

APPENDIX B GLOSSARY

The following definitions represent a variety of terms related to the Advance Planning Document (APD) process. However, because the Handbook represents different FNS programs, all definitions do not apply in all cases.

Acceptance Documents—Documents signed by the State agency to indicate the State’s satisfaction that a contractor has completed a phase of work in accordance with contract requirements. The information upon which, and the methods by which, a State agency is to base its decision, including documentation of the work product that the contractor is to furnish, should be agreed upon in advance.

Acceptance Testing—See User Acceptance Testing

Acquisition – An acquisition means obtaining supplies or services through a purchase or lease, regardless of whether the supplies or services are already in existence or must be developed, created, or evaluated.

Advance Planning Document (APD)—Document used to secure funding and approval of the project to automate State processes to administer the FNS SNAP or WIC programs. This document records information for the APD process, which is designed to: (1) describe in broad terms the State agency’s plan for managing the design, development, implementation, and operation of a system that meets Federal, State, and user needs in an efficient, comprehensive, and cost-effective manner; (2) establish system and FNS program performance goals in terms of projected costs and benefits; and (3) secure FFP for the State agency.

Advance Planning Document Update (APDU)—Annual or as-needed documentation submitted by the State agency on the status of project development activities and expenditures in relation to the approved PAPD. An annual APDU is due 60 days before the anniversary of the approval date of the initial IAPD or PAPD. An APDU may also be submitted as needed to request funding approval for project continuation whenever significant project changes occur or are anticipated.

Advance Planning Document (APD) Closure—Closure of either a PAPD or an IAPD that occurs when all activities associated with the project, approved through the APD, have been successfully completed to the satisfaction of FNS and any other contributing Federal agencies. Once APD closure occurs, any additional changes to the system, such as software enhancements or hardware replacement, will be considered a new project, and the new project is subject to the requirements for Federal approval of FFP that are appropriate to the type and size of the new project. After APD closure, reports on project results, such as operating costs and system functionality, may still be required by FNS. Closure must be documented by RO notification to the State agency.

Advance Planning Document (APD) Process—Process used by several Federal agencies to receive and approve State agency requests for Federal funding or FFP for IS.

Alternatives Analysis—Key part of the Feasibility Study in which alternatives for primary system requirements and resources are contrasted and compared, with the aim of determining the best viable alternative. Comparative analysis includes development resources, implementation resources, functional requirements, hardware and software requirements, and M&O support and costs.

Benefiting Program—State or Federal public assistance program that uses some or all of the functions of a State agency’s automated computer system. For example, the SNAP, Medicaid, TANF and Child Support Enforcement may all be benefiting programs in a shared State computer system that determines applicants’ eligibility.

Best and Final Offer (BAFO)—Technical and cost proposal submitted by a vendor to a State or local agency, after all negotiations are concluded and that is the offer upon which the contracting decision is made.

Budget - The source of the financial information needed to make valid decisions concerning cost-benefit analyses and overall cost controls and to determine funding availability. Technically, it is "aggregating the estimated costs of individual activities or work projects [establishing] an authorized cost baseline". For APD purposes, it must reflect the total anticipated project cost, including Federal and State shares. Accurate reporting of IS expenditures is also required to perform reconciliations against budgeted and approved funding levels. The PAPD budget is designed to capture quarterly costs for the entire planning phase of the project, including all anticipated expenditures. The IAPD budget is designed to capture quarterly costs for the life of the project through full implementation. The APDU budget format is designed to capture actual costs quarterly throughout the life of the project and to compare them with original cost estimates as well as future estimates.

Business Rules Engine—Software that applies business rules to a decision-making process in a software application. The rules may come from legal regulation (the categories of person eligible for a program), state policy (whether and how to count certain assets), or other sources. The rules engine software, among other functions, may help classify, prioritize and manage all these rules; verify consistency of formal rules; and relate rules to multiple applications as appropriate. Rules can also be used to detect certain situations automatically.

Capacity—Measure of a State agency's output; for example, program participation rates or other Federal reporting requirements

Case Conversion—Process of changing over the caseload from the old system to the new system. This is often accomplished in phases, with different State subdivisions being converted at different stages. A case conversion plan, outlining the strategy, requirements, schedule and validation process for transfer of the caseload to the new system and related data conversion, should be included in the IAPD.

