The State of Business Analysis Practices in Organizations

Research Report

Lori Lindbergh, PhD & Kathleen B. Hass, PMP LORIUS, LLC & Kathleen Hass & Associates, Inc.
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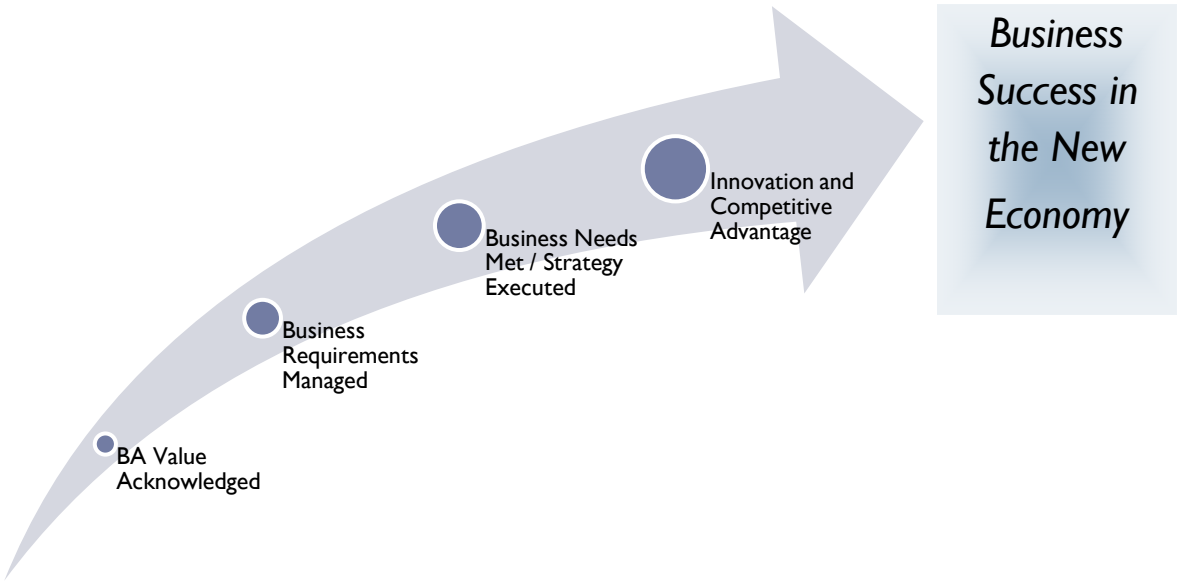

About The Researchers

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Kitty is the president of her consulting practice specializing in business analysis, project management, and strategy execution through portfolio management. Kitty is a prominent presenter at industry conferences, author and facilitator. Her expertise includes IT strategic planning, implementing and managing PMOs and BA Centers of Excellence, executive coaching, coaching to critical projects, and managing large complex programs. She has over 25 years of experience providing professional services to Federal agencies, the intelligence community, and Fortune 500 companies.

Kitty is a Member of the IIBA Board of Directors and Chair of the Board Nominating Committee. Kitty has authored numerous white papers and articles on leading-edge business practices, the renowned series entitled, *Business Analysis Essential Library, and* the PMI 2009 Book of the Year, *Managing Project Complexity - A New Model.* Look for her new book this year, *The Enterprise Business Analyst: Developing Creative Solutions to Complex Business Problems.*

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Lori is the president of her consulting practice offering a unique approach to surveys, assessments, and applied research. Lori helps organizations, leaders and managers, consultants, and business professionals transform data into actionable business intelligence to drive improvement, professional development, and performance outcomes. She has more than 20 years of experience conducting assessments, surveys, and applied research for organizations in multiple industry sectors and the Federal government.

Her expertise includes measuring individual and workforce capabilities, developing structural models for organizational assessment and research, conducting outcomes-based research for effective decision making, and translating complex data into actionable results.

Lori is a frequent presenter at industry conferences, has authored a number of white papers on assessment topics, and is an associate faculty member teaching courses in organizational psychology and behavior, statistics and research methods, and behavioral sciences.

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Thank You.

Kitty and Lori would like to offer a special "Thank You" to all BA participants, BA managers, and senior leaders for your interest and participation in this study. We hope you have gained valuable information about the state of your organization's BA practices and were able to use your study findings presentation and summary report to enhance your BA practice improvement plan.

Remember, "Never doubt that a small group of thoughtful concerned citizens can change the world. Indeed it is the only thing that ever has." (Margaret Mead)

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Abstract

To remain competitive, it is more important than ever for an organization's leadership team to use business analysis (BA) practices to execute strategies through innovative solutions. Over the years, business analysis has been rapidly developing as a profession and as a core business practice in many organizations; however, all too often business analysis is still in its foundational stages. While there are many studies on the role of business analysts, there is a gap in knowledge about the maturity of business analysis practices in organizations.

This study used a proprietary Business Analysis Practice Maturity Model to examine the state of business practices in organizations. The good news is the findings validated that BA practices are fast emerging in organizations. This is happening as businesses get serious about investing in professional business analysis. Although BA practices are still mostly tactical, organizations are beginning to invest in more strategic business analysis practices. Furthermore, those organizations that are investing in more mature BA practices are experiencing fewer project challenges and are also delivering greater business benefits.

Introduction

Businesses are operating in a complex global economy that is in chaos; the earning power of many countries around the world has contracted and may never be the same again. Findings of a recent study, consisting of interviews with more than 1500 CEOs, indicate that the presence of unrelenting complexity is the number one challenge that companies face in the 21st century (IBM, 2010). These CEOs believe they are not equipped to manage the complexities they face. In addition, there is a realization that we must learn to capitalize on complexity to unleash the creativity and innovation that are the hallmark of successful organizations.

So what does this really mean for 21st century businesses? Will your organization be able to adapt to an ever more complex business environment faster than your competitors? Adaptability and agility are essential – success will require a strategy and approach to managing change and complexity through innovation that hits the mark, is executed flawlessly with expert skills, and delivers *real* business value. We can no longer depend on traditional management methods that were developed under very different economic conditions. We need to embrace new approaches to business management.

Importance of Business Analysis Practices

Organizations that are first to acquire and master business analysis and elevate enterprise business analysts to a critical leadership role will more effectively react to and pre-empt changes in the marketplace, which is required to flow value through the business to their customers to achieve competitive advantage. In today's global economy, the conventional wisdom is: *Innovation is the key to survival – "Innovate or evaporate!"* (I-Vibe Global, 2010). It is through projects that companies innovate to create value for their customers and wealth for their organizations – translating ideas into profit.

The effectiveness of an organization's ability to innovate through programs and supporting projects depends on its ability to *define and execute strategy* by:

- Understanding their market and the competitive environment,
- Establishing a future vision and setting strategic goals,
- Converting strategies to valuable innovation projects, and then
- Executing flawlessly to be first to market.

