their subsidized child care programs. In order to assist State administrators in choosing the right solution, this chapter offers background about different technical approaches and specific strategies that can be used to identify and assess potential solutions. Chapter III provides guidance to States when they choose to procure the products or services of one or more vendors.

Once a State decides to acquire new technology to address the challenge of reducing improper payments, the path forward is more complicated than a simple choice between building the technology application under the control and leadership of the State Agency and buying the services or products from an outside vendor. The following explore the many variations that exist for basic IT investment strategies: in-house development, using commercial off-the-shelf (COTS) software, and contracting out. No one approach is inherently better than another, and each IT investment decision requires a careful analysis to determine the best approach or approaches for meeting the objectives.

The growing utilization of Service-Oriented Architectures (SOAs) by State Agencies and their strategic partners adds a new level of complexity and opportunity to this decision because this system architecture allows for a mix of approaches to work together to build a process. For example, one State Agency may develop a web service that accurately associates a residential address with its appropriate county. Multiple programs and organizations could use this service repeatedly as part of their business processes, including a department of social services that may use it to ensure that individual cases are determined eligible for child care and maintained by the appropriate local department of social services, avoiding the unnecessary transfer of cases between local departments.

While this particular function may be web-based, an SOA technical environment allows for different technologies. An example would be for an existing agency mainframe computer, to perform the other processes, such as collecting demographic and financial information, calculating eligibility, and assigning a case to a worker.

Sorting out this complex technical environment and making a good decision require careful analysis and a basic understanding of the different IT investment approaches. This chapter describes and conveys the typical benefits, challenges, and considerations of the different approaches in order to provide a framework in which to evaluate solutions. The chapter also discusses strategies for identifying and evaluating different technology solutions. The intent of the chapter is not to promote one investment strategy over another. In fact, State Agencies responsible for the child care subsidy program and other human service programs commonly mix one or more approaches to meet their business and service objectives within their time and budgetary constraints.

B. Descriptions of the Technical Approaches
For an accurate analysis of different technology solutions, it may be helpful to better understand the advantages, challenges, and key considerations of different IT investment approaches. This section discusses the merits of the following: using in-house development, implementing COTS solutions, and contracting out. The focus is on the choice of approach to implementing a system solution, not the process for determining the specific IT solution. In other words, it is the "who" and not the "what" of the systems investment effort. While the characterization of these approaches follows findings from research and common perception, there are no absolutes in assessing approaches because each project possesses unique requirements and each organization has a unique composition. Prudent in-house development in one State with the hardware, software, and skilled staff to support web applications may not be a good decision in another State working in an environment void of the necessary technical infrastructure to support web applications.

1. In-House Development and Systems Integration
For the purposes of this guide, in-house development includes those development or systems integration efforts led by the State Agency with State staff, contract staff, or a combination. The efforts include enhancements to current systems, building new systems, and systems integration activities, which could include using a system transferred from another State or leveraging existing Agency or State applications. Traditionally, in-house development and systems integration follow a disciplined systems development life cycle and thus can be time-consuming. Chapter III, Section B discusses the development lifecycle in more detail.

Agencies typically embrace this approach with the resources, time, and expertise to perform custom development for systems that are not generic in functionality, and therefore not available as COTS products in the marketplace. Given the strain on State and Agency budgets and the dynamic nature of public policy, there are almost always competing demands for in-house development resources that have to support both new development and maintenance activities. For this reason, it is often difficult for child care projects without any significant, dedicated technical resources to move forward with in-house efforts requiring significant new functionality.

Another option is the transfer and integration of another State's system, which is available in the public domain. The significant variance in IT infrastructure, program policies, and business processes across the States makes such transfer a complicated endeavor, needing careful analysis before pursuit.

As more States adopt an SOA, however, there may be more opportunities for smaller, more discrete web services to be transferred successfully from one State to another or, possibly, for one State to use another's web service as part of its own set of automated processes that support the prevention or identification of improper payments. For example, if one State developed a data-brokering web service that queried a third-party employment verification service (that used real-time

employment and wage data), other States could leverage this development effort for their child care programs.

The following table describes the advantages, challenges, and key considerations related to in-house development.

Table 1 – In-house Development and Integration

Advantages	Challenges	Key Considerations
• The ability to meet unique requirements not found in COTS products • Greater control over project resources and timelines • Little to no learning curve about the existing technical environment • The ability to leverage existing technology and human capital assets, including code, hardware, software, and current system knowledge • The ability to control software improvements • The ability to leverage core competencies, if building on existing system functionality supported by existing staff • Avoiding dependence on and recurring financial obligation to an outside vendor • State ownership of the programming code used in the development of the application	• Requires IT personnel that may be needed to support other development or maintenance tasks • Acquiring and retaining staff with the appropriate skills to support the solution, particularly as States move to web-based applications • High overhead costs • Time consuming commitment for key personnel • Successfully developing an application that meets functional requirements and good usability within the short time frames often imposed on State Agency IT projects • If building on older platforms, increased cost to migrate to newer technology (hardware, software) because additional functionality is built on the older platforms • A solution with poor quality or high cost because many human service Agencies do not have IT development, systems integration, and maintenance as a core competency • Longer time to implementation	• Has a total cost of ownership analysis been done to determine the ongoing commitment to support this development? • Does the development staff possess the necessary skills and experience to develop and support this solution? • Has the alternatives analysis examined COTS solutions and open-source solutions to determine whether alternative approaches may meet the business needs? • Does the internal development approach fit with the strategic business/service and technical direction of the Agency and State? In particular, does building on the existing infrastructure make it more difficult to migrate to a newer or preferred architecture? • Are usability standards included in the system design and development? • Is usability testing part of the testing process?

2. Commercial Off-the-Shelf Systems
COTS systems are developed commercially and then tailored to specific uses, some times with little customization. COTS products exist for many common business processes used by child care programs. Examples of these processes include reporting, data warehouse for analysis of program data, invoice and payment systems to facilitate payment to providers or participants, claims processing to assist in recouping overpayments, and content management systems that enable State-sponsored Web sites, and Intranet sites to more easily keep program information up to date. Typically, COTS products can be integrated into an organization's environment by different vendors or qualified individuals (which can include State staff), not only by the COTS product owner. The level of customization required to make a COTS application work successfully within the State's environment can vary considerably based on the COTS product and the State's technical environment. If considerable customization is necessary, a State should carefully compare the cost of adopting the COTS application against in-house development or contracting out to a third party for systems development.

Even with the many advantages of using a COTS solution, each State needs to determine whether this approach aligns with its technical and business direction. A State also needs to consider training, licensing, system upgrades, and service agreements when analyzing this technical approach.

Enterprise framework COTS solutions have emerged in the human service arena in the last decade. These products provide certain functionality out of the box, but they enable the user to customize the application without needing to make any changes to the underlying code. These products typically provide eligibility, case management, reporting, accounting, and vendor management functions, all of which can be customized by the State business analyst or program staff. Although purchased as COTS products, framework solutions offer some of the advantages of in-house development, including the ability to customize the application. States that purchase a COTS framework application or any other COTS product must dedicate resources for its maintenance.

The following table describes the advantages, challenges, and key considerations related to using COTS products.

Table 2 – Using COTS Products

Advantages	Challenges	Key Considerations
• Shorter time frame for implementation • Use of a proven technology that has been thoroughly tested • Availability of outside technical expertise • Easier to define costs	• Compatibility with current State IT infrastructure • Recurring license fees • Limited or no ability to customize the application • Limited or no control over software improvements • Long-term reliance on	• Does the solution meet the identified business needs? • What changes, if any, does the State need to make to the COTS product and at what cost? • Do the necessary hardware and software

Advantages	Challenges	Key Considerations
because they are negotiated as part of the contract • Software updates by the vendor, who has an incentive to continuously improve the product • Lower price than in-house development because development costs are recouped across multiple product sales • Minimal State IT personnel required for ongoing operations	vendor support • Specific hardware or software requirements • Inability to leverage the product for other programs or business processes without additional cost (no State ownership of the code)	reside within the State's technical environment? If not, what is the cost of acquisition and use? • Has the State identified and vetted the changes to the existing business/service process by the appropriate stakeholders, including the end users? • Did the alternatives analysis examine whether available open-source software may provide the same or similar functionality at no software acquisition cost? • Can the Agency commit to the recurring license fees and other recurring support costs? • Once the State purchases the application, who will support the application?

