1999 International Student Paper Award Winner

Evaluation and Application of a Project Charter Template to Improve the Project Planning Process

Diane S. Hayes, Nova Southeastern University, School of Computer and Information Sciences, PO Box 290600, Fort Lauderdale, Florida 33329-0600 USA

■ Abstract

Innovation and project management formation are best accomplished in the early stage of a project. The project charter is important to the success of a project, transforming agreements and facts into a documented project management approach. This output begins to organize and document a project's need and expected outcomes at the beginning of the project management process and provides a foundation on which to base project decisions. This paper evaluates the completeness and effectiveness of a project charter template as a project management tool. In addition, a project charter is developed for an information system development project initiated by a hospital-based clinical laboratory, addressing the problem of a complete lack of a repeatable project management process within an entity whose adaptation of formal project management methods is immature. A section-by-section assessment of the justification for inclusion in the *Tryon and Associates Project Charter* (Tryon and Associates, 1998) adopted by St. John Medical Center in Tulsa, Oklahoma USA, based upon a review of project management literature, is accomplished. In addition, a working project charter for use in the planning phase of one of Regional Medical Laboratory's (RML) current information system development projects—RML Turnaround Time System—is constructed and evaluated. This study of project charter components, combined with the development of a formal planning document for an authentic project in progress, provides an opportunity to introduce, validate, and integrate the concept of a formalized project initiation process.

Keywords: project planning; project charters; project initiation

Project planning at its inception provides a foundation for the more detailed planning activities that follow. A well-conceived project is developed and determined executable within the time and cost constraints specified in the early stages of the project management process (Laufer, 1997). A complete and formally documented project overview should contain the most valuable information available on the project in the earliest stages (Weiss & Wysocki, 1992). Such a planning document—sometimes termed a project charter, project overview, or project contract—provides a statement of the goal and direction of the project, as well as further information concerning the project environment (Lewis, 1995a). This important document was missing from RML projects, as were all formalized project management processes. The introduction of a project overview or charter as a project management tool for the RML Turnaround Time System began to address the problem of a lack of a well-defined project planning methodology within the clinical laboratory.

In 1997, Linda Taff, director of the Information Technology Department at St. John Medical Center (SJMC) in Tulsa, Oklahoma USA, recognized a need for formalizing a project management methodology for projects handled by this department. Taff's attendance at a seminar entitled "Managing Single-Time Efforts" (Tryon and Associates, 1997) stimulated her decision to focus efforts on developing a project management program within

her department. Her decision resulted in project management training for staff members, as well as other medical center coworkers. In addition, a customized template for a project charter, *Tryon and Associates Project Charter* (Tryon and Associates, 1998), was made available for use by all hospital departments as a starting point for managing projects. No formal project management practices were in place within RML, a division of SJMC. Use of the *Tryon and Associates Project Charter* adopted by SJMC's Information Technology Department introduced the newly adopted project management planning methodology to RML. This research project contributed an evaluation of the SJMC-adopted project charter template, as well as a critique of a project charter developed for the RML Turnaround Time System, a software development project in the project initiation phase at RML.

Literature Review

Planning is the process of establishing courses of action within the prevailing environment to accomplish predetermined objectives (Badiru, 1991). A successful project is one that delivers expected results. Effective project definition and initiation play an important role in controlling project processes in contrast to drifting into a project with little foresight or planning (Lewis, 1995a). This maximizes the chance of developing the customer's product as requested, on time, and within budget (Burke, 1993). A project plan evolves over the life of a project (Curtis, 1996). Although project initiation is only one stage of a project's life cycle, this early planning process provides the opportunity to understand and shape a project from the beginning.

Conceptual planning is strategic, and the issues addressed during this phase of a project have a significant effect on design, performance, and cost control (Signore, 1985). Such planning can be a multilevel, multistage process, but usually the flow is from general to detail as more complete information is identified (Laufer, 1991). Four business factors must be understood before an information systems project is undertaken: the business problem, the cost/benefit analysis, the user needs, and the project's fit with the information technology strategic plan (Koroknay, 1993). A preliminary project plan can be developed based on these factors.

Project planning provides the project's framework and an opportunity to begin the important project documentation process (Signore, 1985). Effective project plan development is based upon the belief that certain factors and methods positively effect the outcome of a desired state (Laufer, 1991). The following factors have been identified as critical to the outcome of the development of the project plan (McNeil & Hartley, 1986):
▨ Experienced personnel must be involved in the planning stages.

▨ The project team must be committed to the plan.
▨ The plan must be comprehensive and intelligent.
▨ Effective communication skills are imperative for the transfer of information.
Such plan development is a form of problem solving that promotes problem definition and solution (Martin & Miller, 1982).

Finding a project's starting point can present the first of many problems, due to the absence of a clear sense of direction. This is remedied only by a clear definition of the project objectives, providing the first stage of successful project planning (Goodman, 1984). Useful preliminary documents, including functional objectives, master planning, operational concepts, and financial and scheduling goals, are phase outcomes (Kliem & Ludin, 1996). The importance of a clear and complete concept presentation is significant due to the project team's diminishing ability to influence the final project cost as the project is developed (Wideman, 1981). Capable project planning leads to a more complete description of the project, increasing the likelihood of a project's success (Martin & Miller, 1982).

