Harnessing the Power of the PM/BA Partnership

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Management Concepts

Introduction

Projects play an essential role in the growth and survival of organizations today. It is through projects that we create value in the form of improved business processes and new products and services in response to changes in the business environment. Since data and information are the lifeblood of virtually all business practices, projects with significant IT components are often the key mechanism used to turn an organization's vision and strategy into reality. Executives have their eye on the project portfolio to ensure that they invest in the right mix of projects, optimize their resources, develop expert capabilities to deliver flawlessly, and ultimately capture the expected added value to the business. In the 21st century we are bombarded with constant change brought about by the Internet, the global economy, and the prevalent use of technology; as a result, there appears to be a never-ending demand for new business solutions supported by IT products and services. Executives across the spectrum are adopting the practices of superior project management and business analysis to increase the value projects bring to their organizations.

The Project Performance Partnership

In the spirit of high-performing teams, project managers align themselves with professional business analysts, expert technologists, and business visionaries to understand business problems or new opportunities, and determine the most appropriate, cost-effective, fastest time-to-market, and innovative solutions. As this core team forms, a project performance partnership emerges that rivals the world's greatest teams (e.g., tiger teams, special operations teams, professional sports teams, parametric teams). At the center of the team is the dynamic twosome: the project manager and the business analyst. The project manager concentrates on the management of the project, ensuring the project delivers on time, on budget, and with the full scope of the requirements met. While the business analyst focuses on management of the business needs, business requirements, and expected business benefits. The wise project manager welcomes this teaming trend, understanding that inadequate information relating to business needs leads to poor estimates, and makes time and cost management virtually impossible.

Business analysis and project management have become central business management competencies of the twenty-first century. These competencies are essential because requirements play a vital role in engineering business solutions, and projects are essential to organizational success. In addition, organizations are realizing that the reasons projects fail are almost always tied to poor requirements and ineffective project management (The Standish Group International, 2001). The following table depicts the resolution of 30,000 applications projects in large, medium, and small cross-industry U.S. companies tested by the Standish Group from 1994 to 2006.

Year	Successful Projects	Failed Projects	Challenged Projects
2006	35%	19%	46%
2004	29%	18%	53%
2000	28%	23%	49%
1998	26%	28%	44%
1996	27%	40%	33%
1994	16%	31%	53%

Source: The Standish Group Project Resolution History, CHAOS Research Reports (2001)