3. Contracting

In addition to in-house development and the purchase and integration of COTS products, many State Agencies consider contracting development to a third party. In the human services field, this practice has been common for the State Automated Child Welfare Information System (SACWIS), child support, benefit determination, and case management systems. Variations exist, including contracting a third party to build a customized system residing within the Agency's environment or purchasing the services of an Application Service Provider (ASP) that would develop and host a solution.

Agencies often consider contracting when their internal development staff is fully engaged on other projects or when moving to a different technical environment in which their current staff members do not have the requisite skills and experience. Additionally, some Agencies recognize that IT development and support are outside their core competency and choose to contract most or all their IT development and support needs. They use Agency business analysts, contract managers, and project management staff to oversee contracts with third-party vendors.

The following table describes the advantages, challenges, and key considerations related to contracting.

Table 3 – Contracting

Advantages	Challenges	Key Considerations
• Access to staff with the appropriate technical skills and experience • The ability to move to a new technical environment with less State staff turnover or retraining because the contractor's technical staff perform the system development and maintenance function instead of State staff • Greater control over project schedule because contractor resources may be more flexible than State resources • Reduced likelihood that competing demands could take away project resources because of the contractual commitment of resources • Possible cost savings by substituting internal development and maintenance costs with a COTS application or a potentially more efficient development process • Shared project risk—some risk and liability assumed by contractor • Frees Agency staff to focus on other high-priority needs and tasks	• Time and cost of procurement • Requires properly scoped contracts to avoid schedule and cost overruns (Chapter III, Section B offers more discussion on this point) • Validating that contract staff members have sufficient program knowledge • Flexibility and ability to accommodate changing program regulations, policies, and processes without expensive and time-consuming change orders • Loss of organizational competencies if development occurs outside the Agency because no State staff work on the application • Dependence on a third-party contractor that may not have the same organizational goals and mission and thus may be more focused on meeting their business and profit objectives than meeting the Agency's service objectives • Difficulty in communicating program mission, goals, and service requirements to contract technical staff	• Is there at least one supplier available to perform the scope of work? • Is the Agency confident that the chosen vendor has the capacity to meet the contract deliverable? Is the vendor stable enough for the State to feel confident they will be in business for the life of the contract? • Does the Agency have the expertise to develop and evaluate a Request for Proposal (RFP) that adequately scopes the project? • Is there a good communications plan in place between the Agency and vendor? • Are the contract deliverables and deadlines realistic, including any deadlines for State staff to review and sign off on work products? • Has human resources been involved in the decision-making process to ensure that contracting fits with the Agency's plans for developing and maintaining competencies within the organization? • If layoffs are part of the formula for implementation, has the State accounted for full cost of severance?

Advantages	Challenges	Key Considerations
		• If significant program knowledge is required, does the contractor possess this knowledge or would Agency staff members be required to provide this expertise? • Does the Agency have a project manager qualified to oversee an IT project?

These three approaches to IT investment are not mutually exclusive. The following descriptions demonstrate blended approaches using two or more of these approaches. A State may choose both a COTS product and a third-party contractor to perform the integration and maintenance of the system.

A State may choose a COTS product, which is an enterprise framework technology, and then train State staff to configure that product to meet the business and service needs of the child care program. Enterprise framework technologies in the human services arena offer the ability of users to configure the software to support many core functions including eligibility determination, case management, reporting, financial management, workflow management, and the development of on-line forms and web pages. Business analysts configure the software and do not require technical programmers.

A State may choose to bring in a third-party to plan and implement its systems architecture, which may include a combination of current applications developed in-house, COTS applications, and web services developed in-house or available from outside entities. This option may be more frequent in States with a SOA.

C. Identifying and Evaluating Alternatives
To move forward with a prudent decision on which technical path to pursue, States may consider conducting both a strategic analysis and an alternatives analysis. A strategic analysis can help States identify potential and reasonable alternatives, and an alternatives analysis can help States assess those alternatives based on a selection of key criteria. Appendix 2 offers a graphic representation of these processes.

1. Strategic Analysis
For the purposes of this guide, the strategic analysis begins by clearly defining user requirements and then performing several key analyses that can help States identify potential technology solutions. The following list describes these activities:

a. Developing User Requirements
Going through a structured, disciplined process to identify needs and develop clear user requirements can assist States in evaluating alternatives. For example, if

one requirement is using mobile devices to determine eligibility for child care at off-site locations, there may be a greater likelihood that the State needs to draw on the expertise of an outside vendor with that core competency. If the user requirement is having an eligibility system available via the Internet, which did not specify a need for mobile computing functionality, then a decision to use in-house development staff may be more likely. Chapter III, Section B provides guidance on developing user requirements.

b. Performing Strategic Plan Analysis
The Agency and State's programmatic and technical strategic plans can provide important insight into current and future plans for service delivery and technical support and bring to light opportunities for enterprise investment and constraints. For example, if a State is moving forward with one of the card technologies to support employee payroll; Temporary Assistance for Needy Families (TANF) cash assistance; and/or the Women, Infants, and Children (WIC) program, there may be an opportunity to leverage staff and resources to implement a card-based attendance tracking, reporting, and payment system for subsidized child care. In addition to surfacing opportunities to leverage existing Agency or State's investments for the subsidized child care program, strategic plans may introduce important constraints, such as the movement away from a particular, outdated software or hardware.

c. Taking Inventory of the Technical Environment
Taking an inventory of the technical environment (hardware and software) and technical staff skill sets can help decision makers in assessing technical approaches. For example, if a State Agency does not possess the hardware, software, and staff with technical skills to develop and support a web-based application, then a web-based solution may require significant internal investment or a decision to contract with a vendor.

d. Identifying Budget Constraints
Understanding the scope of financial resources available for the initial development (system creation and testing) and maintenance can significantly impact the decision on how to proceed. Regardless of the chosen direction, all projects have ongoing costs. Typically, over 70% of costs for a software project occur after fully developing a system.

e. Performing a Baseline Study
Identifying the practices of other State Agencies responsible for the subsidized child care program and looking at comparable industries can help States generate a list of possible alternatives. While Chapter III, Section B discusses how to select these practices, States also could query their Department of Health and Human Services (HHS) regional office staff or national associations for this information or conduct a simple survey themselves. Additionally, States could conduct a Request for Information (RFI) or hold a pre-bid conference of prospective bidders

to help identify potential solutions and technical approaches. Chapter III, Section C discusses these last two items in greater detail.

2. Alternatives Analysis

Once a strategic analysis is complete and alternatives identified, States may wish to conduct an alternatives analysis. An alternatives analysis can include a number of criteria, and States may wish to develop their own list of criteria based on their needs and priorities. A list of possible criteria and an explanation for each follows. Typically, a team performs an alternatives analysis. The team typically consists of staff members that possess program knowledge, financial analysis skills, and those qualified to offer legal opinions related to system ownership and implementation. States should consider additional team members with the knowledge and skills to perform the analyses listed below.

A decision matrix with alternatives on the left column and key evaluation criteria across the top can be a helpful tool to summarize and visualize the results of these many analyses. A sample decision matrix is contained in Appendix 3.

a. Legal Analysis

It may be prudent for States to ensure that the approach meets all legal requirements, for example, using appropriate measures to safeguard personally identifiable information and complying with software ownership regulations related to the use of public funds for software development.

b. Political Feasibility and Executive Sponsorship

Many technically successful projects fail because they do not meet the needs of key stakeholders or diverge from the stated direction of Agency leadership. Including key stakeholders–senior management and end users–in the alternatives analysis helps States avoid this mistake.

c. Technical Analysis

A State must assess whether it can implement the technical approach within the Agency's current technical architecture (hardware, software, and staff skills) and whether the approach is consistent with the planned future technical architecture. For example, if the State chooses to adopt online card technology for all its State-sponsored services (e.g., Food Stamps, WIC, or TANF), can a smart-card solution to track time and attendance for the subsidized child care be included?

d. Usability Assessment

Usability refers to the ease with which users interface with the system. A user interface that is clear and simple can facilitate system adoption and contribute to its long-term success. A usability assessment typically includes a combination of comparing a system to specified design standards and then having end users interact with the system and offer their assessment.

e. Feasibility Analysis
Assessing feasibility at the beginning of the project enables States to make
prudent decisions. A typical feasibility analysis includes:

- Identifying Constraints - Assessing whether a solution fits within the
known constraints is an important component of a feasibility analysis. The
most common constraints are cost, time, and scope. Cost constraints refer
to the available resources for system development and maintenance. For
example, a great data-mining product that can profile cases and determine
which are at greatest risk for resulting in an improper payment may be
available, but the Agency must have adequate funds for its acquisition.
Agencies also may have specific time constraints stemming from
requirements related to State or Federal legislation or from decisions made
by Agency leadership. For example, an Agency may be able to develop a
solution or integrate a system that meets the stated user requirements, but
the timeframe for this development may exceed a requirement set forth in
legislation. Solutions also must meet the stated scope of a project. In some
instances, a COTS product may meet many but not all of the stated
requirements. In these cases, Agencies need to decide whether the solution
is acceptable.