The Burden of Analysis

In the 21st century it is essential for an organization's leadership team to establish a future vision and set strategic goals to innovate and remain competitive. However, the leadership team cannot execute strategy alone. It is through a robust portfolio of projects that strategies are converted to valuable programs and projects. What keeps organizations from successfully managing their project portfolio? "Companies often lack the necessary management information and the energy required to address *the burden of analysis*" (Mais, 2006, p. 3).

Businesses are beginning to realize that the *burden of analysis* is relieved through the energy and expertise of the business analyst. Business analysts, working to support project portfolio managers, provide the enterprise analysis, tools, processes and *actionable information* so decision makers can make the best project investments.

Business analysts start their work by using an array of analysis techniques to understand the current situation, including: competitive analysis, benchmark analysis, technology analysis, environmental analysis, organizational capability analysis, problem analysis, opportunity analysis, and market analysis. Armed with the results of these studies, they work with a passionate expert team to spark the creativity needed to determine the most innovative solutions. The business analyst facilitates innovation sessions by using techniques to promote real dialogue, experimentation, imagination, prototyping, and modeling, while participants are challenging and building on each others' ideas. They then identify the opportunities that appear to be the most feasible and prepare the business case for the new initiatives. This is the work of the enterprise business analysis that is often missing in our business practices today – the BA who takes on "the burden of analysis." Once funding is received, the business analyst is more tactically focused toward defining and managing the requirements to meet the business need and capitalize on the new opportunity - the work we all tend to think of as the totality of business analysis.

Experts agree that an important component of innovation is an organization's business analysis capabilities. Projects fail to meet the business need and opportunities are lost when requirements are poorly defined, strategic alignment is questionable, and inadequate focus is placed on the business.

Why Study Business Analysis Practices?

Due to the emergence of business analysis as a core business practice for the 21st century, it is time to evaluate and benchmark the current state of business analysis practices in organizations. This evaluation will not only contribute to the advancement of the body of knowledge and research in the field of business analysis, but will help organizations fully understand the comprehensive breadth of business analysis practices. We hope to make it clear that business analysis is more than simply gathering and managing requirements.

Limited research has been conducted on business analysis practices at the organizational level and the linkage to improved project and business outcomes. By gaining a better understanding of BA practices, organizations can more effectively evaluate their current state and establish an improvement roadmap for the advancement of BA practices.

About the BA Practice Maturity Model

The BA Practice Maturity Model (See Appendix A) used as the foundation for this research study reflects the maturity of business analysis practices at each level. The maturity levels consist of related practices for a predefined set of process areas that improve the organization's overall business performance.

Experience has shown that the staged maturity model helps organizations do their best when they focus their process improvement efforts on fundamental practices first and only on a manageable number of process areas at a time. It has also become clear that sophisticated processes rely on the institutionalization of foundational processes first for optimum results. Toward that end, the staged model provides not only an effective framework for assessment, but a systematic roadmap to guide comprehensive improvement efforts.

The BA Practice Maturity Model components examined in the study included:

- BA Standards as defined by the International Institute of Business Analysis (2009) (IIBA®)
    - BA Planning and Monitoring
    - Elicitation
    - Requirements Management and Communication
    - Enterprise Analysis
    - Requirements Analysis
    - Solution Assessment and Evaluation
- BA Methods, Metrics, and Tools
- Knowledge Management
- BA Practice Support and Governance
- BA Competency, Career Development, and Training
- Organizational Change Management
- Customer Relationship Management

Organizations at Level 1 do not have plans to implement a business analysis practice, or may even have plans to do so. However, the Level 1 organizations fail to demonstrate an enterprise-wide understanding of the value of business analysis.

Level 2 organizations are project-focused and capable of managing business requirements within projects. Organizations at Level 2 recognize that business analysis is a valuable capability by vesting accountability for it in a centralized organization. This is often referred to as a BA Center of Excellence (BACOE) that represents the entire enterprise and is responsible for the management of the BA framework for managing project requirements.

Specifically, to achieve Level 2:

- The following processes and tools for managing project requirements are developed, piloted, deployed, and institutionalized:
    - BA Planning and Managing
    - Elicitation
    - Requirements Management and Communication
    - Requirements Analysis
    - Requirements Defect Prevention
- The knowledge management process and system are in place to archive, manage changes, and provide appropriate access to all BA process and tool assets as well as actual BA artifacts
- A BA Framework for managing a Project Requirements Training Program is available
- The BA recruitment and training program is in place.

Level 3 organizations are enterprise-focused, capable of meeting business needs by executing strategy. Organizations at Level 3 recognize that business analysis is essential to ensure business alignment of project goals, objectives, and new business solutions. They vest accountability for strategy execution in a centralized organization that represents the entire enterprise. This organization is responsible for management of the business alignment practices and execution of strategy through innovative products and services.

Specifically, to achieve Level 3:

- The BACOE structure consists of:
    - BACOE Governance
    - Centralized Management of Resources, Contractors, Vendors
- The following process and tools for achieving business alignment are developed, piloted, deployed, and institutionalized:
    - Enterprise Analysis
    - Portfolio Management Support & Facilitation

    - Strategic Alignment of Project Investments
    - Solution Assessment and Validation
    - Strategy Execution
    - Benefits Management Program
- Business/Technology Architecture is in sync,
- A Business Alignment Training Program must be developed and available,
- The BA recruitment and training program is in place,
- Business Architects and Enterprise Business Analysts are focused on execution of strategy, and the
- BA career path leads to Director or VP of Business Analysis

Level 4 organizations are outwardly-focused and capable of optimizing business and technology to innovate and remain competitive. Organizations at Level 4 recognize that advanced business analysis practices are needed to use technology as a competitive advantage. They vest accountability for business/technology innovation in a centralized organization that represents the entire enterprise. It is responsible for creativity and innovation, as well as maintaining a competitive advantage. At this level, opportunities are converted into innovative business solutions, strategy is translated into breakthrough process and technology, and the next strategy is forged to achieve innovation.

About the Research Study

The study, which was conducted between October, 2009 and December, 2010, used a survey-based, non-experimental research design. The study examined the application of business analysis practices on current projects and the forecasted performance for scope, schedule, budget, and delivery of forecasted business benefits.

The study methodology and selection of BA participants within each participant organization was consistent with the online data collection component typically conducted as part of an onsite BA practice maturity assessment. Descriptive statistics and correlations were used to examine the characteristics of the data and identify significant relationships between overall BA Practice Maturity, practice maturity components, project complexity, and project outcomes.

Participant organizations were recruited from BA industry meetings, online publications, BA communities of practice, meeting presentations, and participant referrals. A key contact in each participant organization recruited a sample of BAs working mainly on IT projects representative of the overall organization's mix of projects.