CASE Tools—Computer-Aided Software Engineering tools used to assist in managing the software development process, including defining requirements, creating specifications, and writing software code. CASE tools use various software methodologies embodied in the tool and may include data flow diagrams, data dictionaries, process control specifications, object diagrams, and entity relation diagrams.

Cognizant Federal Agency— Federal agency charged with reviewing, negotiating, and approving the Cost Allocation Plan of a given State or local government agency. Cognizance is generally assigned to the Federal agency that has the greatest dollar involvement with the grantee. It may differ for ongoing operational costs and for a specific project, such as an ADP project.

Commercial Off The Shelf (COTS) –Proprietary software products that are ready-made and available for sale to the general public at established catalog or market prices in which the software vendor is not positioned as the sole implementer or integrator of the product.

Configuration Management (CM)— Control of changes, including the recording thereof, that are made to the hardware, software, firmware, and documentation throughout the system life cycle.

Configuration Management Plan—Detailed plans for each project's CM activities. It identifies CM resources, schedules, and procedures and practices, such as the identification scheme and products to be managed.

Contingency Plan – is a secondary or alternative course of action that can be implemented in the event the primary approach fails to function as it should. Plans of this type allow projects to quickly adapt to changing circumstances and remain active. A contingency plan specifies: the risk indicator to be measured, the frequency of measurement, the problem trigger, the action plan, and the specified duration for the contingent actions to resolve the problem.

Contract—Legal agreement between the State or local agency and other organization(s) (e.g., the firm and grantee) to provide IS services or equipment

Contractor—Firm or vendor that is party to a contract to provide equipment, services, or supplies in support of FNS-funded IS

Contractor and Procurement Documentation—Collection of legal and binding documentation that has been agreed to for a specific contract

Cost Allocation—Procedure that State agencies use to identify, measure, and equitably distribute system costs among benefiting State and Federal public assistance programs

Cost Allocation Methodology—Specific method or approach the State agency uses to determine each benefiting program's portion of the shared system costs

Cost Allocation Plan—Document that State agencies submit to Federal benefiting programs for approval during the APD process to obtain Federal funding for a portion of State system costs. It documents the State agency's cost allocation methodology and shows the proposed benefiting programs' share of cost (%) and dollar (\$) amount. Each Federal benefiting program must approve the State agency's cost allocation plan.

Cost-Benefit Analysis (CBA)—Mechanism for classifying alternative systems into cost and benefit components to determine which alternative will provide the greatest benefits relative to its cost. The CBA provides a meaningful comparison of the costs of the alternatives being considered.

Data Conversion—Activity involved in creating a data file from existing files, either manually or through electronic means; a critical process during system development when data is converted from an existing system, paper or automated, to the new system, tested for correctness and data integrity.

Design, Development, and Implementation (DDI) - The process of defining, designing, developing, testing, and implementing a new software application or program.

Detail System Design or Detailed Design Document—Specifies the program/file level design of a system. It describes a software product that a software designer writes to guide a software development team in the architecture of the software project. It usually accompanies an architecture diagram and has pointers to the detailed feature specifications of smaller pieces of the design. A design document is practically required to coordinate a large team under a single vision. It needs to be a stable reference and outline all parts of the software and how they will work. The document should give a fairly complete description while maintaining a high-level view of the software. Detail System Design is a comprehensive software design model consisting of four distinct but interrelated activities: data design, architectural design, interface design, and procedural design.

Direct Charges—Charges for costs of system capabilities that benefit only a single Federal or State program. In cost allocation methodology, direct charges are identified and then removed from the cost allocation pool.

Direct Costs—Costs for system functions benefiting only a single Federal or State program

Disallowance—Recovery of funds that were inappropriately charged to an FNS grant

Electronic Benefits Transfer (EBT)—Use of electronic mechanisms to transfer value from a program to a benefit recipient

Electronic Service Delivery—Use of a unique client identifier and advanced electronic technology to provide integrated and efficient client-centric service delivery

Emergency Acquisition Request—Documentation required for a situation in which the following conditions both exist:

- ▶ The State agency can demonstrate to FNS an immediate need to acquire IS equipment or services to continue operation.
- ▶ The State agency can clearly document that the need could not have been anticipated or planned for and that the need prevents the State from following the prior approval requirements.