- Assessing Cost-Effectiveness - This assessment includes estimating direct
costs, quantifying benefits, and evaluating the impact on existing systems
and business process. This kind of assessment typically includes one-time
costs (e.g., hardware, software, and data conversion) and recurring costs
for enhancements and customer support.

- Performing a Risk Analysis - This analysis includes assessing available
human resources to ensure that the appropriate skills and experience are in
place, determining whether the user requirements are thorough and well
constructed, assessing the efficacy of the project management procedures,
determining whether the project includes a realistic estimate of cost and
schedule, and identifying the existence of contingency plans.

- Calculating Return on Investment (ROI) over a system's life cycle - An
ROI calculation includes costs, savings, benefits, and the ability to meet
strategic objectives. This kind of assessment also includes one-time costs
(e.g., hardware, software, and data conversion) and recurring costs for
enhancements and customer support. An ROI calculation also should
include benefits such as reduced staff time for performing a particular
work function(s); cost savings from fewer improper payments; and other
benefits that are not easily quantifiable, such as an increase in public trust
and an increase in customer satisfaction.

D. Conclusion
As initial steps in considering alternative IT investment approaches, States may be wise
to clearly define their needs and conduct a strategic analysis, including their direction,
infrastructure, and the availability of COTS products and open-source solutions. These
analyses can help States to align their investment decision with their Agency's and
State's future programmatic and technical direction, as well as help identify other

existing information systems investments by other programs and State Agencies (within or outside their State) that may be leveraged, saving time and money.

The next step in the decision process is performing an alternatives analysis to compare the efficacy of choosing in-house development, integrating available COTS products, or contracting. The best approach depends upon a variety of factors, including the existing technical infrastructure, staff skills and experience, availability of funds, user requirements, legal mandates, and executive sponsorship. Given the myriad of considerations that go into a decision, a number of formal analyses and clear criteria for decision making can help child care administrators make a good decision.

The three IT investment paths are different, and each has distinct advantages and challenges. Additionally, the three approaches are not exclusive, and States may consider hybrid approaches that maximize the advantages of each approach and attempt to mitigate the challenges. As States embrace SOA development, the opportunities for leveraging existing services developed by other organizations increase as will the ease of combining development efforts of internal staff with COTS products and the services provided by third-party contractors. For example, many State agencies and local governments in Virginia could benefit by using SPIDeR.

Once a State makes a decision on alternative approaches, States then need to find the best means to procure their solution(s). Chapter III provides information about the procurement process.

III. GUIDANCE FOR PROCURING INFORMATION TECHNOLOGY PRODUCTS AND SERVICES

A. Introduction
Once a State chooses an IT investment approach, State Agencies must then secure the products and services necessary to achieve their objectives. For those State administrators who decide to purchase information technology products or services, this chapter will provide guidance on the procurement process which sometimes can seem daunting in light of fiscal constraints; Agency and State procurement policies; and the myriad of competing opinions about what products, services, and providers to choose. In general, program managers and staff understand programs, not technology, and technology managers and staff do not always understand the business and service needs of the program.

This chapter presents a set of concepts, processes, and ideas that a State can use in conjunction with the existing procedures required by the State Agency. Specifically, this chapter outlines: the steps a State can take to prepare for procurement, an overview of Request for Proposals (RFPs), innovative procurement practices, factors that can drive up the cost of bids, and key considerations for a successful procurement.

B. Preparing for a Procurement
State Agencies must adequately prepare for the procurement of IT products and services in order to mitigate risk and avoid cost overruns. The following section discusses important steps to take to prepare for procurement, including defining the business or service needs, identifying solutions and constraints, and deciding on the most appropriate procurement method.

1. Defining Business and Service Needs
The first and most important step in the procurement process is defining and clearly stating the business and service needs. Even if the State executes all other aspects of the procurement process flawlessly, misstated needs can lead to a less than desirable outcome. The development of information technology products follows a disciplined and structured path that begins with a clear definition of business and service needs. This needs gathering and assessment effort requires involvement by many different stakeholders to ensure meeting all of the States' needs. Once the team articulates and prioritizes its requirements, a formal "statement of needs" document can be created and referenced throughout the development effort. A useful needs statement focuses on desired outcomes rather than technical requirements, incorporates both short- and long-term goals for the requested solution, and defines the criteria on which a State bases its acceptance or rejection.

The next step in the process is developing user requirements, which transform business objectives into statements that describe a system condition or capability. System design follows the user requirements phase. After the system design phase, product development occurs, followed by testing and implementation. The industry commonly refers to the above phases the system development life cycle.

Taking adequate time to define the business or service needs pays off in the long run. The cost of making changes increases as the project moves through the system development life cycle. For example, adding a new requirement (e.g., adding functionality to the eligibility determination system to determine whether an applicant is currently receiving Temporary Assistance for Needy Families [TANF] or Food Stamps) after system development and testing is significantly more expensive than making the change to the user requirements at the beginning. Changing a requirements document may take minutes or at most hours, while changing the systems design document, software code, test scripts, and user manuals could take days or weeks.

Involving multiple stakeholders in a structured needs assessment process facilitates the development of an accurate and comprehensive statement of needs. A stakeholder is any person or organization interested in or impacted by the project. In general, it is better to cast a wide net, include as many stakeholders as possible, and then prioritize needs. For projects that support child care subsidy or quality programs, key stakeholders include at least the following: end users (e.g., local child care staff, child care providers, financial management staff, subsidy recipients, and fraud workers), State program and policy staff, IT business analysts, and an information security officer.

Effective methodologies for assessing needs include Joint Application Design (JAD) sessions, structured interviews, job shadowing, prototype review and comment, and surveys. JAD sessions should be led by an experienced, skilled facilitator, and include as many stakeholders as possible. While it is important to include representatives from as many stakeholder groups as possible, it is not necessary (and often not desirable) to hold JAD sessions with all stakeholders participating at the same time. For large projects or those that have many stakeholders, it is common to run multiple JAD sessions.

Structured interviews may be effective for senior management, including the Chief Information Officer (CIO), Division Director, and Commissioner/Secretary, to help clarify their expectations and identify any other planned policy, program, or enterprise technology changes that may affect the design and implementation of the system.

Survey research helps capture the magnitude of opinion, something not captured by having representatives participate in a JAD session. For example, a local child care worker representative participating in a JAD session may express a need unique to the experience of her Agency. A survey of all local child care workers across the State may reveal that the articulated need is not universal.

When defining needs, it is important to limit the scope to articulating the specific business objectives and avoid making decisions about how to meet those objectives. For example, there may be a need to track time and attendance of each child in

subsidized child care. When expressing this need, it would not be appropriate to name a solution such as a web portal for providers to record time and attendance or a card system for use by parents or providers.

2. Identifying Solutions and Constraints

To address the objectives outlined in the statement of needs, it is important to understand the current business/service process, the availability of solutions in the marketplace, and the technical and service direction of the Agency and State. Having a firm grasp of these factors enables the identification of viable options for technical solutions to meet the stated business objectives and significant constraints related to the implementation of a technical solution.

When employing technology to make a change from the current way of doing business or provide services, it is important to clearly understand and document the current business or service process. As defined by the U.S. Government Accountability Office (GAO), a business or service process is "a collection of related, structured activities - a chain of events - which produce a specific service or product for a particular customer or customers." The current process is often called the "as-is" model, and the new process created by the implementation of new policies and/or new technology, is typically referred to as the "to-be" model. These models can be as simple as narrative descriptions or as sophisticated as workflow diagrams built using modeling software.

With program implementation at the local level and policy development and solicitation for IT products and services occurring at the State level, it is possible that State IT and program staff members involved in the procurement of technology do not understand all the particularities of program implementation. This understanding can be enhanced by a business analyst job shadowing those directly performing the services being impacted by the IT procurement or by directly involving practitioners in developing the as-is model.