BA participants completed an online questionnaire indicating the BA practices they were currently applying on their projects. They then provided information on the current status of their project's budget, schedule, scope, and forecasted business benefits. The data for all participants in an organization were aggregated to compile the organization's BA Practice Maturity Rating.

Each participant organization received a BA Practice Maturity Summary Report along with high-level recommendations to close the gaps and a 2-year improvement roadmap and 12-month action plan. BA participants and BA managers attended a brief webinar to review the findings and address any questions and concerns.

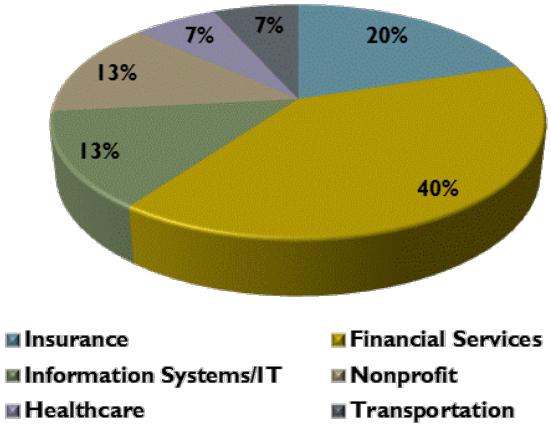
The reliability and validity of the online questionnaire had been examined in several organizations prior to being used in this study. The testing produced strong reliability and validity coefficients. With a representative sample, the questionnaire consistently measured the components of BA practice maturity. This suggested that aggregate participant responses closely reflected the current state of the organization's BA practices.

Participant Organizations

Participants in the study included fifteen organizations across six industries (See Figure 1):

- Insurance (Ins)
- Financial Services (FS)
- Information Systems/IT (IS/IT)
- Nonprofit (NP)
- Healthcare (HC)
- Transportation (Trans)

Figure 1. Industry Participation (Percent)



Most organizations indicated revenues greater than $25 million with greater than 500 employees. Overall, the application of BA practices was evaluated on 141 moderate-to-highly complex projects. Most projects were IT application development and IT enhancement projects, followed by new product development and enhancement projects.

Research Findings

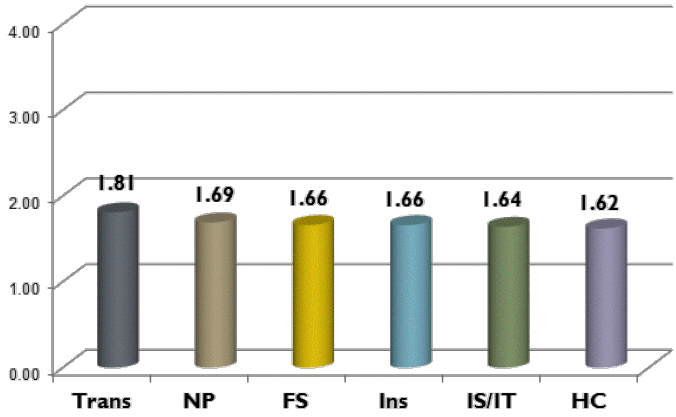
Four key findings identified by this study provide evidence that business analysis practices are emerging and organizations have begun to recognize business analysis as a core competency. BACOEs are emerging with defined business analysis processes and standards, training programs, career paths, and professional development programs.

Finding #1: BA Practices are Mostly Tactical; However, Strategic, Enterprise-Focused Practices are Emerging.

For most organizations today, BA practices focus on the ability to manage requirements at the project level to meet the immediate business need. There is evidence that an enterprise, more strategic focus is emerging, but is not yet commonly accepted practice.

The BA practice maturity of the participant organizations across all industries appears consistent (See Figure 2). All organizations have begun to implement BA practices and are approaching Level-2 BA Practice Maturity.

Figure 2. Industry BA Practice Maturity



No differences were found in BA practice maturity based on total annual revenue or size of the organization. However, organizations with greater than 50 BAs appeared to be applying somewhat more mature BA practices on their projects (1.82) compared to organizations with less than 20 BAs (1.65).

All organizations indicated they were beginning to apply many of the Level 3 BA practices. Furthermore, organizations reported using more Level 3 BA practices as organizational revenue and size increased up to $50 million; however, the use of more Level 3 practices decreased considerably in the largest organizations (> $50 million).

The participant organizations mainly focused their BA efforts at the project level to ensure business requirements were managed. The emphasis was on:

- BA Planning and Monitoring,
- Requirements Elicitation,
- Requirements Management and Communication, and
- Requirements Analysis

To achieve Level-2 BA Practice Maturity, organizations should continue to build capability in the above practices. It is also important to begin to transition to an enterprise focus to ensure business needs are met and strategies are executed.

> ***Implication**: Standout organizations establish a strong foundation of fundamental BA practices first. They know that full value from more sophisticated processes may not be achieved without a strong foundation.*

The following sections provide detailed analyses for each BA Practice Maturity component and provide information on statistically significant correlations between components and project performance.

The correlational statistics (r_s) describe the degree of relationship between two components and range between -1.0 to 1.0. A correlation between two components does not imply that one component causes the other. It means that when one component increases or decreases, the other component varies in the same direction (positive correlation) or when one component increases or decreases, the other component varies in the opposite direction (negative correlation).

When correlations are statistically significant ($p < .05$), this means that the relationship between the two components has a small probability of occurring by chance and that a relationship between the two components most likely exists.

BA Planning and Monitoring

The study revealed that BA Planning and Monitoring efforts were focused more on planning and monitoring the requirements management process versus the overall business analysis procedures and approaches necessary to achieve expected project outcomes.

The BA Planning and Monitoring practices that were applied less consistently across the organization included:

- Conducting Stakeholder Analyses
- Planning BA Communications
- Planning BA Activities

More mature BA Planning and Monitoring practices were significantly correlated with higher overall BA Practice Maturity ($r_s = .925$, $p < .001$). Organizations with more mature BA practices spent more time at the start of the project planning the BA approach, BA activities, and the requirements management process. Furthermore, more time spent planning was related to the use of more mature processes for Elicitation, Requirements Management and Communication, and Enterprise Analysis.

> ***Implication**: Standout organizations enhance BA Planning and Monitoring activities and techniques to identify stakeholders, develop estimates, define deliverables, and establish business analysis procedures and approaches to ensure delivery of all BA artifacts for a given initiative.*

Elicitation

Participant organizations indicated the application of elicitation activities were more consistent. Elicitation activities were planned and conducted using basic techniques, and requirements were documented per organizational standards.

The Elicitation practices that were applied less consistently across the organization included:

- Confirming Elicitation Results
- Conducting Follow-on Elicitation Activities

More mature Elicitation practices were significantly correlated with higher overall BA Practice Maturity ($r_s = .770$, $p < .001$). However, no relationships were found between Elicitation and Requirements Management and Communication, Requirements Analysis, and Solution Assessment and Validation.