A project planning methodology must contain the appropriate level of detail for the size and uncertainty or risk of the project (Laufer, 1991). Most existing methodologies do not address characteristics of a specific domain (Chatzoglou, 1997). A methodology must be broad enough to be flexible, detailed enough to provide direction, yet simple enough to be used and understood (Kliem & Ludin, 1996). There can be adverse consequences with overly detailed plans: increased cost, important information obscured due to cluttering, time-consuming requirement updates, and high obsolescence (Laufer, 1991). The timing of project planning, along with the determination of a plan's future reach or planning horizon, are also important factors to consider. Short-term planning lends itself mainly to execution planning, while longer-term planning becomes primarily avoidance planning (Laufer, 1991). In any case, the immediate and clear cost of planning, which is

▪ **About the Author**

Diane Hayes is a student in the information systems doctoral program at The School of Computer and Information Sciences, Nova Southeastern University. She received a master in health administration degree from the Medical University of South Carolina and a master in business administration from Oklahoma State University. Her work experience includes over 20 years in healthcare. She is currently a project manager with Sabre Inc., a global travel and transportation information technology company.

an increase in the time elapsed and the use of resources, may override the nonquantifiable benefits of early planning and be sacrificed in a schedule-driven project (Laufer, 1991).

Hallows (1998) identifies four phases in a project management road map: (1) understanding the project, (2) defining the project, (3) planning the project, and (4) running the project. The first two phases directly affect the project initiation process. Understanding the project includes assimilating information on the project's background, justification, politics, priorities, and players. A focused awareness of the project in a cultural and political context allows the project manager to better comprehend the environment surrounding the project. The second phase, project definition, includes establishing project scope, defining project deliverables, defining project organization, and determining how deliverables will be reviewed and approved. This phase defines what will be produced near the project's origin, thus enhancing the project team's ability to focus on the needs of the client as decisions are made throughout the project life cycle.

Within the context of the project management road map, a project plan, charter, or statement is defined as only one of 11 items on a sample list of planning deliverables (Hallows, 1998). Project overview and approach, definition of scope, and a list of deliverables are included as separate components, although a clear definition of each is omitted.

A Guide to the Project Management Body of Knowledge (*PMBOK® Guide*) states that project plan development should result in a document that clearly includes a project's historical perspective, constraints and assumptions, and organizational policies that may impact project decision-making (Project Management Institute Standards Committee, 1996). The *PMBOK® Guide* views project plan development as one phase of project integration management. Project integration management consists of those processes required for the proper coordination of various project elements: project plan development, project plan execution, and overall change control (Project Management Institute Standards Committee). No distinction is made between components of the project initiation phase and the further detailed planning phase in the *PMBOK® Guide* methodology.

Weiss and Wysocki (1992) identify project definition as the first stage of a five-phase method to plan and execute a project. A *project overview* is the output of the project definition phase. This document becomes the basis for subsequent, more detailed planning. The project overview records valuable information: a statement of the problem or opportunity, project goals and objectives, assumptions and risks, and preliminary resources (Weiss & Wysocki). The instrument provides general information for management, a reference base

for use in answering questions or addressing conflicts, a guide for project team recruitment and training, the establishment of performance standards, and a reference point for evaluating progress and goal attainment throughout the project (Badiru, 1991). The project overview prescribes components that are equivalent to a subset of those included in the *Tryon and Associates Project Charter* template adopted by SJMC.

The main goals of the definition and initiation phases of project planning are to clearly establish why the project is being initiated and specifically what must be accomplished. Additionally, information is collected about the project environment (Hallows, 1998). The *Tryon and Associates Project Charter* template addresses these goals in the first three sections of the template: the project overview, opportunity statement, and impact statement (Tryon and Associates, 1998).

The project overview provides information on the history of events leading to the project, describes why the project was initiated, and states the intent of the project. Identification of the project owner is also listed in this section. This chronicle provides a basis for understanding the project environment, an important aspect of project management (Hallows, 1998).

The opportunity statement, the second section of the SJMC-adopted project charter template, identifies the customer and states the principal business reasons for instigating a project. This section may also include the conceptualization of project deliverables. The opportunity statement, in conjunction with other sections of the project charter, further conveys the essentials of the project to the project team and forms the basis for a proposal to the customer if necessary (Eisner, 1997).

The third section of the project charter, the impact statement, identifies the influence that the project will have on other processes such as operations, technology, and business. This information provides the project team with a sense of purpose and usefulness (Lewis, 1995a).

The work breakdown structure (WBS), a hierarchical organization of the elements contained in the project, is one project management tool that is included as a component to be developed in the initiation phase of a project (Badiru, 1991; Project Management Institute Standards Committee, 1996). Other authors cite the usefulness of the WBS later in the planning or implementation process. Badiru, Lewis, and the *PMBOK® Guide* include the WBS as a component of the initiation phase of project management. The tool is not specifically addressed in the *Tryon and Associates Project Charter* template.