Once a clear understanding of the current process exists, it becomes easier to define exactly what changes need to occur and identify solutions that can enable those changes. For example, many States intend to automate the eligibility determination for subsidized child care to reduce the number of incorrect calculations. Documenting the current steps for determining eligibility enables the State to develop a more complete set of requirements for an automated tool to perform the eligibility calculation.

Many ways exist to identify potential technical solutions to help an Agency move from its as-is model to its to-be model, including research and discussion about solutions used in other States, a dialogue with vendors, and issuing a Request for Information (RFI).

Agencies can learn about solutions used in other States through direct contact or through various organizations likely to have this information, such as the Federal

government, the American Public Human Services Association (APHSA), and the National Governors Association. Although programs, such as subsidized child care, possess unique policies and requirements, the core processes (eligibility, case management, payment, reporting, quality assurance, improper payment identification, and resolution) are similar across many other programs, including cash assistance, Food Stamps, and Medicaid, making it important to look at solutions used by multiple programs, not simply those funded by CCDF. In addition, open communication with the vendor community can provide valuable information and insight about possible solutions and providers.

Many States have restrictive policies about communication with the vendors; however, finding a legal manner to engage in this dialogue can be invaluable. Some States issue an RFI or a draft RFP to gather information in a structured, written process. An RFI obtains information from prospective bidders before the issuance of a RFP. This information can help States identify possible solutions as well as potential bidders. Other States conduct pre-bid conferences before finalizing their RFP to hold an open conversation with vendors about different approaches to solving the business/service needs.

Understanding the current and proposed programmatic and technical environment of both the Agency and State helps in identifying opportunities and constraints. This assessment can help determine whether the business/service needs can be met by existing or planned applications or service contracts. For example, some States have an active Food Stamp Program Electronic Benefits Transfer (EBT) system supported by a third-party vendor with the capability to deploy multiple programs on a single EBT card. The State personnel and contractors involved in Food Stamp EBT would be a logical starting point for exploring child care programs interested in using card technology to track time and attendance and facilitate payment.

In addition to identifying potential opportunities, this assessment can clarify important technical and financial constraints. Most States maintain IT standards for hardware, software, information security, and web presence look and feel. Adherence to these standards should be included in the solicitation. For example, a State's child care subsidy program wishes to implement a new web-based process for child care providers to record time and attendance. It is likely that States cannot develop this web presence in isolation; instead, the web pages will likely need to meet the current Agency and State standards for look and feel including navigation and color schemes as well as meeting certain technical standards including accessibility standards for individuals with disabilities.

3. Deciding on the Most Appropriate Procurement Method
After identifying business/service needs and potential technical solutions, a State must decide how to proceed with acquiring a solution. Keeping the advantages and challenges of different investment approaches discussed in the previous chapter may be helpful for State administrators as they make this important decision. Options include:

- *Continue the current business process and maintain operations in the same technical environment, making modest adjustments to business processes and small, incremental changes to the existing system.* For example, a State may wish to place additional edits or custom fields in the child care subsidy payment system to ensure that the vendor is still on an approved vendor list or ensure that no payments went to a different vendor for services to the same child during the same time period. Another example is matching data from existing data sources, such as payment data and enrollment data, to identify improper payments made to vendors after a case is closed or a family switched child care providers. States can usually make these types of system modifications to an existing system and do not require the acquisition of new software. Chapter II, Section B-1 discusses the in-house approach in more depth.
- *Implement a new technical solution to meet the business objectives through a contract modification or license upgrade from current vendor(s).* For example, if a State developed and maintained its benefits eligibility determination and case management system for Food Stamps and/or TANF, by a third-party vendor, the Agency could do a contract modification for the vendor to add subsidized child care eligibility determination to the system. If a State acquires a software license upgrade from the current vendor to implement a new technical solution and the software requires a license for each user, then the State would need to purchase additional licenses for all child care staff using the system.
- *Purchase a COTS product through a State-approved vendor/product list or RFP process.* For example, an Agency may purchase a data warehousing and business intelligence product to run reports that match data from different sources, such as enrollment data and payment data. Chapter II, Section B-2 discusses the COTS approach in more depth.
- *Acquire and use internal or contract resources to implement system functionality available in the public domain as open-source software.* Any system developed with Federal funds would be available in the public domain for use, without charge, by a State or other entity. For example, if one State developed (in house) an online training program for child care staff or providers, another State could use and modify this system at no cost for its own purposes. This approach makes sense when implementation can occur without significant modifications and the Agency or State has internal staff with the skills to support it. Chapter II, Section B-1 discusses the in-house approach in more depth.
- *Proceed with a RFP planning process, accounting for the previously identified business/service needs, solution options, and financial and technical constraints.* For example, a State may go out to bid for a system that uses a swipe card to track time and attendance and trigger payment to vendors.
- *Pursue another procurement process allowable under State law.* For example, the Commonwealth of Virginia has purchased IT services through their Public-Private Education Facilities and Infrastructure Act (PPEA), which

allows for unsolicited bids and ongoing discovery and negotiation with vendors to provide services, including IT services. If a State decides to enter into a contract with a third party, States need to consider those RFP elements that can affect the number of prospective bidders. In general, the more bidders, the better in a competitive procurement. If the dollar amount of the request is small, then fewer contractors are likely to bid. Additionally, the State may receive fewer bids if the request includes a high performance bond in the range of a million dollars or more. Smaller companies may not have the resources for a performance bond this high, while larger companies may have to pick and choose among active procurements because they may not be able to support multiple million dollar or more performance bonds. Lengthening the time period for the contract can increase its value and thus the total number of bidders. Additionally, a longer-term contract or one with multiyear renewal options provides the opportunity for a partnership to develop between the Agency and vendor.

States must balance product or service commodities purchased from State-approved lists (as opposed to a RFP) and offers of discounts based on multiyear commitments against the pace of innovation in the sector. For example, telecommunications costs continue to drop, making long-term contracts at fixed rates less attractive.

C. Developing and Evaluating a Request for Proposal

Many States are seeking to add significant, new information systems functionality to support the prevention, identification, and rectification of improper payments in their subsidized child care programs. This type of significant investment typically requires the use of a Request for Proposal (RFP), a written solicitation that conveys to vendors a requirement for materials or services that the purchaser intends to provide. Given this likelihood, the following section offers in-depth guidance for procuring IT goods and services through the RFP process, including an overview of RFPs, a list of key success factors, and a discussion of common mistakes.

1. RFP Overview

A Request for Proposal (RFP) is a written solicitation that conveys to vendors a requirement for materials or services that the State intends to purchase. Many States use a traditional RFP process to solicit IT solutions from vendors and select the proposal that best maximizes the value of State and Federal dollars. Though often time-consuming and labor-intensive, the RFP continues to provide States with the most straightforward process for the acquisition of large-scale IT purchases. Often viewed as a restrictive emblem of government bureaucracy, when carefully articulated and expedited, the RFP offers vendors and solicitors a great deal of flexibility and fairness.

Two strengths of the RFP process are its procedural clarity and flexibility in soliciting innovative, value-added solutions to complex business/service needs and problems. Procedural clarity is especially important in the current, sometimes caustic, public procurement environment. Additionally, today's benefit systems, including those that

support child care programs, often involve complex and varied technical and design aspects, many of which are essential to the functionality of business/service processes and cannot be decided on a purely objective cost basis. The RFP and its associated process offer a structured manner in which vendors and the State can work to understand and propose solutions to these complex requirements and avoid low bids that result in unsuccessful implementations.

Successful RFPs are those documents that:
- Contain the input of relevant stakeholders;
- Provide a well-conceived vision of the client's desired outcome and business needs; and
- Define the criteria on which the State bases its acceptance or rejection of the vendor's proposal.

2. Key Success Factors
Each State must follow its own clearly articulated RFP process. Within that existing framework, the success or failure of a RFP depends on a number of key success factors. The following section discusses many of those factors and includes guidance on establishing an effective team, developing a plan, defining requirements, and using components of a successful RFP.

a. Establishing a RFP Team
Putting together the right team is one of the initial and most important steps in the RFP process. Drawing on the appropriate individuals that represent key stakeholder groups helps establish buy-in of key stakeholders, especially front-line workers or other users of the system. Additionally, benefit service systems are notoriously complex, as are the issues related to the acquisition of any new IT architecture. To address this complexity, the ideal RFP team would include a procurement specialist, a policy representative, an end user, and an IT business analyst. Depending on the nature of the need and potential solutions, other key stakeholders need to be involved at different points in the process, including legal counsel, budget representatives, and more specialized IT staff members, such as a security officer, systems architect, and database administrator.