End-to-End Testing -- This testing is used to demonstrate whether the flow of an application is performing as designed, and includes every step from beginning to end for the full cycle. The purpose is to identify system dependencies and to ensure the right information is passed between various system components and systems. The test should be performed using real world cases and data in a complete application environment that mirrors actual production as closely as possible, confirming the validation of performance metrics and analytics such as reporting. The entire application is tested in a real-world scenario such as communicating with the database, network, hardware, and other applications. The purpose is to identify system dependencies and to ensure that the right information is passed between various system components and systems. The test of interrelated systems should include not only those owned and managed by the organization but also the external systems with which they interface.

Enhancement –Enhancements are modifications which will change the functions of software and hardware beyond their original purposes, not just to correct errors or deficiencies which may have been present in the software or hardware, or to improve operational performance of the software or hardware. A major enhancement is a software change that significantly increases risk, cost, or functionality of the system.

Enterprise—Whole (or portion) of the State agency (or additional agencies) that is affected by change in the IT infrastructure. This scope is necessary to establish the boundaries, within which the State agency decision makers can manage the interoperability and integration within and across this boundary.

Feasibility Study—Preliminary study to determine whether it is sufficiently probable that the use of IS equipment or systems would improve the effectiveness and efficiency of program operations and warrant the investment of staff, time, and money being requested and whether the plan can be accomplished successfully.

Federal Financial Participation (FFP)—The portion or amount of allowable costs (up to 100 percent) that a Federal grantor agency provides through a grant, contract, or other agreement. Specifications shall be based upon a clear level of funding established through legislation or regulation. This is the net amount provided by the Federal participating agency.

Functional Requirements Document (FRD)—Initial definition of the proposed system, which documents the goals, objectives, and user or programmatic requirements. This document details what the new system and/or hardware should do, not how it is to do it. Specifications shall be based upon a clear and accurate description of the functional requirements for the project and shall not, in competitive procurement, lead to requirements that unduly restrict competition. The FRD specific to the WIC program includes EBT readiness and functionality.

Gap Analysis - is an assessment tool to help identify differences between information systems or applications. A gap is sometimes called "the space between where we are and where we want to be." A gap analysis helps bridge that space by highlighting which requirements are being met and which are not. The tool provides a foundation for measuring the investment of time, money and human resources that is required to achieve a particular outcome. In software development, a gap analysis can be used to document which services and/or functions have been accidentally left out, which ones have been deliberately eliminated and which still need to be developed.

General System Design— Combination of narrative and diagrams describing the generic architecture of a system, as opposed to the detailed architecture of the system. It may include a system's diagram; a narrative identifying

overall logic flow and systems functions; a description of equipment needed (including processing, data transmission, and storage requirements); a description of other resource requirements that will be necessary to operate the system; a description of system performance requirements; and a description of the environment in which the system will operate, including how the system will function within the environment.

Go/No-Go Decision- Go/No-Go Decision points (also known as Project Gates) serve as a point in time when the project team may decide whether or not to move forward to the next phase of the project. It also provides a point where all documentation should be up to date before moving forward. Go/No-Go Decision points may occur at any logical phase of a project but become increasingly important based upon how far into the SDLC a project is. These points allow the project team and manager time to analyze the current state of the project, including documentation, business needs, unresolved defects, testing results, training outcomes/feedback, etc. to determine if the project should move forward to the next phase. Funding sources may dictate these decision points as temperature checks to determine if the project is still viable and on a realistic schedule.

Implementation Advance Planning Document (IAPD)—written plan of action requesting FFP (or approval to expend Federal funds) to acquire and implement IS services and/or equipment. The IAPD includes the design, development, testing, and implementation phases of the project.

Implementation Plan - The implementation plan includes a description of the procedures, detailed schedules, and resources needed to implement the project.