A project charter or contract—a living document with updates and revisions as additional knowledge about the project is gained—will improve communications, clarify expectations, and aid the balance of conflicting objectives when it is used effectively. As such,

the project charter provides a project management approach that is approved and documented (Zells, 1991). The charter's emphasis on the philosophies, requirements, constraints, and dependencies aids the discovery of decisions that can be controlled and ultimately affect successful project completion (Zells).

Methodology

The project consisted of a review of the literature and developmental study. The *Tryon and Associates Project Charter* adopted by SJMC's Information Technology Department was used as the basis for project charter development (Tryon and Associates, 1998). In addition, the completeness and effectiveness of this template as a project management tool was evaluated in terms of the current research and literature in project management planning methodologies. The output produced was a working project charter for use in the planning phase of one of RML's current information system development projects: RML Turnaround Time System.

The scope of the literature review identified documents related to a systematic approach to the development of a project plan. Each section of the project charter template was defined and reviewed separately: project overview, opportunity statement, impact statement, constraints and assumptions, project scope, project objectives, project justification, project approach, project organization, and project agreement. An assessment of the justification for inclusion in the template, based upon a review of the literature, was accomplished. In addition, the project entitled RML Turnaround Time System provided an opportunity to integrate a formal planning document into an authentic project in progress. The results of the newly developed project charter were examined and assessed in terms of project initiation methodologies identified in the literature.

Results

Evaluation of the *Tryon and Associates Project Charter.* The *Tryon and Associates Project Charter* template adopted by SJMC consists of 10 sections: project overview, opportunity statement, impact statement, constraints and assumptions, project scope, project objectives, project justification, project approach, project organization, and project charter acceptance (Tryon and Associates, 1998). Based upon a review of the literature, a discussion on each section's inclusion follows.

Project Overview. The project overview, or management summary, introduces to the project. Project history, reasons for project initiation, and the results of feasibility studies are outlined (Ashley, 1996). The clarification of other pertinent factors such as organiza-

tional values and beliefs in the political, social, environmental, and cultural domains can also be included, although such information can be difficult to elicit in a project's early stages (Goodman, 1984; Nidumolu, 1996). The inclusion of a project overview containing the expectations and views that are pertinent to the project management program contribute to a more complete description of the project in the project initiation phase, leading to a greater likelihood for success (Martin & Miller, 1982).

The project charter template adopted by SJMC prompts the inclusion of a brief summary and history of the project, as well as the reasons for project initiation and a description of the project's intent (Tryon and Associates, 1998). This closely follows discussion found in literature. Identification of the project owner is also suggested in this section of the project charter. No justification for inclusion of this information specifically in the project overview section of a project charter was found in the literature, but the importance of project owner or sponsor identification is recognized (Hamburger, 1991).

Opportunity Statement. The opportunity statement documents the business need and establishes the reasons for a project's existence (Dinsmore, 1993). The project's opportunity, problem, need, or benefit is stated here, providing purpose and direction for all associated objectives, activities, and tasks (Weiss & Wysocki, 1992). This section is included in the project initiation document to provide a description of the link between the required work and the requesting organization's strategic plan (Laufer, 1997).

The project charter template suggests that the opportunity statement may include items in addition to an identification of the business need: a preliminary reference to anticipated deliverables and features and identification of intended customers (Tryon and Assoicates, 1998). This contradicts Weiss & Wysocki's (1992) assertion that an opportunity statement should be "short, crisp, and to the point."

Impact Statement. The impact statement documents the expected influence a project will have on relevant business processes: operations, schedule, and technology, as well as other projects. In information systems projects, consideration should be give to the total system design, the project's impact on other systems, and how other departments may use the data or product produced (Koroknay, 1993). These identified influences are referred to as boundaries in the project initiation document described by Ashley (1996), who states that the impact of projects should be clearly defined in terms of interaction. No further citations were found in the literature to substantiate the specific inclusion of an impact statement in the "Tryon and Associates Project Charter" template.

Constraints and Assumptions. The constraints and assumptions section of the project charter provides the

opportunity to identify limiting or restricting factors that may affect a project (Tryon and Associates, 1998). Constraints are items that limit a project team's options (Project Management Institute Standards Committee, 1996). Constraints typically relate to schedule, resources, budget, technology, or contractual provisions (Ashley, 1996; Dinsmore, 1993). Constraints should be documented and communicated to the level required for decision-making (Martin & Miller, 1982), so inclusion in the project charter is valid.

Assumptions are those conditions that are considered true, certain, or real for planning purposes (Project Management Institute Standards Committee, 1996). Assumptions are necessary because some degree of uncertainty is present in the planning stages of every project (Dinsmore, 1993). This uncertainty can be due to several factors: insufficient planning, knowledge deficiency, or information that is incomplete, unclear, or unstable (Laufer, 1991). Major assumptions are documented because they can have a significant impact on estimating and planning.