The following are other considerations for the RFP team:
- One or more team members should be effective leaders and posses strong program management skills.
- Team members should be multifunctional and have abilities to write, analyze, and communicate.
- Team members should have experience in RFP development and IT development.
- Team members should possess relevant program knowledge and technical knowledge from all the programs affected by the procurement.
- Adequate training in writing successful RFPs and in evaluating responses is a must for team members.

- To avoid time delays, States should develop a list of alternates to stand in for members who cannot attend meetings.
- States should develop a preferred method of communication; many States are effectively using a shared workspace that includes project documents, schedule, and online discussion capabilities.

b. Developing a Procurement Management Plan

Once the team is established and trained, the first order of business is creating a procurement management plan that describes all the phases and activities involved in the procurement process. The plan keeps the RFP team focused and prevents critical items from being overlooked and deliverable dates from being missed. Having the team develop the plan as one of its first activities engenders ownership among team members and helps identify the full breadth of necessary activities.

c. Establishing an Online RFP Document Library

Developing a library of governance documents enables team members to review, create, upload, check out, and modify documents. The library may retain some or all of the following resources:
- RFPs and responses;
- RFIs and responses;
- Project Plan Templates and copies of plans from past IT projects;
- Proposal Evaluations Criteria Templates;
- Procurement training courses;
- Blanket Purchase Agreements;
- Employee and citizen satisfaction surveys; and
- Statement of Needs.

d. Writing the RFP

Successful RFPs clearly and succinctly communicate the State's business needs, outline performance expectations, include only necessary technical specifications, and provide a balanced set of terms and conditions that mitigate risk without driving up the bid cost.

Once the RFP team understands the needs of end users through the methods described in the previous section, Preparing for Procurement, it should decide whether the solution is self-evident or the procurement should simply present the business need and desired outcome and then allow vendors to propose solutions. In most cases, RFPs should focus on desired outcomes rather than technical requirements, incorporate both short, and long-term goals for the requested solution, and define the criteria on which a State bases its acceptance or rejection.

By prioritizing desired outcomes over technical specifications, States leave respondents open to the exploration of cutting-edge or out-of-the box strategies as well as opening up the vendor pool. According to the National Association of State Chief Information Officers (NASCIO), States should find the balance

between specifications "that focus on what the desired outcome of procurement is and how the IT system must perform once implemented to satisfy the State's expectations." While it is permissible to attach an addendum to the RFP that includes requirements, States should be wary of providing too much information. Additionally, excessive detail can shift design responsibility to the State, which may allow a vendor to avoid liability for successful implementation of a State's faulty design requirements.

e. Establishing Acceptable Terms and Conditions

States typically use standard terms and conditions in their contracts. To the extent possible, sharing these terms or a draft of terms up front (instead of during the negotiation) helps vendors assess their risk and liability and more accurately account for these factors in their bid. Many States have mandatory terms and conditions that assign all or the majority of risk to the vendor as a means of safeguarding public funds. These limitations of liability (or unlimited liability) clauses often do not reflect the terms and conditions in similar contracts in the commercial sector, which share the risk among parties. For this reason, vendors are likely to pass along the cost of this risk to the State via their bid or choose not to bid at all.

The Information Technology Association of America (ITAA), NASCIO, and the National Association of State Procurement Officials have all published briefs discussing specific terms and conditions included in State contracts, which may limit the number of vendors choosing to bid on projects and drive up the cost of bids among vendors that choose to bid. The bibliography at the end of this chapter includes references to these briefs.

The terms and conditions include:
- Limitation-of-liability clauses (or unlimited liability);
- Intellectual property rights (IP) clauses;
- License rights clauses;
- Warranty and indemnification clauses; and
- Most-favored-customer pricing clauses.

3. Evaluation

States typically use a prescribed evaluation methodology that combines several elements, including cost, quality, references, and meeting performance bond and other threshold organizational requirements. The following section offers some important considerations related to the evaluation process, including a discussion about the use of the "best-value" concept instead of "best price."

States may consider the following recommendations to improve evaluations:
- Seek out referrals from current and past projects from the same subject area (child care and/or improper payments) that demonstrate the required qualifications. If the contract is of significant financial and programmatic

value, States may consider visiting a reference site to observe the product or service.

- Evaluate contractors' technical and management processes to ensure compliance with State and Agency policies and procedures.
- Assess applicants' organizational capacity to consider long-term consequences and risks. Purchasing a product or product license and IT services can be risky for any project, particularly large, multiyear projects.
- Carefully examine and qualify the personnel proposed for the project and determine if the vendor has committed the necessary management expertise and experience to successfully complete the project. Clarify vendor's contingency plans if critical resources become unavailable during the project.
- Plan for the long term intellectual property tradeoffs of any IT investment. Purchasing a COTS product may enable a State to achieve its business/service objectives more quickly, the State purchases a license to use the COTS, but the underlying code belongs to the company. Building processes on software licensed from a vendor is commonplace in State government, especially with the use of desktop applications. However, States need to be aware of the short- and long-term dependence on the product and the company that supports the product. Conversely, building custom applications or modifying applications available in the public domain can be costly and time-consuming.
- Oral briefings from the top few applicants offer an excellent opportunity to clarify unanswered questions in the proposal, gain exposure to the key personnel included in the proposal, test the knowledge of the key personnel, and observe a vendor demonstration of the proposed solution.
- Not all procurements result in an award. If the proposals do not meet the business/service needs, then a new approach or a new request may be necessary.

4. Best Value

The best-value concept has taken hold in many States as a better alternative than best price, particularly in the area of IT services. Unlike its antecedent best price, which means the lowest price at which a State can purchase goods or services, best value connotes a process for selecting the most advantageous solution by evaluating and comparing all relevant factors in addition to price.

Under this paradigm, a winning proposal may entail a higher price, but provide greater quality and benefits for the State. Best-value factors may include long-term project benefits, cost avoidance, increased productivity, maintenance and replacement costs, cost versus technical superiority tradeoffs, vendor support, and user satisfaction.

The following list describes several issues to consider when implementing a best-value approach:

- Evaluating best-value bids is more complicated than evaluating low-cost bids. Decision makers must make thoughtful decisions about the relative weight of different evaluation criteria. For example, what percentage of the overall

evaluation will the State base on cost, corporate qualifications, the technical approach, and understanding the business/service need?

- States need to make sure the data used to evaluate factors are reliable. Unless States clearly and carefully articulate evaluation standards, it can be easy to make subjective judgments. For example, do the number of hours spent on a project and the tasks within that project provide a more accurate accounting of the level of effort than the number of individuals and whether they are working full-time or part-time.
- States need to communicate the relevant factors that make up the evaluation criteria for a best-value bid to the vendor.
- The review team needs to be scrupulous in its use and documentation of rating factors. Inconsistent rating factors could lead to poor procurement choices and potential legal challenges that drive up cost and move projects off schedule.

5. Avoiding Common Mistakes
Many of the following tips are adapted from Karl M. Kapp's "Winning E-Learning Proposals: The Art of Development and Delivery." Avoiding these common mistakes can help States effectively procure the products and services necessary to meet their business/service objectives:

- *Poorly written or illogical content* - Despite their enormous importance, RFPs are notoriously poorly written. Vendors are more likely to bid on a RFP which is well written. In addition to standard writing procedures, such as using a technical editor, writers of RFPs may want to include diagrams, examples, and reference additional, available documents such as an Agency's strategic plan, descriptions of the existing technical environment, and a synthesis of the stakeholder needs.
- *Providing too little detail* - Vendors cannot help meet business/service needs or solve problems if there is too little information about the current business process, technological infrastructure, or proposed budget. States should avoid providing unnecessary detail regarding solution design. Sharing information about the current technical environment helps vendors understand the gap between current operations and their proposed solution. Clearly stating budget constraints helps vendors to assess and propose viable solutions.
- *Lack of imagination* - The RFP process is a good time to brainstorm internally and think outside of the box. As a Service-Oriented Architecture (SOA) approach gains hold among States, more RFPs are calling for web-based services that can be used across the enterprise by multiple programs. Additionally, the advent of framework technology creates new possibilities to leverage a single software product across multiple programs. Looking to the experience and solutions used in other industries with similar functions may produce new, innovative ideas.
- *Poorly scoped* – Poorly scoped RFPs typically overstate or understate the business/service needs and the level of effort. Discussing lessons learned with other States can help a State avoid this problem.
- *Failing to account for business needs* – If the RFP does not clearly include the statement of business needs and the desired outcomes, the quality of all other

aspects of the RFP process does not matter. If vendors know the business needs driving your RFP, they can leverage their knowledge to help identify a solution.