Organizations may be focusing on the elicitation activity itself and documenting requirements, but may not be using the requirements effectively to ensure the solution will fulfill stakeholder needs and address the capability gaps in the organization.

***Implication**: Standout organizations establish standards for requirements elicitation and documentation, elicit requirements using multiple elicitation techniques, and continuously validate elicitation results. They ensure requirements are documented in a dynamic, useable format to continuously guide the development of the desired solution.*

Requirements Management and Communication

Participant organizations indicated more consistent application of Requirements Management and Communication activities. Detailed requirements were captured and approved by stakeholders and conflicts and issues about solution scope were resolved efficiently.

The Requirements Management and Communication practices that were applied less consistently across the organization included:

- Managing Requirements Traceability
- Maintaining Requirements for Reuse
- Communicating Requirements

More mature Requirements Management and Communication practices were significantly correlated with more mature Requirements Analysis practices (r_s = .643, p < .001). Expressing requirements to a broad and diverse stakeholder environment and ensuring that stakeholders fully understand the requirements results in more effective requirements analysis activities. This allows the analyst to demonstrate that the requirements will deliver value to stakeholders and will align with the organization's business goals and objectives.

***Implication**: Standout organizations ensure requirements are traceable and well integrated into testing, manage changes to requirements and welcome changes that add business value, reduce the cost of change through iterative development, and communicate requirements using custom messages for each stakeholder.*

Enterprise Analysis

Participant organizations indicated less consistent application of Enterprise Analysis across the organization. The business need and project goals were defined to address capability gaps, but less detailed solution descriptions and models were developed to help stakeholders understand what the project would deliver.

The Enterprise Analysis practices that were applied less consistently across the organization included:

- Assessing Capability Gaps
- Determining Multiple Solution Approaches
- Defining the Business Case including Business Benefits

More mature Enterprise Analysis practices were significantly correlated with more mature BA Planning and Monitoring and Elicitation practices (r_s = .680 and .801, p < .001). Organizations that used Enterprise Analysis when initiating and planning new projects may have been more effective in identifying and defining business requirements.

***Implication**: Standout organizations implement rigorous Enterprise Analysis practices that support building the current and future state business architecture, incorporate rigorous opportunity and feasibility analysis into business case development, and evaluate business benefit achievement throughout the project.*

Requirements Analysis

Participant organizations indicated more consistent application of Requirements Analysis across the organization. Requirements were organized consistently, assumptions and constraints were documented, and requirements were verified to ensure they met defined organizational standards.

The Requirements Analysis practices that were applied less consistently across the organization included:

- Prioritizing Requirements
- Specifying and Modeling Requirements
- Validating Requirements

More mature Requirements Analysis practices were significantly correlated with more mature Requirements Management and Communication practices and a more competent BA workforce (r_s = .643 to .650, p < .001). When requirements are effectively prioritized, organized, and validated, the analyst may be more effective in performing solution scope management as well as resolving conflicts and issues related to requirements.

***Implication**: Standout organizations prioritize requirements based on risk and quantified business value. They use formal modeling techniques to depict and track the interrelationships among and between requirements for more effective tradeoff analysis and change management. They link requirements to business value and continually validate requirements throughout the project. This ensures they meet forecasts made in the business case, deliver value to the business, and fulfill business goals and objectives.*

Solution Assessment and Validation

Participant organizations indicated more consistent application of Solution Assessment and Validation activities across the organization. The solution was assessed to determine if it met business requirements. The solution was also validated during testing and deployment; however, business value and organizational effectiveness was not always maximized.

The Solution Assessment and Validation practices that were applied less consistently across the organization included:

- Allocating Requirements
- Assessing Organizational Readiness
- Evaluating Solution Performance.

More mature Solution Assessment and Validation practices were significantly correlated with more mature BA Planning and Monitoring and Customer Relationship Management practices (r_s = .618 and .840, p < .001). Organizations that spent more time planning BA practices are able to include more activities to ensure the solution meets the business needs of the customer. They then spend more time involving the customer throughout the entire project.

***Implication**: Standout organizations allocate requirements to maximize business value, assess the organization's readiness culturally, operationally, and structurally, and evaluate solution performance against the business case and forecasted benefits, and evaluate the performance of the deployed solution.*

BA Methods, Metrics, and Tools

Participant organizations indicated that BA Methods, Metrics, and Tools were focused at the project level and did not include metrics to measure the effectiveness of BA process and programs, or the achievement of business benefits and corporate goals. BA tools and methods appear somewhat integrated with project management and SDLC standards, but may not be used enterprise wide.

BA Methods, Metrics, and Tools that were applied less consistently across the organization included:

- Quantitative BA Process Metrics
- Benefits Management
- Dynamic Requirements Management Tools
- Integrated BA and Enterprise Tools and Standards

More mature BA Metrics, Tools, and Methods were significantly correlated with more mature BA Planning and Monitoring and more established BA Practice Support and Governance practices (r_s = .661 and .676, p < .001). An important support function provided by a BACOE is the provision of standard methods and tools. BACOEs also establish metrics to evaluate project success and the effectiveness of BA practices. BACOE's that are involved from the start of the project ensure BA resources are available and BA approaches, techniques, and practices will achieve desired performance.

> ***Implication**: Standout organizations establish metrics to measure BA effectiveness across the organization, and develop a formal business benefits measurement program to evaluate the solution throughout the project and post deployment. BA tools for requirements gathering, management, and communication are dynamic to meet the changing needs of projects and promote effective use and re-use of BA artifacts..*

Knowledge Management

Participant organizations indicated less consistent use of Knowledge Management practices related to BA and project performance improvement across the organization. BA lessons learned were often captured and stored in a centralized network location.

Knowledge Management practices that were applied less consistently across the organization included:

- Consulting Lessons Learned
- Conducting Lessons Learned Sessions
- Establishing an Enterprise Repository

No statistically significant correlations were found between Knowledge Management and the other BA practice maturity components. Organizations most likely have not yet developed effective Knowledge Management systems and practices to be able to share project information and lessons learned at the enterprise level. Without an effective system, current Knowledge Management practices at the project level provide limited value.

> ***Implication**: Standout organizations implement a collaboration tool and enterprise-wide repository to facilitate the retrieval and sharing of lessons learned. Conducting periodic organization-wide lessons learned sessions and project best practices presentations and meetings ensure efficient adoption and use of insights and experiences.*

BA Practice Support and Governance

Participant organizations indicated less consistent application of BA Practice Support and Governance processes, practices, and structure across the organization. BACOEs may have been forming in many of the participant organizations, but were not yet mature in their support and guidance of change initiatives to establish business analysis practices across the organization.