Independent Verification and Validation (IV&V) - IV&V is a review process performed by an organization that is technically, managerially, and financially independent of the development organization. **Verification** is using iterative processes to determine whether the products produced fulfill the requirements placed on them by previous iterations/phases/steps and are internally complete, consistent, and sufficiently correct to adequately support the next iteration/phase/step. **Validation** is the process of examining and exercising the complete application (software, hardware, procedures, and all else) to determine whether all stakeholders requirements have been met.

Information System (IS)—Combination of computer hardware and software, data, and telecommunications that performs specific functions to support the State agency, or other Federal, State or local organizations.

Information System Services—Services to design, develop, or operate IS equipment, either by private sources or by employees of the State agency or by State or local organizations other than the State agency to perform such tasks as:

- ▶ Feasibility studies
- ▶ System studies
- ▶ System design efforts
- ▶ Development of system specifications
- ▶ System analysis
- ▶ Programming
- ▶ System implementation
- ▶ Maintenance
- ▶ Operations
- ▶ Backup and recovery

▶ Disposition.

IS services also include system training, system development, site preparation, data entry, and personnel services related to IS development and operations.

Information Technology—Processing equipment, interconnecting (networking) equipment, and the software entities that operate with this equipment.

Integration Testing— The phase of the system development life cycle in which application programs or modules that were separately developed and tested are brought together and operated as a single system. The objective of integration testing is to ensure that all elements of a system function correctly according to specifications and defined requirements as a single entity. Integration testing ensures that data or outputs from one program or module that function as input to, or is used by, another program or module are correctly processed. Integration testing also ensures that data integrity is maintained throughout the system. A complete test plan must be provided to FNS prior to the start of the testing phase.

Invitation for Bid—Type of solicitation document used in formal advertising, where the primary consideration is cost and the expectation is that competitive bids will be received and an acceptance (award) issued to the low responsive, responsible bidder.

Legacy System—Jargon for an IS (or set of applications) that is currently in use and was initially deployed many years ago, using a computing infrastructure that is several generations old. These systems tend to be critical to the business and cannot be easily replaced or cost-effectively maintained; however, they are approaching or have reached the end of their practical operational life span

Maintenance—Process of modifying a system or component after delivery to correct faults, improve performance or other attributes, or adapt to a changed environment, with the purpose of maintaining the value of the existing system.

Management Plan—Document describing the process that a specific contractor will use to manage their activities.

Migration—Process of transferring all or part of an IS' functionality, data, or communications to another technical infrastructure. The original application code may be ported or replaced. The business data and its schema are usually retained in a significant way.

Operational—Term with both general and specific meanings in FNS programs. As a general concept, operational refers to the point in the project development at which the major functions of the automated system are functioning to support program activity. For example, the new system is being used to certify recipients and to provide benefits in local offices. An IS system may become operational before all project work included in an approved APD is completed. For example, a system may be considered operational, although there are still ancillary functions being built, cases to be converted, or some geographic areas needing installation of the system. A system is considered truly operational statewide once all development under the IAPD is completed, all sites are fully operational, and all work has been accepted by the State agency. Operational also signifies the point at which the reporting of costs moves from the Automated Data Processing (ADP) Development to ADP Operational on the FNS-269 (through FY 2011) or FNS-425 (beginning FY 2012) or FNS-798 documents submitted by all State agencies. The closure of an APD may occur after a system is considered fully operational statewide.

In the specific meaning, operational refers to the SNAP regulatory meaning for implementation of Food and Nutrition Act provisions for enhanced funding for development projects. For projects with phased implementation, each State subdivision (as outlined in the Case Conversion or Implementation/Rollout Plan) shall be considered operational at the time that the system produces automated application processing and/or issuance for the SNAP caseload for that subdivision.

Operations – Refers to the operating of the IS and networks. It may include the day to day procedures for operating the system, performing routine housekeeping procedures on the system, reviewing error logs and responding to any issues, and performing end of period (e.g. daily, monthly) procedures to include creating backup of key data files.

Order of Precedence – Clause or paragraph included in a contract citing the order of importance of documents to be used in the definition of terms and work and most importantly in dispute resolution, should questions or challenges arise.