The inclusion of assumptions in the project charter serves multiple purposes. First, agreement on the assumptions can be validated before a project plan is created (Lewis, 1995b). Additionally, the creation of the list of assumptions facilitates further consideration of issues associated with project execution by the project team and provides evidence of the understanding of the assumptions involved in project planning to the project owner (Weiss & Wysocki, 1992). This documentation also becomes an important reference for the project manager to use as a basis for plan revision when assumptions change (Dinsmore, 1993).

Assumptions imply a degree of risk (Project Management Institute Standards Committee, 1996), and planning for risk is a fundamental part of project and task management. The exclusion of a section restricted to the exploration of project risk in the project charter template is remarkable. The constraints and assumptions section provides the most closely related opportunity to document such information. The template notes that identification of the impact of each constraint or assumption is appropriate (Tryon and Associates, 1998). This mimics the directives for a risk assessment. It is possible, although not obvious, that the template's author expects risk assessment to occur under the guise of assumption declaration.

The literature review identifies sources that address the issue of open discussion of risk. There are instances where risk management is not considered at all because to do so would be to admit to something being wrong or uncontrollable (Boehm & DeMarco, 1997). The organizational culture of a business group affects the acceptance of risk as an openly discussible item. The extent of risk management's integration into an organization's behavior and its effect on project decisions is related to the stigma attached to the concept of risk (Charette, 1996). The active assessment of a project's risk can be stifled when the following occur: uncertainty is viewed as negative, information is not shared, bad news is filtered out, closure is not reached on difficult issues, probabilities are assessed intuitively, and comebacks are rewarded (Gemmer, 1997). Risk-taking project management must be supported by a culture that proactively stresses collaboration, cooperation, open discussion, and informed decision-making (Charette). Failure to include a well-defined risk identification and assessment in the project charter template lends itself to a suspect corporate culture that avoids risk acceptance.

Project Scope. Once the existence of a project has been formally recognized, a well-defined statement of scope is an important output of the project start-up and planning processes (Duncan, 1991). Scope definition should occur early in the life cycle of a project in order to provide a baseline for use in decision-making throughout the project's existence (Stone & Archibald, 1993). A high level of scope definition in the early planning phase of a project significantly improves the accuracy of cost and schedule estimates. Additionally, the time invested in clarifying the scope will improve the probability of meeting project objectives (Gibson, Dumont, & Fish, 1996).

There are two types of scope in the project context: product or system scope and project scope (Hallows, 1998). Product scope means coming to an agreement on the features, boundaries, and business functions that will be included in the product or service under development. The scope of the project is the work that must be accomplished for successful product delivery (Project Management Institute Standards Committee, 1996). A clear understanding of the product and the work necessary to produce that product provides the baseline from which future changes in the product, the project, or both can be measured. There is less likelihood for disagreement among the primary stakeholders during the course of the project when the baseline is definitive (Webster, 1994).

Project scope management is necessary to ensure that all the work required for successful project completion is defined and included in a project. Scope planning, definition of scope, scope verification, and scope change control are processes that must be considered when developing a successful scope management plan (Project Management Institute Standards Committee, 1996). Each of these areas contributes to the clarification of the project definition and requires firm oversight and management (Hallows, 1998).

The *Tryon and Associates Project Charter* template adopted by SJMC provides the means to identify measurable criteria necessary for project completion, although inclusion of a scope change control process is not specifically suggested (Tryon and Associates, 1998). A formal

mechanism for change management is in order regardless of how completely and conscientiously the scope has been defined (Hallows, 1998). The addition of an entry in the comment section of the project charter template regarding the inclusion of the process to accommodate expected scope changes would help assure the formal documentation of a change management plan.

Project Objectives. Well-defined project objectives outline the achievements necessary to declare successful project completion and include several characteristics. A statement of objectives should be specific, measurable, attainable, realistic, and time limited (Lewis, 1995a). Measures of cost, schedule, and quality must be included to provide quantifiable criteria that can be clearly assessed in the determination of project completion (Project Management Institute Standards Committee, 1996). An objective defines the result to be achieved, but does not designate the method or solution for achievement (Lewis, 1995a). Project objectives used to declare the scope of a project that are poorly identified, defined, and documented can adversely affect results—projects can fall short of schedule, cost, and operational goals (Forsberg, Mooz, & Cotterman, 1996). Well-defined project objectives define the scope of the project and are critical elements in the determination of project success (Duncan, 1991). The project charter template adopted by SJMC does include a section for the documentation of project objectives, but reminds the user simply that objective criteria should be measurable (Tryon and Associates, 1998).

Project Justification. A documented project justification describes the returns expected from project completion. This introduces an awareness of the cost/benefit ratio, providing a record of the expected benefits identified as an outcome of the costs versus benefits analysis (Signore, 1985). When the justification is quantified, the improved savings or revenues are clearly identifiable and become a project goal (Hallows, 1998). Economic and financial studies of market demands for the project output, tangible and intangible production costs, working capital, and funds generation may be necessary to ensure an operational project (Goodman, 1984). A well-developed and complete project justification provides a basis for assessing the impact of future decisions (Project Management Institute Standards Committee, 1996).