BA Practice Support and Governance practices that were applied less consistently across the organization included:

- Existence of a BACOE
- Centralized BA Support and Guidance
- Structured BA Governance and Oversight

More mature BA Practice Support and Governance was significantly correlated with the use of more mature BA Metrics and more established BA Training and Professional Development practices (r_s = .626 and .661, p < .001). Critical functions for BACOEs include the standardization of BA training and professional development opportunities, such as mentoring, coaching, and communities of practice. Without a central support office, BA training may be ineffective and will not result in institutional changes in BA work behaviors.

***Implication**: Standout organizations establish a BACOE for the centralized management of BA tools and standards, to define standards for requirements documentation and quality, manage business case development, and centralized management of BA resources. A structured governance and oversight body facilitates effective BA practices and business and technology optimization.*

Change Management

Participant organizations indicated that Change Management was performed at the project level, but formal organizational change management practices were not applied consistently across the organization.

The Change Management practices that were applied less consistently across the organization included:

- Developing Organizational Change Management Plans
- Conducting Organizational Change Readiness Assessments

No statistically significant correlations were found between Change Management practices and the other BA practice maturity components.

Organizations that perform change management at only the project level will receive limited benefits. These organizations will risk implementing solutions into an organizational environment that is not yet ready to change. Many organizations do not truly understand the importance of organizational change management and what best practices entail. This lack of understanding may create the perspective that organizational change management is time consuming and will impede the progress of projects.

***Implication**: Standout organizations conduct meticulous organizational change management to ensure the organization is ready to operate the new business solution efficiently and effectively. BA plans include techniques to communicate and manage organizational change.*

BA Competency, Training, and Professional Development

Participant organizations indicated the use of activities to facilitate BA Competency, Training, and Professional Development practices were somewhat less consistent across the organization. BA job descriptions and career paths existed and tactical, basic BA training was available for most BAs. BA career paths and competency standards were less defined, BA capability assessments were not always used, and mentoring, coaching, and support services were less available.

BA Competency, Training, and Professional Development practices that were applied less consistently across the organization included:

- Conducting Business Alignment Training
- Providing Mentoring and Coaching
- Offering Support Workshops
- Providing Expert Project Support
- Conducting BA Competency Assessments

More mature BA Training and Professional Development programs were significantly correlated with greater BA Competency and more mature BA Planning and Monitoring and Elicitation practices (r_s = .711, .661, and .543; $p < .001$).

Organizations that valued training worked to improve BA competency through assessments and other career development activities. When BAs are more competent, they spend more time planning BA activities, approaches, and methods to ensure their project achieves expectations and delivers business value.

***Implication**: Standout organizations ensure they have appropriately skilled BAs possessing the capabilities needed to successfully deliver complex business solutions. This is done by baselining competencies, developing career paths, and creating professional development opportunities and programs to support effective BA practices and skills application. BAs are matched to projects based on competency and support opportunities provided to ensure success.*

Customer Relationship Management

Participant organizations indicated more consistent application of Customer Relationship Management practices. These were more focused on customer involvement and collaborating with primary project stakeholders throughout the project; however, standards for managing customers at the organizational level did not typically exist.

Customer Relationship Management practices that were applied less consistently across the organization included:

- Measuring Customer Satisfaction
- Applying a Stakeholder Management Plan
- Enhancing BA Customer Management Approaches

More mature Customer Relationship Management practices were significantly correlated with greater BA Planning and Monitoring and Solution Assessment and Validation practices (r_s = .785 and .840; $p < .001$). Planning for BA communications and conducting stakeholder analyses ensures customers are involved and informed of project progress throughout the project. Stakeholders' needs and expectations are also identified and managed more effectively.

> ***Implication**: Standout organizations establish formal customer relationship management processes, methodologies, and technologies that support the BA in managing customer relationships and help BAs better manage the expectations of internal and external customers. Customer feedback should be used to improve current and future business analysis practices.*

See Appendix B and Appendix C for industry ratings for each component.

Finding #2: Project Complexity Matters

Mature BA practices and a competent BA workforce will help organizations better manage the complexities that impact project success.

Participants rated their current projects for six dimensions that will increase the complexity on projects based on the complexity model and formula developed by Kathleen Hass (2009a):

- Budget and Schedule Size
- Ambiguous Problem, Opportunity, and Solution
- Requirements Volatility
- Strategic Importance
- Level of Organizational Change
- IT Solution Complexity

As the complexity of these dimensions increases, BAs must possess a higher competency level and apply more advanced BA practices to be successful.

Most participant organizations were working on projects of high complexity. Statistically significant differences between industries were found for these complexity dimensions:

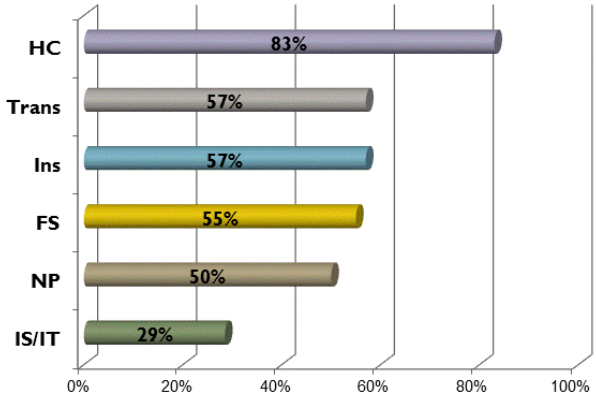
- Ambiguity of Problem, Opportunity and Solution
- Strategic Importance
- IT Solution Complexity

In the Transportation, Healthcare, Financial Services, and Insurance industries, organizations indicated greater complexity related to the ambiguity of problems and solutions. In the Transportation, Healthcare, and Nonprofit industries, organizations indicated greater complexity related to project strategic importance. In the Healthcare, Transportation, and Financial Services industries, organizations indicated greater complexity related to the complexity of the IT solution. (See Appendix D.)

Overall, participant organizations with more complex projects indicated greater challenges for meeting delivery commitments of full scope, on schedule, and/or on budget. Organizations in all but one industry indicated that over half of their projects

were challenged for scope, schedule, and/or budget (See Figure 3).

Figure 3. Percentage of Projects Challenged for Scope, Schedule, and/or Budget



Not surprisingly, in the Transportation, Healthcare, and Financial Services industries, organizations indicated the highest percentage of challenged projects. This is because the BAs in these organizations indicated their projects had a greater number of dimensions in the highly-complex category.

Similar findings were identified for forecasted business benefits (See Figure 4) with participant organizations in the Transportation, Healthcare, Nonprofit, and Financial Services industries indicating more projects that were forecasted to achieve fewer business benefits than planned.