Performance Testing -- Performance testing is the process of validating the effectiveness of computer hardware or software to ensure that a system meets performance specifications, especially under the expected workload. It is conducted to determine how a system performs in terms of quantitative measures such as responsiveness (speed), bandwidth and data transfer rate, throughput (requests per second), and stability characteristics. It can also serve to evaluate qualitative attributes of the system, such as scalability, reliability, interoperability, resource utilization levels, and efficiency. Common types of performance testing include:

- **Load testing** – checks the application’s ability to perform under normal and peak load conditions, to verify the application can handle the anticipated number of users.
- **Stress testing** – tests an application under extreme workloads to see how it handles high traffic or data processing. The objective is to push the application beyond normal or peak load conditions to identify its breaking point.
- **Endurance testing** – ensures the software can handle the expected load over a long period of time.
- **Spike testing** – tests the software’s reaction to sudden large spikes in the load generated by users.
- **Capacity testing** -- determines how many users and/or transactions a given system will support and still meet performance goals.
- **Configuration testing** – tests how running an application in different configuration environments affects the system’s performance.
- **Volume testing** – Used to check the software system’s performance under varying database volumes.
- **Scalability testing** – Used to determine the software application’s effectiveness in “scaling up” to support an increase in user load.
- **Response time** – The time it takes from when a user inputs data into the application until the application outputs a response to that input.
- **Bottlenecking** – Bottlenecking is obstructions in a system caused by faulty code or hardware issues, which create a decrease in throughput (data delivery) that can degrade overall system performance under certain loads.

Pilot (Acceptance) Testing— The phase of the system development life cycle in which a fully functional prototype of the entire system is tested in a “live” environment before it is rolled out and implemented statewide. Pilots must operate until a state of routine operation is reached with the full caseload in the pilot area. The design of the pilot must provide the opportunity to test all components of the system as well as the data conversion process and system performance. The duration of the pilot must be for a sufficient period of time to evaluate thoroughly the system (usually a minimum of three months).

Planning Advanced Planning Document— **Advance Planning Document for project planning or Planning APD (PAPD)** is a written plan of action that requests FFP to accomplish the planning activities necessary for a State agency to determine the need for, feasibility of, and projected costs and benefits of an IS equipment or services acquisition; plan the acquisition of IS equipment and/or services, and to acquire information necessary to prepare an Implementation APD.

Platform—Collection of tightly integrated computing hardware, peripherals, OS, and middleware upon which an application is built. The application provides some of its functionality by accessing services residing on the application platform through a program interface.

Project—A related set of information technology related tasks, undertaken by a State, to improve the efficiency, economy and effectiveness of administration and/or operation of its health or human services programs. A project may also be a less comprehensive activity such as office automation, enhancements to an existing system, or an upgrade of computer hardware.

Project Management - Project management is the application of knowledge, tools, skills, and techniques to project activities and teams for meeting project requirements and competing demands and is accomplished by integrating and applying the project management processes of initiating, planning, executing, controlling and integrating, and closing. Successful project management includes identifying requirements; establishing goals; balancing demands of quality, time, scope, and cost; and adapting the specifications, plans, and approach to meet the needs and expectations of stakeholders.

Project Management Plan - A document that defines how the project is executed, monitored, and controlled. It is detailed and composed of one or more subsidiary management plans and other planning documents. It describes the project oversight, reporting requirements for the State and contractor, and how the State will achieve professional project management.

Proposal—Offer that includes a description of proposed technical approach and associated costs is received as a response to an RFP and is subject to negotiation.

Quality Assurance (QA)—Planned and systematic set of actions to provide adequate confidence that work products and the processes used to produce them conform to established requirements.

Quality Assurance Plan —Plan for each project’s QA activities, defining QA resources and schedules, detailing QA procedures and practices and how noncompliance issues are to be handled, and identifying the products or processes to be reviewed or audited.

Regression Testing -- The process of testing of a software system program that has been modified to ensure any bugs have been fixed, no other previously working functions have failed as a result of the modifications, and that newly added features have not created problems with previous versions of the software. The intent of the testing is to determine whether a change in one part of the software has not inadvertently affected other parts of the software, and that the older and stable programming functions still work with the new modifications. The goal is to uncover new software bugs, or *regressions*, in existing areas of a system after changes such as enhancements, patches or configuration changes have been made to them. The reason they might not work is that changing or adding new source code to a program may create errors into other code that is not intended to be changed.