Clearly there has been a steady improvement in project performance since 1994. According to the Standish Group reports, the reasons for the overall improvement include smaller projects (the average cost of a project had been downsized more than half by 2001); better skilled project managers; and better methods and tools to manage changes. The Standish Group continues to recommend minimizing project scope, reducing project resources, and downsizing timelines to improve project success. The Standish Group also predicts that the number of critical projects wills double each year; therefore, we must continue to work vigilantly to improve project performance, paying particular attention to the elements it calls the *Recipe for Project Success: The CHAOS Ten*, which are listed here grouped by category. Notice that many of these elements relate to business analysis and the remaining are about better project management.
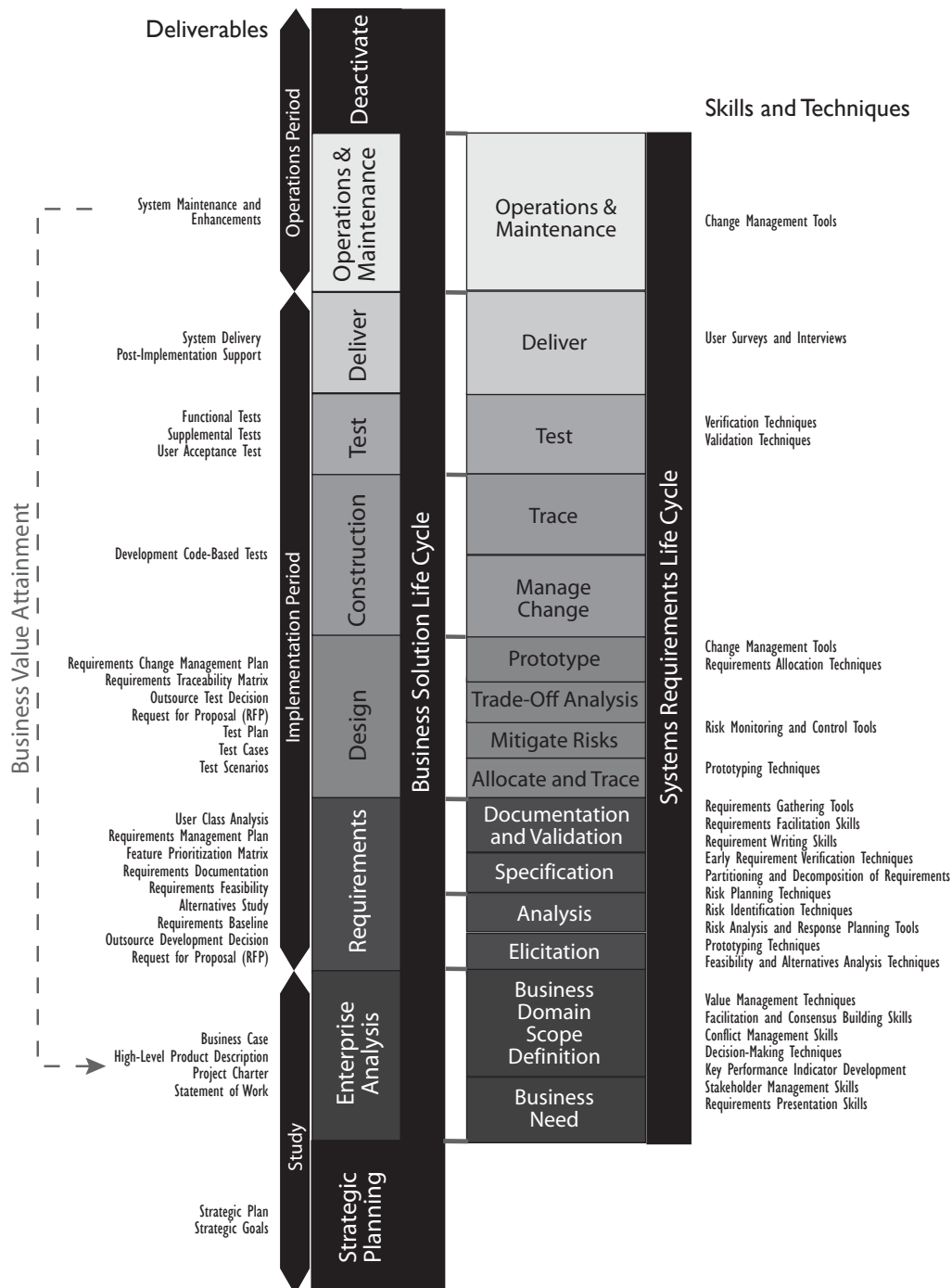
Recipe for Project Success: The CHAOS Ten

Project Management	Business Analysis
1. Executive support 2. Experienced project managers 3. Standard infrastructure 4. Formal methodology 5. Reliable estimates 6. Small milestones, proper planning, and competent staff	7. User involvement 8. Clear business objectives 9. Minimized scope 10. Firm basic requirements

It is the project manager who owns the Business Solution Life Cycle, and the business analyst who owns the Systems Requirements Life Cycle, from understanding the business need to ensuring that the delivered solution meets the need and adds value to the bottom line (See Figure 1). For complex twenty-first century projects, the business analyst has a critical role throughout the Business Solution Development Life Cycle, not simply during the requirements phase. Business requirements analysis differs from traditional information systems analysis because of its focus, which is exclusively on adding value to the business. In particular, project managers rely on business analysts to assist in providing more detailed project objectives; business needs analysis; clear, structured, usable requirements; trade-off analysis; requirement feasibility and risk analysis; and cost-benefit analysis. Poor requirements definition emerges without this key liaison between business and IT departments, resulting in a disconnect between what IT builds and what the business needs.

Combining Disciplines Leads To Success

For organizations to achieve strategies through projects, a strong partnership between the project manager and the business analyst is essential. Indeed, when this partnership exists, and they both embrace the contributions of expert technologists and business visionaries, collaboration, innovation, and far superior project performance is realized. For an in-depth discussion of the project

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Figure 1 – Business Solution Life Cycle Mapped to the System Requirements Life Cycle

Deliverables

Skills and Techniques

Business Value Attainment

Operations Period

Deactivate

System Maintenance and Enhancements — Operations & Maintenance — Operations & Maintenance — Change Management Tools

System Delivery
Post-Implementation Support — Deliver — Deliver — User Surveys and Interviews

Functional Tests
Supplemental Tests
User Acceptance Test — Test — Test — Verification Techniques / Validation Techniques

— Construction — Trace

Development Code-Based Tests — Construction — Manage Change

Implementation Period

Requirements Change Management Plan
Requirements Traceability Matrix
Outsource Test Decision
Request for Proposal (RFP)
Test Plan
Test Cases
Test Scenarios — Design — Prototype / Trade-Off Analysis / Mitigate Risks / Allocate and Trace — Change Management Tools / Requirements Allocation Techniques / Risk Monitoring and Control Tools / Prototyping Techniques