- *Overly strict interpretation of the "Cone of Silence"* – Many States maintain strict requirements related to interaction between State personnel and vendors, particularly during the RFP process. This is often referred to as the "Cone of Silence." Vendors possess great knowledge of industry practices and technological capabilities that can be valuable to the RFP team in understanding the external environment and identifying potential options. Finding acceptable ways for the RFP Team to have access to this knowledge of vendors could significantly benefit the project. Options for acceptable interaction with venders include: issuing a Request for Information (RFI), issuing a draft RFP for comment, holding a pre-bid conference, and providing time for "discovery" for vendors to interview and observe State and local staff so that they better understand the business processes and challenges.

D. Innovative Procurement Practices

This section examines some promising and innovative procurement practices, including electronic bidding systems, commoditization of certain IT products and services, solutions-based solicitation, and performance-based contracting.

1. Procurement Solutions

Many States have implemented web-based procurement systems enabling vendors to browse IT orders and submit bids. The tool is proving to be an important strategy for many States. States have achieved savings through the competitive bid process and the automation of processes formerly dependent on paper, mail, and staff resources. For example, Wisconsin implemented the first fully electronic, Internet-based bidding service. The service handled $4 billion dollars in contracts in 2001. This solution enabled the State to eliminate paperwork and save money. In fact, States tout one-stop shopping capabilities for their staff and bidders because the site serves as the State's business hub to display and post new project opportunities. This practice increases the bidding pool and competition.

2. Commoditization of IT Products and Services

As standards for hardware, software, and telecommunications continue to evolve, more products and services can be purchased as commodities, enabling a simpler, more efficient procurement process. This process is similar to the purchase of office products from State-approved product lists. Purchasing IT products and services from a list of approved vendors and previously negotiated prices can, under the right circumstances, save significant time and money by avoiding a more traditional bid process.

Similar to hardware and software, States now maintain a list of qualified and approved vendors with set prices in order to facilitate the rapid and efficient acquisition of IT services.

3. Solutions-Based Solicitation
Some solicitations have embraced a procurement approach that simply articulates the problem or challenge and asks vendors to propose one or more solutions. This flexible and simplified process enables vendors to analyze the business problem and propose solutions that fit their core capabilities.

This approach reduces the overall time, and cost of the RFP process and can lead to more creative, innovative proposed solutions. States spend scarce resources exploring the solutions presented in the proposals instead of writing the RFP.

The former Chief Information Officer (CIO) of Michigan states the solicitation process can be achieved in five steps:
- Determine business problem;
- Have vendors identify possible solutions;
- Pick the best solution;
- Purchase the right solutions; and
- Document the decision.

4. Performance-Based Contracting
Performance-based contracting vehicles are emerging around the country. Share in Savings (SIS) contracts require all or most of the initial systems development and implementation investment to be borne by the vendor, and the savings and possibly the revenue from that investment is shared between the State and the vendor for a specified period of time. SIS contracts allow States to implement and expand their technology with little up-front investment. States then make payments to the vendors based on sharing future savings and revenue or meeting particular project milestones.

If structured properly, this approach can provide incentives to contractors to become more effective and efficient by making them more of a partner with the State. States can reduce their capital outlay and risk by sharing that risk with the contractor. Embracing this approach can foster a true partnership between the State and contractor. For example, if an Agency runs an older legacy system on a mainframe hosted by a third party, which charges the Agency on a per-transaction basis, then the operation for this fixed-capital investment may be significant. An SIS contract could be developed where a third party develops a next-generation, web-based system to replace the existing legacy system and agrees to absorb the cost of development and implementation in return for a share of the future savings for a period of years. This would benefit both the Agency, which gets a better system with no out-of-pocket costs, and the contractor, who makes money in the long run.

E. Driving Up the Cost of Bids
This section outlines different factors that can drive up the cost of bids. With careful planning, States can avoid each of the following factors:

- *Unclear business needs or unclear deliverables* – Vendors build greater contingency into their bids to mitigate the risk associated with unclear business needs and/or unclear deliverables.
- *Unlimited liability terms* – The industry standard for liability of IT services is shared liability. Language requiring unlimited liability drives up the cost of the bid because the vendor must cover their risk.
- *Deliverable-based payment schedules* – If payment schedules are not based on a good estimate of the costs associated with deliverables, then vendors may end up fronting costs, and the cost of this "loan" to States is accounted for in the bid.
- *Hiring a separate Independent Verification and Validation (IV&V) vendor* – For contracts requiring development, many States hire independent vendors to do verification and validation to ensure quality. In addition, most sophisticated vendors have their own V&V process as part of their normal course of doing business. If a State does not hire an independent vendor, the IV & V needs to be included in the contract with the development vendor. Although there is additional cost, use of an IV&V vendor offers an additional level of independence.
- *Unnecessary constraints* – Unnecessary constraints can increase costs, precluding vendors from using innovative approaches to meeting the business need. Unless the service or product purchased is narrow in scope, it is better to state the business/service need and see how the vendor responds than presume a solution and place multiple constraints on the bid.
- *Cost-plus contracts* – Cost-plus contracts do not offer vendors an incentive to hold down their costs, and they require substantial auditing by the government. Fixed-price performance contracts shift risk to the vendor.

F. Summary

As States research and plan approaches to preventing, identifying, and redressing improper payments in their subsidized child care programs, they are often faced with the challenge of upgrading their existing IT infrastructure or acquiring new IT products and services. With limited funding and the high cost and complex nature of many IT projects, it is important for States to make prudent procurement decisions to ensure that they meet business and service objectives on time and within budget.

The most important tasks in any procurement process are clearly defining the business needs and stating the desired outcomes or problem to solve. Defining needs early in the process saves cost in every phase of the project life cycle.

In their procurement, States can choose to either specify the desired solution or articulate the problem and allow vendors to bid one or more solutions. To make this important decision, project team members must understand the current business processes and technical environment, research promising practices in other States and industries, prioritize the business requirements, and identify technical and budget constraints.

If the State cannot purchase the service or product from a State-approved vendor list, a RFP is the most likely procurement method. Key successful factors to consider when

developing a successful RFP include, establishing a project team that includes some key stakeholders, developing a procurement management plan, and putting together a RFP library for use by the team and prospective bidders.

Emerging IT applications that support improper payment activities for the child care program provides incentives for States to explore solutions with the vendor community. This dialogue can be fostered through an RFI, issuing draft RFPs for comment, pre-bid meetings, product demonstrations, and oral presentations.

In constructing the RFP, States should be mindful of the following common mistakes:

- Poorly written or illogical content;
- Providing too little detail;
- Lack of imagination;
- Poorly scoped;
- Failing to account for business needs; and
- Overly strict interpretation of the "Cone of Silence."

With careful planning, States can avoid each of the following factors:

- Unclear business needs or unclear deliverables;
- Unlimited liability terms;
- Deliverable-based payment schedules;
- Hiring a separate Independent Verification and Validation (IV&V) vendor;
- Unnecessary constraints; and
- Cost-plus contracts.

The aforementioned mistakes can lengthen project life cycle and drive up the cost of contracts. States should be methodical when evaluating vendors and solutions. States also should consider innovative procurements, such as e-procurement, commoditization, solution-based solicitation, and performance-based contracting, as they embark on their IT procurements.

CONCLUSION

Technology solutions hold great promise for helping States address the challenge of identifying and reducing improper payments in subsidized child care programs. States that have already implemented automated solutions to address improper payments are realizing benefits including: a reduction in improper payments, program savings, timelier provider payments, accurate time and attendance data, and improved work efficiency.

Because each State has a unique technical and programmatic environment, the recommendation of any one solution for all States' child care automation needs is impractical and improbable. As States modernize information systems, child care programs may have opportunities to partner with other program, such as TANF or Food Stamps to be included in broader IT investments within the State, including: eligibility determination, case management, vendor management, financial management, and payment, reporting, and data analysis.