Figure 4. Percentage of Projects Challenged for Business Benefits

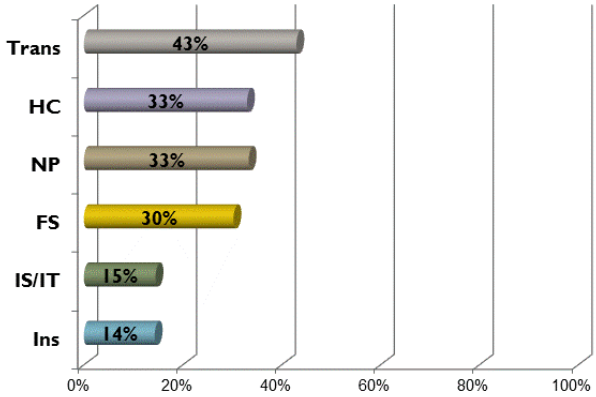


Table 1 presents a summary of statistically significant correlations between complexity dimensions and challenged project status and business benefits.

Table 1. Correlations (r_s) Between Complexity Dimensions and Project Status and Business Benefits Status

	Challenged Status			Delivery of Less Business Benefits			
	Budget	Scope	Schedule	Reduced Cost	Increased Revenue	Increased Market Share	Improved Efficiency
Budget and Duration	.304**				.326*	.461**	
Problem, Opportunity, and Solution	.369**	.270*					
Requirements Volatility	.470**	.234*					
Strategic Importance	.305**	.367**	.260*				
Organizational Change	.343**						
IT Solution	.609**	.314**	.264*			.418**	

**Statistically significant ($p < .01$)
*Statistically significant ($p < .05$)
No correlation

The findings suggested that IT Solution Complexity and Requirements Volatility had the greatest correlation with challenged project budgets: As solution complexity increased and requirements became more volatile, participants indicated a greater increase in percentage over budget.

Strategic Importance and IT Solution Complexity had the greatest correlation with challenged project scope. As projects became more strategic in nature and solution complexity increased, participants indicated less achievement of the full scope of the project.

Strategic Importance and IT Solution Complexity had the greatest correlation with challenged project schedule. As projects became more strategic in nature and solution complexity increased, participants indicated greater schedule delays.

Finally, Budget and Duration were related to delivery of fewer business benefits. As project budgets and schedules increased, participants indicated less forecasted increase in revenue and market share the proposed solution would provide. Furthermore, as IT solutions became more complex, participants indicated less forecasted increase in market share.

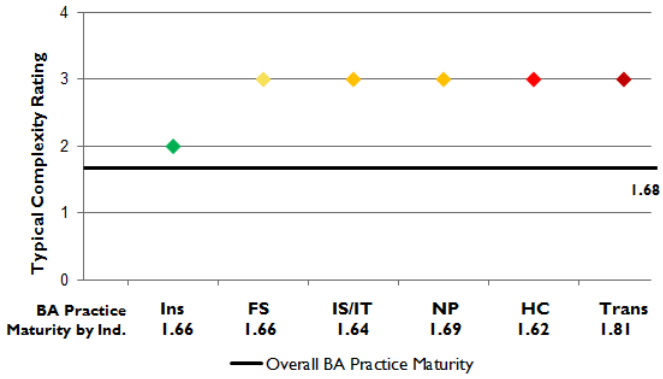
***Implication**: Standout organizations understand and manage the specific complexities associated with projects in their organization/industry and implement more mature and creative BA practices that address each complexity dimension. These organizations periodically reassess changes in project complexity and the effectiveness of BA practices. They use metrics and indicators of project success and business success to ensure projects achieve stakeholder expectations and continue to provide business value.*

Finding #3: Mature BA Practices Will Deliver Successful Projects and Business Benefits

More mature BA practices overall were significantly correlated with improved budget, schedule, and scope performance. These findings suggest that the BA practice maturity in the participant organizations may be inadequate to manage highly complex projects (See Figure 5).

The black line indicates the aggregate, average overall BA Practice Maturity for all organizations in the study of 1.68 with the practice maturity ratings for each industry organization indicated across the horizontal axis.

Figure 5. BA Practice Maturity and Budget, Schedule, or Scope (BSS) Status



The diamonds represent the typical complexity rating of projects in each industry (vertical axis: 1 = Low complexity, 2 = Moderate complexity, 3 = High complexity) with the color of the diamond indicating the status of the greatest percentage of projects in each industry.

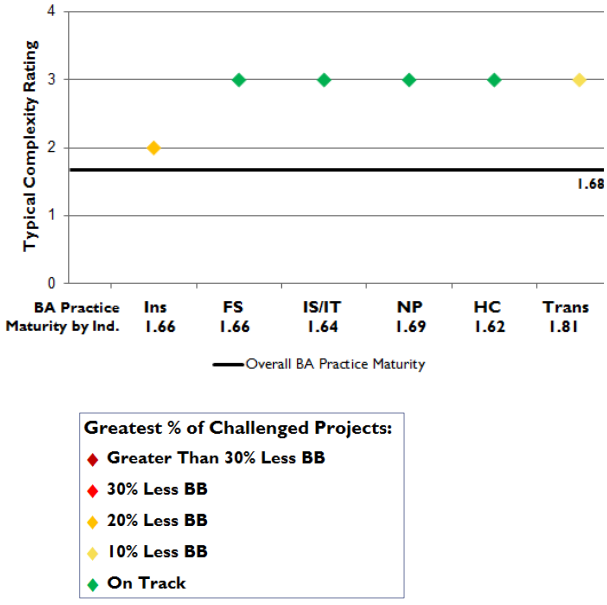
Most of the participant organizations were working on highly complex projects and were experiencing budget, schedule, and scope challenges on the greatest percentage of their projects. For example, in the Healthcare and Transportation industries, organizations indicated that the greatest percentage of their projects included in the study were 30% or greater over budget, schedule, and/or scope. Appendix E provides additional detail about the status of all projects included in the study.

These findings indicate that BA practices at Level 2 maturity do not appear adequate to manage the dimensions associated with highly complex projects; however, in the Insurance industry, Level 2 practices may be adequate for moderately complex projects. Organizations should examine the complexity of their current and future projects to determine the BA

practice maturity level necessary to achieve success on their projects.

Less challenge was noted for business benefits (See Figure 6); however, most organizations indicated they were not using a benefits management program or metrics to measure business success. Without these, the result could be inaccurate ratings for business benefits. Furthermore, organizations often sacrifice budget, schedule, and scope to achieve business value.

Figure 6. BA Practice Maturity and Business Benefits (BB) Status



In the Insurance industry, organizations indicated 20% less delivery of business benefits. This may indicate the industry is delivering projects that achieve budget, schedule, and scope, but these projects may not provide the expected value to stakeholders and the organization.

***Implication**: Standout organizations examine the complexity of their current and future projects to determine the BA practice maturity level necessary to achieve both project success and deliver business value to customers and the organization.*

Finding #4: Proficient Business Analysts Lead to Project Success

Organizations need a competent, valued BA workforce that takes a deliberate approach to business analysis using effective planning, stakeholder management, change management, and flexible business analysis approaches.