User Class Analysis
Requirements Management Plan
Feature Prioritization Matrix
Requirements Documentation
Requirements Feasibility
Alternatives Study
Requirements Baseline
Outsource Development Decision
Request for Proposal (RFP) — Requirements — Documentation and Validation / Specification / Analysis / Elicitation — Requirements Gathering Tools / Requirements Facilitation Skills / Requirement Writing Skills / Early Requirement Verification Techniques / Partitioning and Decomposition of Requirements / Risk Planning Techniques / Risk Identification Techniques / Risk Analysis and Response Planning Tools / Prototyping Techniques / Feasibility and Alternatives Analysis Techniques

Business Case
High-Level Product Description
Project Charter
Statement of Work — Enterprise Analysis — Business Domain Scope Definition / Business Need — Value Management Techniques / Facilitation and Consensus Building Skills / Conflict Management Skills / Decision-Making Techniques / Key Performance Indicator Development / Stakeholder Management Skills / Requirements Presentation Skills

Study

Strategic Plan
Strategic Goals — Strategic Planning

Business Solution Life Cycle

Systems Requirements Life Cycle

manager and business analyst partnership, it is helpful to frame the dialogue in the context of a generic project cycle. Refer to Figure 1 once again, the "Business Solution Life Cycle Mapped to the Systems Requirements Life Cycle," to provide context as we examine the nature of the partnership. The diagram shows a sequential development approach, from strategic planning to the business requirements to the delivery of a complete business solution. This is a simplistic model that guides the development process through its typical phases.

Strategic Planning and Enterprise Analysis

Strategic Planning

Strategic planning is the first phase in the Business Solution Life Cycle. During this phase the current state of an enterprise is examined and the desired future state is determined and described by a set of broad goals. The goals are then converted to measurable objectives designed to achieve the strategy.

Project managers and business analysts may not contribute directly to strategic planning activities since it is the responsibility of the senior leadership team. However, senior business analysts and project managers may be asked to conduct market research, benchmark studies, or competitive analysis surveys to inform the executive team as input to the strategic planning process. In some organizations, senior business analysts and project managers help plan and facilitate strategic planning sessions. Nevertheless, business analysts and project managers should have a full understanding of the strategic direction of the enterprise to determine how new initiatives fit into the long term strategy and/or mission of the organization, and to help build and manage the business case and other relevant information regarding business opportunities.

Enterprise Analysis

During the enterprise analysis phase, the collection of activities for depicting the current and future views of the business determine the gap in organizational capabilities needed to achieve the business strategies. Enterprise analysis activities then determine new business opportunities to close the gaps.

Enterprise analysis activities begin after the executive team of the organization develops strategic plans and goals. The core activities center on identifying new business opportunities or solutions to business problems; conducting studies, gathering information, and determining the solution approach; and developing a business case or project proposal document to recommend a new project to the leadership team for their decision on selection, prioritization and funding. If the new change initiative is selected, a new project is formed and requirements elicitation and project planning commence.

Deliverables

The business analyst and project manager collaborate with selected business and technology experts to produce the deliverables of the enterprise analysis activities.

Deliverable	Description
Business Architecture	The set of artifacts that comprise the documentation about the business
Feasibility, Benchmark, Competitive Studies	Conducting formal or informal studies prior to proposing a new project helps to discover very important information about the business opportunity
New Business Opportunities	As an outgrowth of strategic planning, the business analyst and project manager review the results of feasibility, benchmark, and competitive analysis studies, and the target business architecture to identify potential solution alternatives to achieve strategic goals
Business Case	A business case should be developed for all significant change initiatives and capital projects
Initial Risk Assessment	Once the business case is developed, the project manager and business analyst facilitate a risk management session using the same set of experts

PM/BA Collaboration Opportunities

The project manager and business analyst have numerous opportunities for collaboration to complete the enterprise analysis activities, including:

- Conducting feasibility, benchmark, and competitive studies
- Creating the business case, scope statements, preliminary time, and cost estimates
- Conducting risk assessment and risk response planning
- Establishing project priorities
- Managing stakeholders
- Getting the right people involved and excited about the potential project
- Partnering with the senior IT architecture team to create the solution's "vision"

Requirements and Design

During the requirements and early design phases the business need is discovered, analyzed, documented and validated and the solution concept begins to come into view.