Broader enterprise investments or specific, child care program-only investments can take many different forms, including: in-house development, systems integration, the use of COTS products, contracting out for development and/or maintenance with a third-party, or a combination of the above. The best approach for each State can only be determined through careful analysis and planning, both in the selection of alternatives, as well as in the procurement of the technology solution.

Virginia achieved efficiencies through data brokering which allowed multiple agencies to share data both internally and externally with stakeholders, as well as with other State and Federal agencies. Oklahoma and Georgia achieved substantial cost efficiencies through the use of successfully implemented automated systems. Since implementation of their automated system in 2003, Oklahoma saved over $10 million, Georgia's automation efforts increased payment accuracy, improved payment adherence to policy and regulations, and saved State staff time spent processing payments.

The Arkansas automated system effort improved case management accuracy, provided management reports and data, and established interfaces with other systems. System implementation reduced data entry errors, maintained data integrity, and validated information. System benefits also included the development of a data mining capability using COTS products, which identify risk factors using benchmark criteria to predicts and identify improper payments within the child care program.

Florida and Washington States gained significant efficiencies in eligibility and case management processes by re-engineering business processes and increasing automation, including: on-line applications for benefits, document imaging, electronic case files, and the implementation of a call center to process applications and status change reporting.

Creating efficiencies through automation can free scarce resources for direct service delivery and offer improved customer support. Regardless of the impetus for IT investment, State child care administrators need to partner with the Agency's IT

leadership and the leadership of other programs, such as TANF and Food Stamps, to leverage agency-wide future automation improvements.

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GLOSSARY

This Glossary is provided to assist child care administrators with a quick reference of commonly used IT terms. These terms apply to the acquisition, development, implementation, or support of automated systems.

Acquisition – The act of acquiring goods and services (including construction) for the use of a governmental activity through purchase, rent, or lease. Includes the establishment of needs, description of requirements, selection of procurement method, selection of sources, solicitation of procurement, solicitation for offers, award of contract, financing, contraction administration, and related functions.

Amendment/change order – a written modification to a contract or purchase order or other agreements.

Application Service Provider (ASP) – offers enterprises access over the Internet to applications and related services that would otherwise have to be located in their own enterprise computers.

Appropriation – sum of money from public funds set aside for a specific purpose. Best value-a result intended in the acquisition of all goods and services. Price must be one of the evaluation criteria when acquiring good and services. Other evaluation criteria may include, but are not limited to, environmental considerations, quality, and vendor performance.

Authorization System – an automated system usually associated with an eligibility system. The system places edits on the authorization and payment functions. These software edits match the demographic characteristics of the household against the State policy and approved rates to ensure the accuracy of benefit issuance.

Card technologies – any one of the different types of cards used to facilitate payment or other transactions, including credit cards, debit cards, or Electronic Benefit Transfer (EBT) cards.

Core competency – fundamental knowledge, ability, or expertise in a specific subject area or skill set.

Design specifications – a detailed description setting forth the required characteristics to be considered for award of contract, including sufficient detail to show how the product is to be manufactured.

Development environment – the set of processes and programming tools used to create the program or software product.

Development process – a set of tasks performed to meet the user requirements in a software development project.

Electronic Benefits Transfer (EBT) – an electronic system in the United States that allows State and Federal governments to provide benefits to authorized recipients via a plastic debit card. Common benefits provided via EBT include Food Stamps and cash assistance. EBT works much like a credit or debit card. Users must enter a Personal Identification Number (PIN) to use the card. Once used, the amount is deducted from the user's benefit balance.

Eligibility System – an automated system used in the determination of eligibility for one or more government programs which can include but are not limited to subsidized child care, Temporary Assistance for Needy Families (TANF) cash assistance, Medicaid, and Food Stamps.

Enterprise framework – a complete environment for developing and implementing a comprehensive information system. Enterprise frameworks often include pre-built applications and development tools.

Hosting – business of housing, serving, and maintaining files for one or more Web sites.

Job shadowing - job shadowing involves someone spending time observing an individual doing a job. The "shadower" watches, listens, and learns what the job is about and what is involved in a typical day's work.

Joint Application Development (JAD) – a methodology that involves the client or end user in the design and development of an application, through a succession of collaborative workshops called JAD sessions.

Object-oriented programming – a programming model organized around objects rather than actions and data rather than logic, based on the idea that what we really care about are the objects we want to manipulate, rather than the logic required to manipulate them.

Open source – describes a program whose source code is made available for use or modification as users or other developers see fit.

Payment system – automated system used to generate payments using one or more methods including checks, electronic funds transfer (EFT), and placing value on an EBT card.

Performance bond – a contract of guarantee, executed subsequent to award by a successful vendor to protect the buyer from loss due to the vendor's inability to complete the contract as agreed.

Proprietary – the only items that can perform a function and satisfy a need. This should not be confused with "single source." An item can be proprietary and yet available from more than one source. For example, if you need a camera lens for a Nikon camera, the

only lens that will fit is a Nikon lens, thus, this lens is "proprietary." However, the Nikon lens is available from more than one source, thus, it is not single source.

Prototype review – Prototype review is a technique involving a group of stakeholders observing and commenting on a prototype of the application. Prototypes can be as simple as mock web pages or as sophisticated as another State's system that may be under consideration for use.

Request for Information (RFI) – a written solicitation to vendors, requesting specific information regarding a technology or technological solution. States often issue a RFI prior to issuing a RFP. The information obtained is then used to assist the State in its RFP development.

Request for Proposal – a written solicitation that conveys to vendors a requirement for materials or services that the entity intends to purchase.

Return on investment (ROI) – how much profit or cost saving is being realized.

Risk management – the process of planning, organizing, leading, and controlling the activities of an organization in order to minimize the effects of risk on an organization's capital and earnings.

Section 508 – In 1998, Congress amended the Rehabilitation Act to require Federal Agencies to make their electronic and IT accessible to people with disabilities. Inaccessible technology interferes with an individual's ability to obtain and use information quickly and easily. Section 508 was enacted to eliminate barriers in IT, to make available new opportunities for people with disabilities and to encourage development of technologies that help achieve these goals. The law applies to all Federal Agencies when they develop, procure, maintain, or use electronic IT. Under Section 508 (29 U.S.C. ' 794d), Agencies must give disabled employees and members of the public access to information that is comparable to the access available to others.

Specification – a concise statement of a set of requirements to be satisfied by a product, material or process that indicates whenever appropriate the procedures to determine whether the requirements are satisfied. As far as practicable, it is desirable that the requirements are expressed numerically in terms of appropriate units, together with their limits. A specification may be a standard, a part of a standard, or independent of a standard.

Service Oriented Architecture (SOA) – The World Wide Web Consortium (W3) defines SOA as "a set of components which can be invoked, and whose interface descriptions can be published (made available) and discovered (found)." SOA is an information systems architectural framework. In an SOA environment, independent, discrete services communicate with one another, regardless of the technology on which they have been built. These smaller, discrete services can be grouped together to form a business process and be used repeatedly for other business processes.

Terms and conditions – a phrase generally applied to the rules under which all bids must be submitted and the stipulations included in most purchase contracts; often published by the purchasing authorities for the information of all potential vendors.

User interface – everything designed into an information device with which a human being may interact -- including display screen, keyboard, mouse, light pen, the appearance of a desktop, illuminated characters, help messages, and how an application program or a Web site invites interaction and responds to it.

Vendor – person or company that sells goods or services to someone else in the economic production chain.

Web services – services made available from a business's web server for web users or other web-connected programs.