Regular Funding or Regular Federal Financial Participation Rate—Federal reimbursement at the 50 percent level for allowable costs for State agency planning, design, development, or installation of IS; this definition applies only to the (SNAP?).

Request for Proposals (RFP)—The document used for public solicitation of competitive proposals from qualified sources as outlined in 7 CFR 277.14(g)(3). The type of solicitation document used in negotiated procurements with the expectation that proposals will be received and evaluated leading to an award without discussion, or a revised proposal after discussion, which will then lead to an award.

Request for Quotation (RFQ)—Type of solicitation document used for negotiated small purchases and sometimes for information purposes. Response to an RFQ under the latter circumstances is only informational and is not a binding offer.

Risk Management Plan—Document that describes the risk analysis and management processes to be used, including a listing of current risks, their priority, and planned strategies for their mitigation

Security Plan – Describes the security and interface requirements to be employed, and the system failure and disaster recovery/business contingency procedures available to be implemented. Includes the approach for ensuring the physical, electronic, and operational security of the system, including hardware, software, data, communications, facilities, and goods. Identifies the security safeguards that are in place and planned for the IS to mitigate potential risks that could result in unauthorized disclosure, modification, or destruction of sensitive information stored and processed on a system. It summarizes the security of all processing, including PCs, remote access, mainframes, and related business operations.

Server—A computer or device on a network that manages network resources. A processor or host that performs operations at the request of local or remote clients. For example, a file server is a computer and storage device dedicated to storing files. A print server is a computer that manages one or more printers, and a network server is a computer that manages network traffic. A data base service is a computer system that processes database queries. Servers are often dedicated, meaning that they perform no other tasks besides their server tasks. On multiprocessing operating systems, however, a single computer can execute several programs at once. A server in this case could refer to the program that is managing resources rather than the entire computer.

Service Agreement—Document signed by the State or local agency and the State or local IT department for IT services—such as telecommunications, network installation and maintenance, hardware installation, and maintenance system planning services—provided to the State or local agency.

Software—A set of computer programs, procedures, and associated documentation used to operate the hardware and/or administer and manage FNS programs.

State—Any of the 50 States of the United States, the District of Columbia, Puerto Rico, Guam, the Northern Mariana Islands, the U.S. Virgin Islands, and the reservation of an Indian Tribal Organization that meets the requirements for participation as a State agency as defined by individual FNS programs.

State Agency—Agency of a State government (including the local offices thereof) responsible for the administration of the Federally aided public assistance programs in the State, and in those States where such programs are operated on a decentralized basis, including the local agencies that administer such assistance programs for the State agency; also, an Indian Tribal Organizations of any Indian tribe determined by the Department to be capable of effectively administering a SNAP, WIC or a Food Distribution Program, in accordance with provisions of the Food Stamp Act of 1977.

Statement of Work—Portion of an RFP or RFQ that identifies the products or services sought through a procurement, typically, detailing tasks or services a vendor will be required to provide, conditions under which they will be provided, deliverables to be provided, and (often) the project schedule or required milestones.

Status Reports —Information a contractor provides to the State Agency regarding performance progress or issues for a specific contract.

Stress Testing – The phase of testing of software or hardware to determine the stability of a system, and whether its performance is satisfactory outside standard usage specifications, such as under any extreme and unfavorable conditions which may occur. The stress involves testing beyond normal operational capacity, to determine the maximum load or safe usage limits the software can handle before it breaks or reaches its limit, and to evaluate if the software will be able to operate correctly in certain common situations. The process can involve quantitative tests, such as measuring the frequency of errors or system crashes, and qualitative tests such as availability or resistance to denial-of-service attacks.

Subagency—Any State or local government entity to which the State agency provides FNS funds in connection with the administration of FNS programs.

Subcontractor—A private, profit, or nonprofit organization that performs a portion of the services required by a State agency through a contractual agreement with the prime contractor.