Requirements Elicitation

Requirements are always unclear at the beginning of a project. It is through the process of progressive elaboration that requirements evolve into maturity. Requirements elicitation involves conducting initial requirements gathering sessions with customers, users, and stakeholders to begin the specification process. Requirements gathering techniques include discovery sessions and workshops, interviews, surveys, prototyping, reviews of existing systems and business documents, and note taking and feedback loops to customers, users, and stakeholders.

Requirements Analysis

Requirements are first stated in simple terms, and then analyzed and decomposed for clarity. Requirements analysis is the process of structuring requirements information into various categories, evaluating requirements for selected qualities, representing requirements in different forms, deriving detailed

requirements from high-level requirements, and negotiating priorities. Requirements analysis activities also include determining required function and performance characteristics, the context of implementation, stakeholder constraints, measures of effectiveness, and validation criteria. Through the analysis process, requirements are decomposed and captured in a combination of textual and graphical formats. Analysis activities include:

- **Studying** requirements feasibility to determine if the requirement is viable technically, operationally, and economically

- **Trading off** requirements to determine the most feasible requirement alternatives

- **Assessing** requirements feasibility by analyzing requirement risks and constraints and modifying requirements to mitigate identified risks. The goal is to reduce requirement risks through early validation prototyping techniques

- **Modeling** requirements to restate and clarify them. Modeling is accomplished at the appropriate usage, process, or detailed structural level

- **Deriving** additional requirements as more is learned about the business need

- **Prioritizing** requirements to reflect the fact that not all requirements are of equal value to the business. Prioritization may be delineated in terms of critical, high, average, and low priority. Prioritization is essential to determine the level of effort, budget, and time required to provide the highest priority functionality first. Then, perhaps, lower priority needs can be addressed in a later release of the system.

Requirements Specification

Requirement specifications are elaborated from and linked to the structured requirements, providing a repository of requirements with a completed attribute set. Through this process of progressive elaboration, the requirements team often detects areas that are not defined in sufficient detail, which,

unless addressed, can lead to uncontrolled changes to requirements. Specification involves identifying all the precise attributes of each requirement. The system specification document or database is an output of the requirements analysis process.

Requirements Documentation

Requirements documentation must be clear and concise since it is used by virtually everyone in the project. Transforming graphical requirements into textual form can make them more understandable to non-technical members of the team. Documentation involves translating the collective requirements into written requirements specifications and models in terms that are understood by all stakeholders.

Requirements Validation

Requirements validation is the process of evaluating requirements documents, models, and attributes to determine whether they satisfy the business needs and are complete enough that the project team can commence work on solution design and construction. The set of requirements is compared to the original initiating documents (business case, project charter, statement of work) to ensure completeness. Beyond establishing completeness, validation includes evaluating requirements to ensure that design risks associated with the requirements are minimized before further investment is made in solution development.

Deliverables

The business analyst and project manager collaborate with selected business and technology experts to produce the requirement deliverables.

Deliverable	Description
Stakeholder analysis and communication needs	Interviews are conducted with individuals and small groups to determine what business functions must be supported by the new solution.
Elicitation Workshop	An efficient way to gather information about the business need from a diverse group of stakeholders.
Survey	A valuable tool to collect a large amount of information from an array of stakeholders quickly and efficiently.
Document Review	The business analyst and project manager review all existing documentation about the business system, including policies, rules, procedures, regulations, and process descriptions.
Test Plan	Typically a document that describes the scope, approach, resources and timing of test activities.
Business Requirements Documentation and Validation	Structured, validated, archived and accessible requirements are the functional and performance needs for the new solution. They are captured in documents, tables, matrices, models, graphics, and prototypes
Requirements Management Plan	A document that describes how changes to requirements will be allocated, traced, and managed.

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PM/BA Collaboration Opportunities

The project manager and business analyst have numerous opportunities for collaboration during requirements activities, including:

- Conducting requirements elicitation workshops

- Determining the number of iterations of requirements elicitation, specification, and validation

- Determining the appropriate life cycle choice (e.g., waterfall, Agile, Spiral)

- Developing the project management plan

- Conducting trade-off analysis for the requirements and solution trade-offs

- Balancing the competing demands

- Validating requirements

- Prototyping

- Updating the business case

- Planning and facilitating the control gate review, sign-off on requirements, and go/no decisions

Solution Construction and Test

During the solution construction and testing, the business analyst and project manager collaborate to ensure changes to requirements are identified, specified, analyzed for impacts to the project (cost, schedule, business value added), and dis-positioned appropriately. The goal for both the business analyst and the project manager is to reduce the cost of changes and welcome changes that add business value. Requirements management activities include allocating requirements to solution components, tracing requirements throughout system design and development, and managing changes to requirements.