The *Tryon and Associates Project Charter* template advises that preliminary identification of the known cost and benefits from project performance should be included in the project justification section. The suggestion that a fuller definition may need to be outlined in ancillary documents is also included in the template (Tryon and Associates, 1998). This counsel does not significantly deviate from project justification statements described in literature.

Project Approach. Strategies for the achievement of project objectives should be developed comprehensively at the project's outset (Dinsmore, 1993). A description of the project management approach or strategy should also be included as part of the project plan development (Project Management Institute Standards Committee, 1996). The project approach section of the SJMC-adopted project charter provides an opportunity to communicate an outline of the general strategy for completing the project. Plans must be established to work within the existing environment and the overall business strategy, while addressing the project's opportunities, risks, and other associated issues (Dinsmore, 1993). The more specific approach statement, in contrast to the cursory opportunity statement, can be appraised on its fit with organizational strategies (Lewis, 1995b). Often there are alternative strategies to be considered as well. The use of a problem-solving approach can be effective for the development and evaluation of such alternatives (Lewis, 1995b).

The timing of project strategy development is important. The overall approach to achieve the project's major objectives can only be determined once the project's mission and objectives have been defined. Lack of sufficient definition may result in vagueness if the development of the project strategy is accomplished too early in the project life cycle, yet decisions previously made could limit possible alternative strategies if addressed too late (Lewis, 1995b). Finally, the entire project team should be involved in the project approach or strategy development (McNeil & Hartley, 1986). This facilitates the proactive acceptance of the strategy by project participants, a factor key to the success of the project (Dinsmore, 1993).

The *Tryon and Associates Project Charter* template guides the user to describe project methods or processes that will be used in addition to the general strategy (Tryon and Associates, 1998). This provides an opportunity to communicate the integration of the work of the project with the performing organization's ongoing operations (Project Management Institute Standards Committee, 1996). Without further information, though, it is unclear whether the template's project approach section is also the appropriate place to include a framework for the integration of the project work scope, schedule, resources, and cost. If this is the suitable area, then inclusion of the work breakdown structure, statement of work, project milestone schedule, resource allocations, cost accounts, and budget estimates would be appropriate (Dinsmore, 1993).

Project Organization. Early organization of the project team plays an important role in effective project initiation (Hamburger, 1991). Identifying the necessary functional skills and resources necessary, given an understanding of the project's objectives and scope of work performed, is a critical activity (Signore, 1985).

Experience, organization skills, and technical ability must be assessed for potential team members during the conceptual design phase. Also, business functional knowledge and interpersonal and management skills are considered to be very important factors when staffing (Chatzoglou, 1997). The ideal team will be well balanced (Signore, 1985). In information systems projects, the distinctive competencies of users and designers must also be recognized in order to facilitate clear and open communication patterns between the groups (Amoako-Gyampah & White, 1997). Successful companies succeed by developing a team that is committed to preestablished project objectives and continuous and effective communication (Wideman, 1981).

Once a project team is organized, compatibility with the structural requirements of an organization must be established (Hamburger, 1991). This is accomplished by outlining an organizational structure that identifies the roles, responsibilities, lines of authority, reporting requirements, and communication methods expected of all participants (Ashley, 1996). The role of the project sponsor and the expected relationship to the project, the project manager, and the project participants should also be outlined (Hamburger, 1991).

The *Tryon and Associates Project Charter* template is designed to provide identification of the roles and responsibilities of the project organization. General responsibilities of the project owner and project manager are stated within the template (Tryon and Associates, 1998). The template does not, though, suggest a means for inclusion of lines of authority, the relationship between participants and their principle organizational affiliation, or reporting and communication methods. This omission could result in a lack of integration between users and project team participants, even when elements of traditional user involvement are in place (Amoako-Gyampah & White, 1997).

Project Charter Acceptance. Project charter acceptance provides a means of documenting a formal agreement on the terms set forth in the project charter. Formal acceptance officially establishes common agreement on the operating methodology and defined project requirements (Hamburger, 1991). This evidence of the presentation of the relevant elements of a project to the project owner facilitates obtaining commitment (Hamburger, 1991). Such validation of a cooperative relationship ultimately facilitates planning consistency and results in higher-quality project decisions (Laufer, 1991).

The *Tryon and Associates Project Charter* acceptance recommends approval from the project owner, as well as other corporately designated stakeholders (Tryon and Associates, 1998). Zells (1991) supports obtaining official approval of a project contract by any participant at any level that can affect the schedule and quality of the project. Widespread approval by all contributors promotes a clear understanding of project deliverables,

as well as the project management process, in the earliest stages (Zells). The project charter acceptance statement advocates the formal inclusion of fewer individuals in the authorization process.