Improving BA practice maturity and developing a proficient business analyst workforce must be done concurrently. Improving BA practices without supporting BA skills development or developing BA skills without improving BA practice maturity will not always produce the expected improvements in project performance.

As noted earlier, the BA Practice Maturity of organizations across all industries was consistent at the tactical level. Organizations were approaching Level 2 practice maturity for many components. However, the findings in Table 2 indicate that those organizations that were performing more consistent Requirements Management & Communication and Solution Assessment & Validation practices indicated less challenge for budget, schedule, or scope (indicated by the negative correlations). As BA practice maturity increased in these areas and became more consistent, participants indicated a decrease in budget, schedule, and scope challenge.

Table 2. Correlations (r_s) Between BA Knowledge Areas and Project Status and Business Benefits Status

	Budget, Schedule, and Scope Challenge	Business Benefits Challenge
BA Planning & Monitoring		-.671**
Elicitation		-.780**
Requirements Management & Communication	-.528*	-.570*
Enterprise Analysis		-.662*
Requirements Analysis		-.579*
Solution Assessment & Evaluation	-.747**	

**Statistically significant ($p < .01$)
*Statistically significant ($p < .05$)
No correlation

Furthermore, increased practice maturity and consitency in most BA knowledge areas were related to decrease in business benefits challenge (indicated by the negative correlations). As BA practice maturity increased in these areas and became more consistent, participants indicated less reduction in forecasted business benefits.

Table 3 presents the findings for the other critical components that support BA Practice Maturity. Stronger BA Practice Support & Governance, Knowledge Management, and Customer Relationship Management were all significantly correlated with less challenged budget, schedule, or scope. More mature BA Practice Support & Governance was significantly correlated with more successful achievement of business benefits. As the BACOE became more supportive, business benefits were less challenged.

Table 3: Correlations (r_s) Between BA Practice Maturity Components and Project Status and Business Benefits Status

	Budget, Schedule, and Scope Challenge	Business Benefits Challenge
BA Practice Support & Governance	-.750**	-.518*
Knowledge Management	-.643**	
Customer Relationship Management	-.617*	
Change Management	.536*	

**Statistically significant ($p < .01$)
*Statistically significant ($p < .05$)
No correlation

It is interesting to note the findings for Change Management. As change management processes became more rigorous and consistent, participants indicated greater challenge for budget, schedule, and scope. This indicates that performing effective organizational change management, which is a mature organizational capability, will likely have impacts to the project's budget, schedule, and scope. The participant organizations indicated change management practices were less mature and, when not performed efficiently or integrated into BA plans, could have a negative impact on project success.

> ***Implication**: Standout organizations focus on providing strong BA practice support, knowledge management, organizational change management, and customer relationship management throughout the project to ensure projects continue to satisfy customers' needs and achieve business value.*

Summary & Conclusion

This study found that higher BA practice maturity is directly correlated with

- More effective business alignment of projects,
- Better performance for budget, schedule and scope,
- Higher quality business solutions,
- Increased customer satisfaction, and
- Increased delivery of the business benefits that will result from implementing the new/changed solution(s).

Overall, this study provides important information about the current state of business analysis practices in organizations. The study further illustrates the need for a multidimensional approach to improving business analysis capabilities in which a BACOE is implemented as an essential structure in order to drive continuous improvement.

The journey begins with an acknowledgement that business analysis is a critical business management discipline for the 21st century. Realizing that it takes investment and resources to build a new business management process, organizations will need to use a structured approach coupled with expert change management practices. The three-pronged approach includes building a mature BA Practice, developing a competent BA workforce, and establishing a BACOE to plant the seeds and steer the course (Hass, 2009b).

Finally, organizations must understand and apply complexity thinking on their projects to guide BA practice maturity improvements. Not all organizations need to strive for Level 4 practice maturity and may achieve success at moderate levels of practice maturity.

Study Limitations

This study provides a unique perspective of BA practice maturity using a proprietary model. As with any research study, limitations are present.

Because this study does not examine causal relationships, internal validity (the approximate truth of inferences regarding cause-effect relationships) is not relevant. Therefore, the limitations of this study are more related to external validity, or the degree to which the conclusions in the study can be generalized to other organizations.

Limitations of this study related to external validity include:

- *Participant self-selection*. Participant organizations self-selected to participant in the study and were not randomly chosen. These organizations were focusing on BA practice improvement and may differ from organizations in general.
- *Participant self-report.* Responses were self-reported and were not validated. This is typical in an onsite BA practice maturity assessment; however, the instrument and BA Practice Maturity Model used for this study have been previously examined for reliability and validity in onsite assessments and have achieved strong results for both. Furthermore, when used as part of an onsite BA practice maturity assessment, the online assessment has exhibited strong inter-rater reliability between the onsite assessors' ratings and participant self-report responses.
- *Representative sample within each organization*. Nonrandom sampling was used in each organization to select BA participants. A key contact in each organization was instructed to select a sample of BAs working on projects representative of the typical project mix in the organization. The selection process used and sample composition were not validated; however, when tested, the instrument performed well when a representative sample of 5-7 projects was used.
- *Sample size and breadth*. Because this study used a modified case-study method, a smaller sample was appropriate and expected. Furthermore, the use of primarily US based companies may have biased the results somewhat. However, the same

instrument has been used at non-US organizations that were not part of the study and similar findings were revealed.

It is important to note, however, that in spite of these limitations, managers and BAs who participated in the findings presentations felt that the findings for their respective organizations closely reflected the state of BA practices in their organization.

Future Research and Next Steps

The findings support the relevance of the BA Practice Maturity Model in organizations across a number of industries. Future research should focus on the continued application of the model in organizations ensuring the model remains up to date. It is also important that enhancements are made as the BA environment changes and organizations achieve higher practice maturity. A similar comparison study would be appropriate after enough time has passed for organizations to implement and sustain BA practice improvement.

Furthermore, now that the online assessment has undergone additional testing, it will be possible to develop a shorter, more streamlined assessment for follow up assessments. The streamlined model would also be appropriate for organizations that have fewer resources to invest in a full-scale BA practice maturity assessment but still wish to begin their journey toward BA practice maturity.