APPENDIX 1
COST INFORMATION FOR E-CHILD CARE (Oklahoma)

EBT Daycare Financial Information:

Cost per Case Month ($5.24) includes:
- Call Center Operations – located in Sandy City, Utah
- Transaction Processing – Time and Attendance tracking
- Settlement to providers
- Reconciliation
- Card stock
- Embosser installation and maintenance
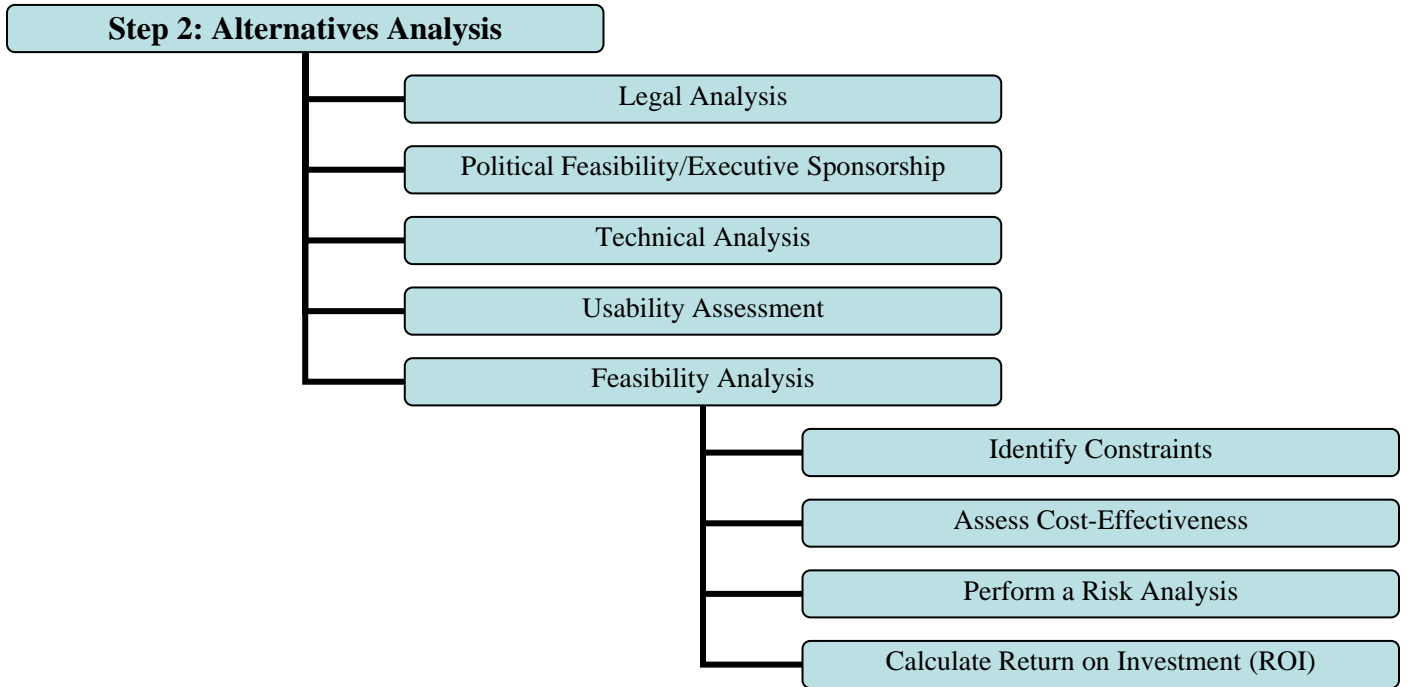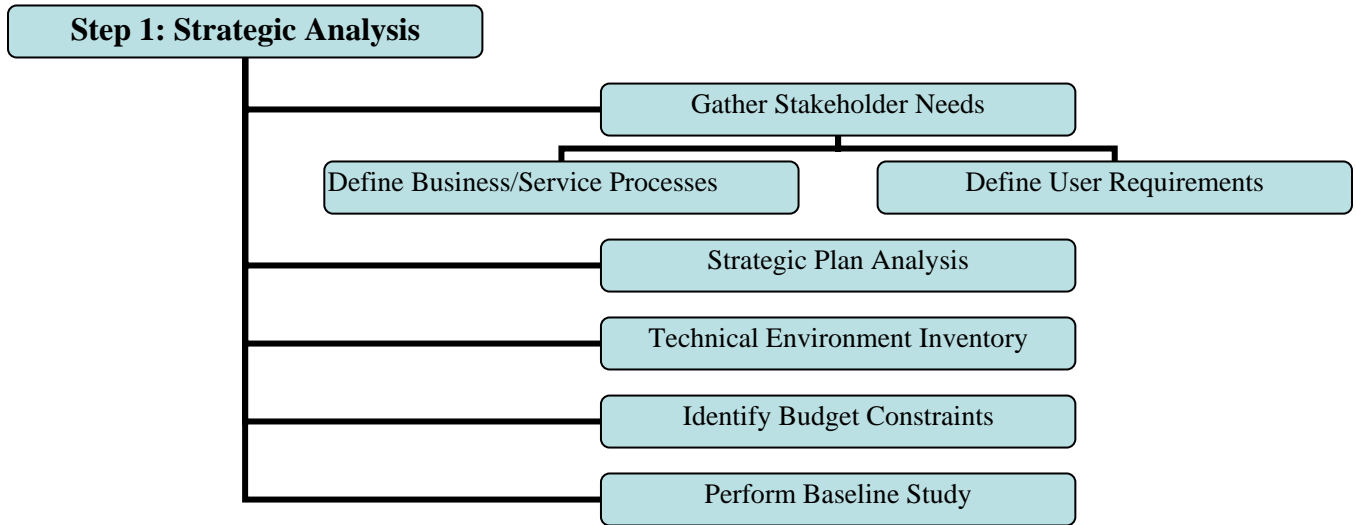- POS installation and maintenance
- Training

Original Contract Award	**$5,200,000**
Design	$ 378,067
POS Terminals	$3,600,000
Training Total	$1,221,933

Enhancements	**$793,175**
Program Changes	$580,675
Provider Web Development (OKDHS)	$150,000
Provider Web Interface (ACS)	$ 62,500

An Average Month	**FY 2004**	**FY 2005**
Children Receiving Services	46,870	47,327
Amount Paid Per Child	$ 249	$ 224*
Amount Paid for Child Care Services	$11,673,304	$10,607,984
Average Administrative Payment	$ 245,599	$ 247,993

* In FY 2004 Oklahoma had a higher number of overpayments due to providers billing
for children who were not receiving care. These overpayments were corrected in FY
2005, resulting in a lower average amount paid per child.

APPENDIX 2
IDENTIFYING AND EVALUATING ALTERNATIVES

Step 1: Strategic Analysis

- Gather Stakeholder Needs
  - Define Business/Service Processes
  - Define User Requirements
- Strategic Plan Analysis
- Technical Environment Inventory
- Identify Budget Constraints
- Perform Baseline Study

Step 2: Alternatives Analysis

- Legal Analysis
- Political Feasibility/Executive Sponsorship
- Technical Analysis
- Usability Assessment
- Feasibility Analysis
  - Identify Constraints
  - Assess Cost-Effectiveness
  - Perform a Risk Analysis
  - Calculate Return on Investment (ROI)

APPENDIX 3
DECISION MATRIX EXAMPLE FOR ANALYZING TECHNICAL ALTERNATIVES

In this matrix, a State explores five Alternatives. Each Alternative receives scores for each criterion and a total score. A lower total score is more favorable, while a higher score indicates more problems or issues with the Alternative. This example provides a variety of options for scoring individual criteria. States need to select a set of scoring scales that best meets their needs.

This example also has one automatic "Eliminate Solution" criterion, Legal Issues. This criterion is often referred to as a GO/NO GO decision criterion. This type of criterion means that if an Alternative receives an "Eliminate Solution" score for that criterion, the whole Alternative is out of consideration regardless of the overall score. In the example below, the State would eliminate Alternative 3 even though the other scores were within range of the other Alternatives.

In this example, Alternatives 1, 2, and 4 received the most favorable scores. The State would give them further consideration.

	Legal Issues	Executive Sponsor Support	End-User Support	Ease of Technical Implementation	Level of Risk	Score
Alternative 1	1	1	3	3	3	11
Alternative 2	1	1	3	4	1	10
Alternative 3	Eliminate	1	2	1	5	Eliminate
Alternative 4	1	1	1	2	5	10
Alternative 5	2	3	4	3	3	15

Scoring Legend
- Legal Issues
    - 1 = No
    - 2 = Potential
    - 3 = Eliminate solution
- Executive Sponsor Support
    - 1 = Yes
    - 2 = No
- End-User Support (Rating Scale of 1–4)
    - 1 = Very supportive
    - 2 = Supportive
    - 3 = Somewhat supportive
    - 4 = Not at all supportive
- Ease of Technical Implementation (Rating Scale of 1–5)
    - 1 = Very easy
    - 2 = Easy

- o   3 = Neutral (neither easy nor difficult)
- o   4 = Difficult
- o   5 = Very difficult
- Level of Risk
  - o   1 = Low
  - o   3 = Medium
  - o   5 = High