Deliverables

The business analyst and project manager collaborate with selected business and technology experts to produce the solution construction and test activities deliverables.

Deliverable	Description
Solution Verification and Validation	Validating requirements to provide evidence that the designed solution satisfies the requirements through user involvement in testing, demonstration, and inspection techniques. The final validation step is the user acceptance testing. Verifying requirements to provide evidence that the designed solution satisfies the requirements specification through test, inspection, demonstration, and/or analysis.
Business Policies, Procedures, Rules, and Education	For new business solutions, there are almost always changes to business rules, policies, and procedures.
Testing	Includes integration, system, and user acceptance testing.

PM/BA Collaboration Opportunities

The project manager and business analyst have numerous opportunities for collaboration during solution construction and testing phases, including:

- Developing the test plan and test approach

- Validating activities to ensure the solution meets the business requirements (customer reviews, product demonstrations)

- Reviewing test results and dis-positioning identified defects

- Conducting defect root cause analysis and determining the appropriate corrective action

- Managing issues

- Managing stakeholders

- Facilitating the go/no-go decision to deliver

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Solution Delivery

Planning for the organizational change management that is brought about by the delivery of a new business solution is often partially or even completely overlooked by project teams that are focused mainly on the IT application system. While the technical members of the project team plan and support the implementation of the new application system into the IT environment, the business analyst and project manager are working with the business unit management to bring about the benefits expected from the new business solution by:

- Assessing the organizational readiness for change, and planning and supporting a cultural change program

- Assessing the current state of the knowledge and skills resident within the business, determining the knowledge and skills needed to optimize the new business solution, and planning for and supporting the training, retooling, and staff acquisition for skill gaps

- Assessing the current state of the organizational structure within the business domain, determining the organizational structure needed to optimize the new business solution, and planning for and supporting the organizational restructuring

- Developing and implementing a robust communication campaign to support the organizational change initiative

- Determining, enlisting, and supporting managements' role in the championing the change

Deliverables

The business analyst and project manager collaborate with selected business and technology experts to produce the solution deployment activities deliverables.

Deliverable	Description
Deployment Plans	Developing and communicating the plans to implement the new business solution.
Business Policies, Rules, and Procedures	Implementation of business policies, procedures, rules, etc.
Education and Training	Training of business customers, stakeholders, and users to accept and operate the new business solution efficiently.
Post-Implementation Support	The business analyst and project manager provide support to the business customers, stakeholders, and users to help them learn how to operate the new business solution efficiently, and to resolve any issues that arise.
Lessons Learned	The business analyst and project manager conduct lessons learned sessions with the project team, business customers, stakeholders, users, and technical team to determine what went well, and what needs improvement for future projects.

PM/BA Collaboration Opportunities

The project manager and business analyst have numerous opportunities for collaboration during solution deployment activities, including:

- Developing, communicating, and getting approval for the deployment plan

  - Approach (deploy to all business units or use a phased in)

  - Which business units are affected?

  - When will the business units be implemented?

  - When will training be delivered?

  - When will post-implementation support by the core project team end?

- Making the decision to move to Operations and Maintenance

- Conducting lessons learned sessions

Operations and Maintenance

The business analyst and project manager's contributions to the success of the project do not end when the business solution is delivered and operational. There are key responsibilities during Operations and Maintenance (O&M) that must be filled. O&M is the phase in which the system is operated and maintained for the benefit of the business. Maintenance services are provided to prevent and correct defects in the business solution.

Deliverables

The business analyst and project manager collaborate with selected business and technology experts to produce the O&M phase deliverables.

Deliverable	Description
Solution Benefits Measurement	The actual business benefits that are realized are captured, analyzed and communicated.
Identification, Prioritization, and Planning for Solution Enhancements	Maintenance and enhancements projects are identified, prioritized by business value, planned, and executed.
Decision to Deactivate	At some point, the solution will need to be replaced. The decision to do so often involves the enterprise analysis activities described above.

PM/BA Collaboration Opportunities

The project manager and business analyst have numerous opportunities for collaboration during O&M, including:

+ Prioritization of enhancements

+ Root cause analysis of performance and value attainment issues

Final Words

Gaps in technology, techniques, and tools are not the fundamental reasons why projects fail. Rather, project failure most often stems from a lack of leadership and poor choices made by people. Undeniably, the business analyst and project manager are evolving into strategic project leaders of the future. The key issues are no longer centered on control and management, but rather collaboration, consensus, and leadership. Team leaders develop specialized skills that are used to build high-performing teams. When building software-intensive systems, well managed teams undoubtedly accomplish more work in less time than do poorly managed teams (Bechtold, 1999).

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