Evaluation of the RML Turnaround Time System Project Charter. Project origination stems from the existence of an opportunity or problem (Haynes, 1996). In the case of the RML Turnaround Time System, the problem was the lack of comprehensive measures to evaluate turnaround time performance. Test turnaround time is a major component of service quality in the clinical laboratory. The decision to do something to solve this problem resulted in the request for an information system development project. Project initiation was the formal recognition of the existence of this project (Project Management Institute Standards Committee, 1996).

The project charter associated with the initiation phase of the RML project (Hayes, 1998) was a result of full discussion between the project manager responsible for carrying out the project, the RML client and the staff, and the Infometric Systems Corporation development team (Haynes, 1996). The product description, business need, assumptions, and constraints were recorded along with additional information, in order to better understand the project: the justification, background, players, politics, and priorities (Project Management Institute Standards Committee, 1996). Such information provided further understanding of the project environment, framework, and people. Although yet untested, it is expected that this recorded information in the form of the project charter will enhance responsible decision-making as the project progresses (Hallows, 1998).

Project Overview. The project overview section introduced the RML Turnaround Time project. This segment included a brief history of the project, and a short explanation of the project's intent. The reason for project initiation was addressed, although the declarations of the need for an "upgraded and expanded" system were vague. Clarification of organizational, political, social, cultural, and environmental factors were omitted. The original project owners were noted, as suggested in the template's user prompt. The RML Turnaround Time project overview appeared to provide an adequate abstract of the project.

Opportunity Statement. A dedicated statement of the opportunity or problem prompting project initiation was documented in the RML Turnaround Time Project Charter. The business need addressed by this project was clearly identified within the project charter's opportunity statement. An attempt was made to describe returns that occur if the project is a success: the identification of process problems affecting turnaround time and adequate response times. This inclusion facilitated a common understanding of the project's major boundaries and the surrounding business functions (Hallows, 1998). Such a link between the project goals and objec-

tives and a broader organizational mission, provided by a documented project opportunity statement, ideally resulted in more complete understanding by the client and project team members (Duncan, 1991).

Impact Statement. The impact statement portion of the RML Turnaround Time Project Charter listed several systems that could be affected by the project: specimen transport, test ordering, specimen processing, clinical testing, staffing, instrumentation, test schedules, result distribution, and client communication (Hayes, 1998). These areas of interactions or boundaries were clearly cited. This portion of the charter included internal boundaries, as well as interactions external to the project organization. The impact statement satisfactorily documented project influences.

Constraints and Assumptions. The RML Turnaround Time Project Charter's constraints and assumptions section identified limitations and restrictions placed on the project. The category containing assumptions provided a clear explanation of eight conditions assumed true at the time of project initiation. There were four limitations or constraints identified. Items and questions needing further consideration were also listed in this section. It is assumed that answers or resolution to these questions were added as other project charter updates were made throughout the course of the project. Clear documentation of assumptions and constraints conferred increased understanding of estimates and other aspects of the project plan (Lewis, 1995b).

The RML Turnaround Time System Project Charter did not state the potential impact of each constraint or assumption, as the Tryon and Associates Project Charter template proposes. This exclusion was remarkable if this section was expected to provide the only attempt at risk assessment. Planning for risk should have been a fundamental part of project and task management (Eisner, 1997). The role of the project manager in this case was to predict the potential risks to the success of the project, and manage these risks before they had a significant negative effect on the project outcome (Van Scoy, 1992). Open communication occurring within project teams—as well as between project team members, senior management, and other stakeholders—should have been solicited and documented in the RML Turnaround Time Project Charter (Hayes, 1998), with the understanding that effective risk communication would provide information and perspective to aid informed decision-making (Gemmer, 1997).

Project Scope and Project Objectives. The project scope and project objective sections of the Tryon and Associates Project Charter template were combined into one in the RML Turnaround Time Project Charter. An evaluation of the project scope and objectives statement developed for the RML Turnaround Time project was based on a review of the scope statement outputs defined in the *PMBOK® Guide*: project product, project deliverables, and project objectives (Project Management Institute Standards Committee, 1996). An assessment based on these outputs provided a means of identifying the strengths, weaknesses, and omissions found within this section of the project charter.

One component of the scope statement—project product—was addressed in the developed scope statement. The statement provides a brief summary of the product description, although the requirements outlined are somewhat vague, imprecise, and lacking in detail. An example of this is "provide a standard user interface to allow senior management to gain access to all information necessary" (Hayes, 1998), a statement without a clear definition of terms. The practical side of more precise need articulation, seen as lacking in this case, is the development of functional requirements (Frame, 1995). In this case, the formulation of functional requirements, characteristics of a deliverable described by the functions they are to perform, is absent (Eisner, 1997). It appears that the project product description must be further addressed, probed, and refined to document more clearly and completely the needs of the user in order to maximize the component's usefulness.

Project deliverables, another component of a well-defined scope statement, were not identified in the project scope and objectives statement. Project deliverables consist of the aggregate of tangible items that the project will produce, along with a brief description of each (Forsberg, Mooz, & Cotterman, 1996). A sample list of deliverables for a systems development project addresses aspects of both the project and the product. The list of deliverables may vary from one project to the next in both number and complexity, but the defined deliverables should always be reviewed and approved by the client (Hallows, 1998). This helps ensure that major stakeholders agree upon the goods to be produced during the course of the project. The addition of the list of project deliverables would improve the RML Turnaround time project scope statement.