System Architecture—Representation of a system in which there is a mapping of functionality onto hardware and software components, a mapping of the software architecture onto the hardware architecture, *and* human interaction with these components. An architecture description is a formal description of a system, organized in a way that supports reasoning about the structural properties of the system. It defines the [system] components or building blocks and provides a plan from which products can be procured, and systems developed, that will work together to implement the overall system. It enables management of IT investment to meet business needs.

System Design—Specification of the working relations between all the parts for systems in terms of their characteristic actions.

System Development Life Cycle (SDLC) – is defined as a software development process, although it is also a distinct process independent of software or other Information Technology considerations. It is the development or application development process used to develop an IS, including requirements, validation, testing, training, and user ownership through investigation, analysis, design, implementation, and maintenance.

System Specifications—Exact models, brands, and suppliers for each software application and hardware device; information about the new IS system, such as workload descriptions, input data, information to be maintained and processed, data processing techniques, and output data, required to determine the IS equipment and software necessary to implement the system design.

System Study—Examination of existing information flow and operational procedures in an organization.

Test Plan- Describes how all system testing will be conducted including, but not limited to, unit testing, integration testing, performance testing, end-to-end testing, and regression testing. At a minimum, a Test plan should address the types of testing to be performed, organization of the test team and associated responsibilities, test database generation, test case development, test schedule, pass/fail criteria, and documentation of results.

Training Plan - Describes how all system users will be provided with training on the IS/application. A comprehensive training plan includes the topic(s), the training methods to be utilized, the duration, location, and staff identified for each topic. The training plan describes the training methodology and provides sufficient detail to encompass all possible users, the training topic, defines materials to be developed, and include a budget that identifies travel for the trainers and trainees, materials, facilities, and goods. The training plan may also include recommendations for refresher training and new staff training that may be conducted after the system is fully operational.

Transfer and Implementation (T&I): The transfer of a system, component, or data from one hardware or software environment to another. Any planned or desired modifications to the current “core” code are kept to a minimum. When a State agency is transferring a system, requirements for the T&I must include any enhancements and code modifications.

Unit Testing – The phase of testing the individual units or components in the software application to validate that each unit of the software performs as designed. The primary goal of unit testing is to take the smallest piece of testable software in the application, isolate it from the remainder of the code, and determine whether it behaves exactly as expected. The testing involves only those characteristics that are vital to the performance of the unit being tested. This allows modifications to the source code without concerns about how such changes might affect the functioning of other units or the application as a whole. Each unit is tested separately before integrating it into

modules to test the interfaces between the modules. Once all of the units in an application have been found to be working efficiently and in an error-free manner, larger components of the application can be evaluated by means of integration testing. Unit testing is often automated but it can also be done manually.

Use Case—Technique for capturing functional requirements of systems and systems of systems. Each use case provides one or more *scenarios* that convey how the system should interact with the users, called actors, to achieve a specific business goal or function.

User Acceptance Testing (UAT)— The phase of the SDLC in which an application is tested, usually by or in conjunction with users, to ensure that the application is functioning according to specifications and defined requirements and is acceptable to users.

UAT usually involves testing each logic path to validate that each condition in a system is functioning correctly. This is typically accomplished through establishment of a test database and processing of transactions that test system functions with the expectation of predictable outcomes for each test.

Stress and performance testing is often also a part of acceptance testing.

UAT is often linked to system or deliverable sign-off and acceptance by the procuring or funding agency at the State level.

A complete test plan must be provided to FNS prior to the start of the testing phase, and documentation of the results of UAT must be provided before the system is piloted in a production environment.

Waiver of Depreciation—Written request to change the method of accounting and claiming for the cost of equipment. Federal cost circulars require that individual items of equipment that cost more than \$25,000 per item, must be charged over the useful life of the equipment. (Useful life is as proscribed by the IRS. Workstations have a useful life of 3 years, while mainframes are normally charged over a period of 7 years.) The written request asks for agency permission to charge the entire cost of the equipment acquisition at the time of acquisition (more commonly known as “expensing”). Unless agency permission is received, the equipment cost must be based on depreciation over the life of the equipment.