NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

QUALITY ASSURANCE CHECKLIST

System Development Life Cycle Methodology

April 10, 2000

QA CHECKLIST*

FEASIBILITY STUDY

Has the project sponsor from the business or program area been identified?

Will the project sponsor from the business or program area participate in this project on a regular and ongoing basis?

Has the sponsoring business or program area participated in the development of the project management and organization documentation, including the work plan?
Will departmental senior managers be involved with this project on a regular basis?

Will an experienced project manager be assigned to this project?

Will the project adhere to a formal systems development life cycle methodology (SDLC)?

Are expected benefits (including improved or new services and cost savings) verifiable?

Have the expected benefits been identified, documented, and quantified?

Have all relevant costs been identified, documented, and estimated?

Has a cost/benefit analysis (such as pay back period, internal rate of return, return on investment, etc.) been performed?

Have departmental senior management and the project business/program sponsor approved the cost/benefit analysis?

Have major project risk factors (e.g. size, organizational structure, number of parties involved, technical complexity, length of schedule, knowledge of technology being used, experience of project management team, skills of staff, experience with tools being employed, data conversion and other implementation complexities, flexibility in schedule, number of interfaces within and outside of project team control) been identified and documented?

Has each major risk factor been analyzed to determine its potential adverse impact on the project?

Have steps or factors for mitigating the risks been identified, documented, and incorporated in project plans and activities?

Have procedures been developed to monitor continuously the major risk factors, so they can be managed as the project progresses?

REQUIREMENTS DEFINITION AND CONCEPTUAL DESIGN

Are the project's objectives and goals verifiable, defined, and stated?

Is this project strategically aligned with departmental/divisional missions, goals, and objectives?

Have or will business or program practices and procedures be re-engineered before or as part of the implementation of the system or technology?

Has departmental senior management approved this project?

Have standards, conventions and documentation requirements been developed for major activities (e.g. requirements analysis, program specifications, coding)?

Will formal procedures and processes (such as JAD, etc.) be employed to ensure adequate participation by business and program personnel?

Has a formal quality plan identifying quality goals and defect prevention activities been developed?

Have checkpoints for formal independent quality assurance reviews been identified?

Have the scopes and focuses of each quality assurance review been determined?

Are all business and technical requirements testable?

ARCHITECTURE

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Has the application been architectured?

Does the technology make use of the state's technical physical and applications development infrastructure?

Does the technology reflect current, modern approaches for designing and installing information systems, including the concepts and principles in the IRMC's Statewide Technology Strategies and Initiatives document?

Does the technology conform to the state's technical architecture?

Are common business applications services that are required by the system being provided by the state's technical infrastructure?

Are new business applications services being developed by this project that are common to other systems going to be added to the state's technical infrastructure?

WORKPLAN

Does the project have a budget, supporting schedule, work plan, and work packages incorporating major phases, tasks, due dates, responsibilities, deliverables, and time and effort estimates?

Have Gantt, PERT, and Critical Path charts been prepared so that interdependent activities and essential timetables are known?

Has a formal project organization structure and management process (including regular progress reporting and communication among team members, sponsors, and all oversight bodies) been developed?

Have clear responsibilities and reporting relations been indicated on the project organization chart in the work plan?

Have personnel resource needs been determined by identifying skill and experience requirements and work effort estimates?

Are the necessary skills and experiences available or are training times included in the project work plan?

Does the project work plan include provisions and time for data conversion, user training, and system documentation preparation?

Are representatives from the business and program areas included in the project work plan, including personnel that will use the system when it is installed?

Does the project work plan include the development of a maintenance plan?

Does the project work plan include the development of resource requirements provided by SIPS, such as computing, data storage, and communications needs?

Have estimates been developed for project work efforts and costs?

Have tools (including project management, configuration management, change management, version control, productivity, CASE, testing, etc.) for managing and performing the project been identified?

Have time and effort been allocated in the project work plan for acquiring, configuring, and learning the support tools?

Has the project work plan been adjusted for staff training time for the support tools?

Have the needs for subject matter experts been identified, and are those requirements reflected in the project work plan?

Have the needs for other logistical items (such as workspace, workstations, LAN support, telephones, development and testing environments, etc.) been determined?

Does the project work plan accommodate the time required to acquire, install, and become competent with the necessary logistical items?

Will automated aides be used for supporting data conversion, user training, and system documentation preparation?

Does the project work plan include time and work efforts for coordinating with organizations providing shared services (e.g., SIPS) and other departments involved in the system or technology?

Does the project work plan include participation of the departmental staff so that the department will be able to maintain the system after installation?

TESTING

Has a formal project test plan been developed?

Will the testing process (including test cases) be automated?

IMPLEMENTATION

Is there a formal education and training plan or does the project work plan include the time and resources for the development of this plan?

Does the formal education and training plan identify the curricula, delivery mechanisms, and audiences (e.g., senior management, departmental executives, project staff, and end users), or are there tasks in the project work plan to address these?

Are automated aids and resources being used to support training needs for project staff and users?

Have detailed practices and techniques (such as design reviews, code inspections, etc.) been determined for identifying and correcting defects as early as possible in the implementation process?

Have acceptance criteria been established?

CHANGE MANAGEMENT

Has a change management process been developed and agreed upon by all participants?

* This list of questions was developed by the state IRM.