Project objectives were the final items to be addressed in an effective scope statement. Project objectives are scope, time, cost, and quality parameters that must be evaluated to determine a project's success (Woolshlager, 1986). Written objectives are more specific than the mission statement or project justification (Lewis, 1995a), and it is important that objective criteria are quantifiable as a means of measuring attainment (Project Management Institute Standards Committee, 1996). Project objectives in any form were absent in the scope statement constructed for the RML Turnaround Time Project Charter. No measurable criteria were outlined to determine project completion. This lack of specific, measurable, assignable, realistic, and time-related goals could severely decrease the reliability of subsequent planning (Dinsmore, 1993).

Project Justification. The *Tryon and Associates Project Charter* template proposes a summary of the cost/ben-

efit analysis as the content of the project justification. The project justification was absent from the RML Turnaround Time Project Charter. The exclusion of a summary of project financials at project initiation was striking. This information should have communicated a summary of the project's known costs and benefits, both tangible and intangible, and provided a basis for evaluating the impact of future decisions (Project Management Institute Standards Committee, 1996). Incomplete project information for the project team and stakeholders resulted from this omission.

Project Approach. The RML Turnaround Time project approach section of the project charter identified the general strategy for completing the project by including the expected steps of system development. The *Tryon and Associates Project Charter* template also suggested other components for inclusion: any methods or processes that will be used throughout the project. The project manager did not include these at the time of the charter's development. A synopsis of the project management approach would have enhanced the value of the project charter and was a recommended output of project plan development (Project Management Institute Standards Committee, 1996).

Project Organization. The project organization was clearly specified in this portion of RML Turnaround Time Project Charter. Names of the core project team members, as well as their accompanying positions of responsibility, were documented in this section, and the project owners were identified. An improvement would have been the inclusion of a detailed description of responsibilities by individual, recognizing the role, authority, and accountability of each team member to the project (Lewis, 1995b).

Project Charter Acceptance. This section of the RML Turnaround Time Project Charter provided documentation confirming that the RML project team members had read the charter, discussed concerns, verified expectations, and validated project completion as a realistic notion. The requirement of obtaining signatures indicated the seriousness of the document and emphasized that the project document should be acceptable to all project participants (Zells, 1991). Infometric Systems Corporation (ISC) software development project team members' signatures were not obtained as a part of RML Turnaround Time Project charter acceptance. Every project participant should have participated in the charter's approval, not only those individuals representing RML. The exclusion of ISC project team participants resulted in unilateral affirmation. All project participants who could influence successful project completion should have signed the charter, resulting in formal confirmation of an understanding of the project management process and its deliverables by all project participants at the project's inception (Zells).

Conclusions

Innovation and project management formation is best accomplished in the early stage of a project (Signore, 1985). The project charter is important to the success of a project, transforming agreements and facts into a documented project management approach (Zells, 1991). This output begins to organize and document a project's need and expected outcomes at the beginning of the project management process, and provides a foundation on which to base project decisions (Lewis, 1995b).

The project's literature review substantiated the importance of the project initiation phase to the project management process. There was disparity among authors in terminology used to describe various components of project initiation, although the intent of each was described similarly. Mission, goal, and opportunity were examples of such terms. Additionally, some inconsistencies were found in the positioning of a particular component within the process. The distinction between the initiation and planning phases was not clearly stated in all cases, making organization of the literature review challenging. It is noted that the role of the *Tryon and Associates Project Charter* is significant in the initiation phase of a project, as the charter is a precursor to the development of a more detailed project plan in later stages.

The project charter template developed by Tryon and Associates (1998) and adopted by St. John Medical Center's Information Technology Department provided a repeatable project initiation process for use in RML's early attempt at adopting a formal project management process. A review of the complete *Tryon and Associates Project Charter* template was achieved, as well as the development and evaluation of the RML Turnaround Time System Project Charter. The introduction of this type of project management document to RML began to address the problem of a complete lack of a repeatable project management process for RML information systems project development. It was only the second attempt by RML to document the project initiation process in this manner. The method was well received by the organization's project participants, in spite of the project charter's numerous weaknesses and omissions. This project was significant because it introduced the concept of a formalized project initiation process to RML, which had been absent in the past. It is expected that the knowledge gained by the project manager and project team will be built upon, as future information systems development projects are initiated.

References

Amoako-Gyampah, K., & White, K.B. (1997, Summer). Managing technology: When is user involvement not user involvement? *Information Strategy: The Executive's Journal, 13* (4), 40–45.

Ashley, J. (1996). *PRINCE in small organizations.* [Online]. Available: http://www.avnet.co.uk/tesseract/PiP/articles/Ashley/Ashley

Badiru, A.B. (1991). *Project management tools for engineering and management professionals*. Norcross, GA: Industrial Engineering and Management Press.

Boehm, B.W., & DeMarco, T. (1997, May/June). Software risk management. *IEEE Software, 14* (3), 110–117.

Burke, R. (1993). *Project management planning and control* (2nd ed.). New York: John Wiley & Sons.

Charette, R.N. (1996, July). Large-scale project management is risk management. *IEEE Software, 13* (4), 110–117.

Chatzoglou, P.D. (1997). Factors affecting completion of the requirements capture stage of projects with different characteristics. *Information and Software Technology, 39*, 627–640.

Curtis, M. (1996). A framework for project management. *Software Quality Journal, 5*, 97–105.

Dinsmore, P.C. (ed.). (1993). *The AMA handbook of project management*. New York: AMACOM.

Duncan, W.R. (1991). How to succeed in white collar projects without really trying: Redefine the scope, shrink the project, validate the plan. *Proceedings of the 22nd Annual Project Management Institute 1991 Seminar & Symposium*, 406–411.

Eisner, H. (1997). Essentials of project and systems engineering management. New York: John Wiley & Sons.

Forsberg, K., Mooz, H., & Cotterman, H. (1996). *Visualizing project management*. New York: John Wiley & Sons.

Frame, J.D. (1995). *Managing projects in organizations*. San Francisco: Jossey-Bass Publishers.

Gemmer, A.H. (1997, May). Risk management: Moving beyond process. *Computer, 30* (5), 33–43.

Gibson, G.E., Dumont, P.R., & Fish, J.R. (1996). Scope management: Using the project definition rating index (PDRI). *Proceedings of the 27th Annual Project Management Institute 1996 Seminar & Symposium*, 1–7.

Goodman, L.J. (1984, December). Integrated project planning and management: A new approach. *Project Management Journal, 15* (4), 66–76.

Hallows, J. (1998). *Information systems project management*. New York: American Management Association.

Hamburger, D. (1991). Project kick-off—Getting the project off on the right foot. *Proceedings of the 22nd Annual Project Management Institute 1991 Seminar & Symposium*, 730–736.

Hayes, Diane. (1998). RML Turnaround Time System Project Charter. Prepared for Regional Medical Laboratory.

Haynes, M.E. (1996). *Project management* (Rev. ed.). Menlo Park, California: Crisp Publications, Inc.

Kliem, R.L., & Ludin, I.S. (1996, May). Developing a project management methodology for Is environments. *Managing System Development*, 1–4.

Koroknay, J.W. (1993). Software development using process project management. *Proceedings of the 24th Annual Project Management Institute 1993 Seminar & Symposium*, 544–552.

Laufer, A. (1991, June). Project planning: Timing issues and path of progress. *Project Management Journal, 22* (2), 39–45.

Laufer, A. (1997). *Simultaneous management*. New York: AMACOM.

Lewis, J.P. (1995a). *Fundamentals of project management*. New York: American Management Association.

Lewis, J.P. (1995b). *Project planning, scheduling and control* (Rev. ed.). Chicago: Irwin Professional Publishing.

Martin, M.D., & Miller, K. (1982, March). Project planning as the primary management function. *Project Management Quarterly, 13* (1), 31–38.

McNeil, H.J., & Hartley, K.O. (1986, March). Project planning and performance. *Project Management Journal, 17* (1), 36–43.

Nidumolu, S.R. (1996). Standardization, requirements uncertainty and software project performance. *Information & Management, 31*, 135–150.

Signore, A.A. (1985, September). Conceptual project planning from an owner's perspective. *Project Management Journal, 16* (4), 52–58.

Stone, W., & Archibald, R.D. (1993). Team planning workshops cut project time and cost. *Project Management Institute Seminar & Symposium: papers presented October 1–7, 1993*, 491–494.

Tryon and Associates. (1997, March). Managing single-time efforts: Project management in the information age [Online]. Available: http://www.tryonassoc.com/seminars/index.asp

Tryon and Associates. (1998). *Project Charter Template.* [Online]. Available: http://www.tryonassoc.com/news/ProjCharterTempl.asp

Van Scoy, R.L. (1992, September). *Software development risk: Opportunity, not problem.* (Tech. Rep. No. CMU/SEI-92-TR-30 / ESC-TR-92-030). Pittsburgh, PA: Carnegie Mellon University, Software Engineering Institute.

Webster, Francis. (1994, September). PM 101: Scope management [PM tutorial]. *PM Network*, 38–40.

Project Management Institute Standards Committee. (1996). *A guide to the project management body of knowledge*. Upper Darby, PA: Project Management Institute.

Weiss, J.W., & Wysocki, R.K. (1992). *5-Phase project management*. Reading, MA: Addison-Wesley Publishing Company, Inc.

Wideman, R.M. (1981, September). Managing project development for better results. *Project Management Quarterly, 12* (3), 13–19.

Woolshlager, L.C. (1986, August). Scope management. *Project Management Journal*, 37–42.

Zells, L. (1991). Balancing trade-offs in quality, cost, schedule, resources, and risk. *Proceedings of the 22nd Annual Project Management Institute 1991 Seminar & Symposium*, 406–411.