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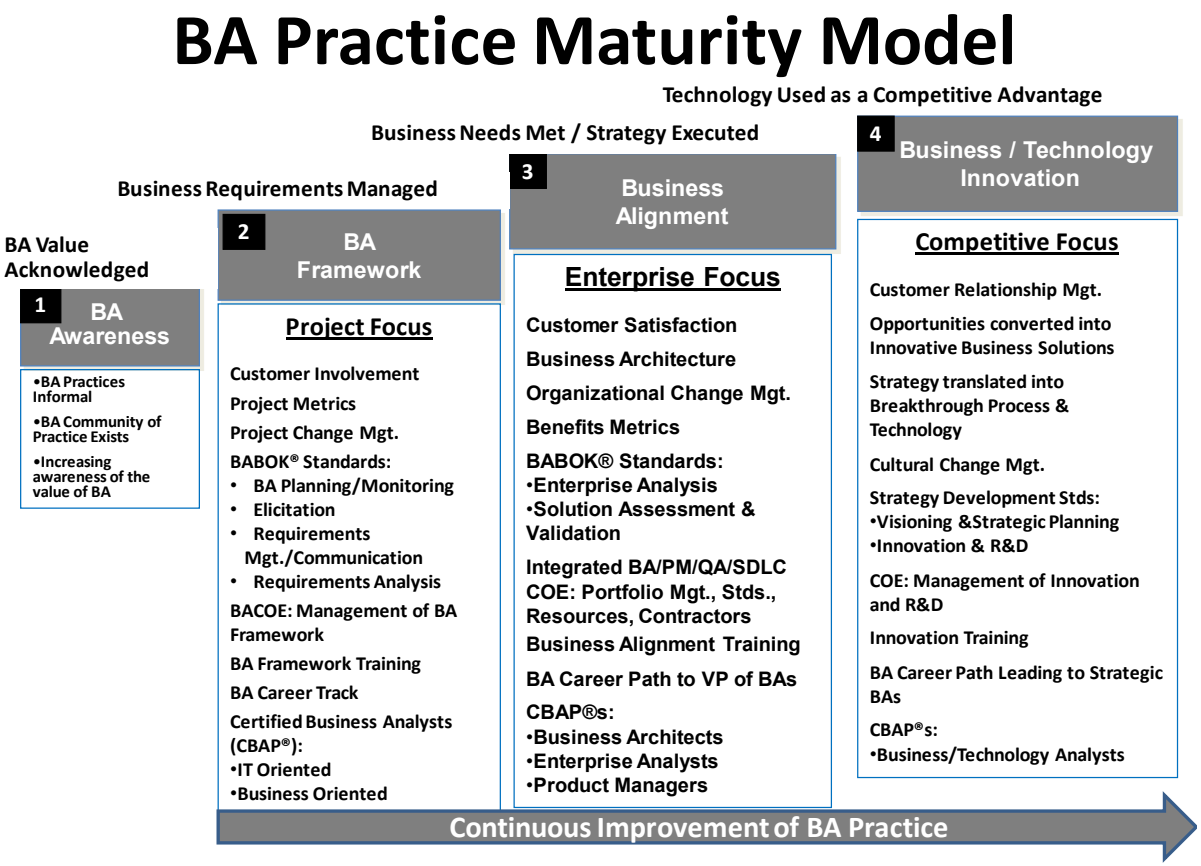
APPENDICES

Appendix A: BA Practice Maturity Model

This diagram depicts the BA Practice Maturity Model used as the basis for this study. The model reflects the maturity of business analysis practices at each level. Each maturity level consists of related practices for a predefined set of process areas that improve the organization's overall business analysis performance.

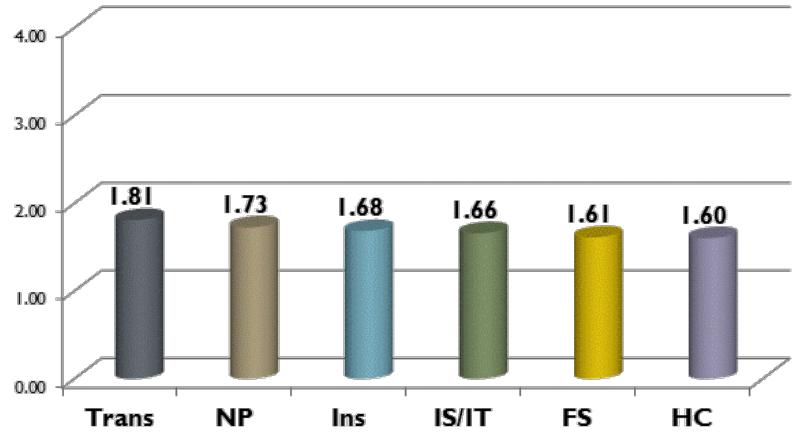
As practices become mature, moving from left to right in the diagram, BA practices move from a more tactical, project focus to a more strategic and competitive focus. Continuous process improvement activities are integrated into all stages of the model.



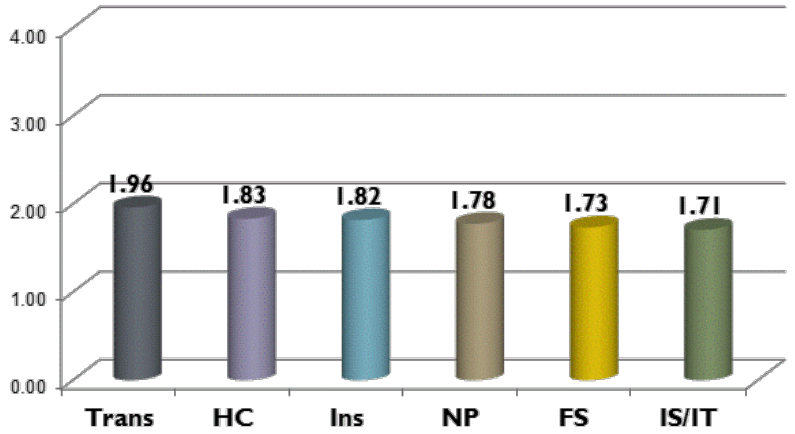
Appendix B: BA Knowledge Areas Maturity – Industry Detailed Findings

The following graphs depict the practice maturity ratings by industry for the six BA Knowledge areas.

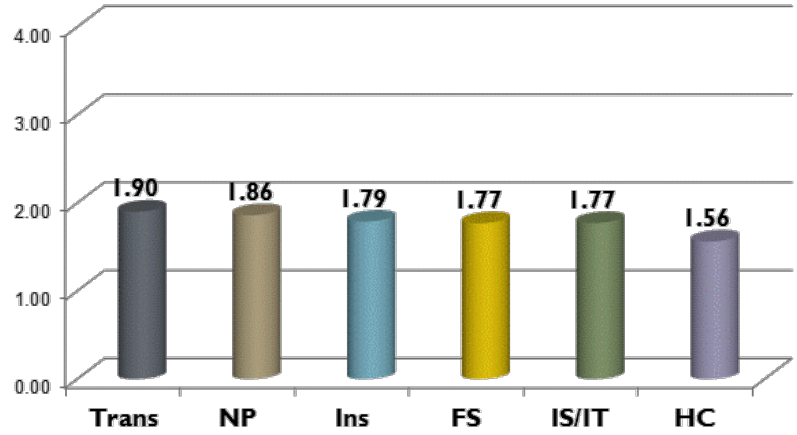
BA Planning & Monitoring



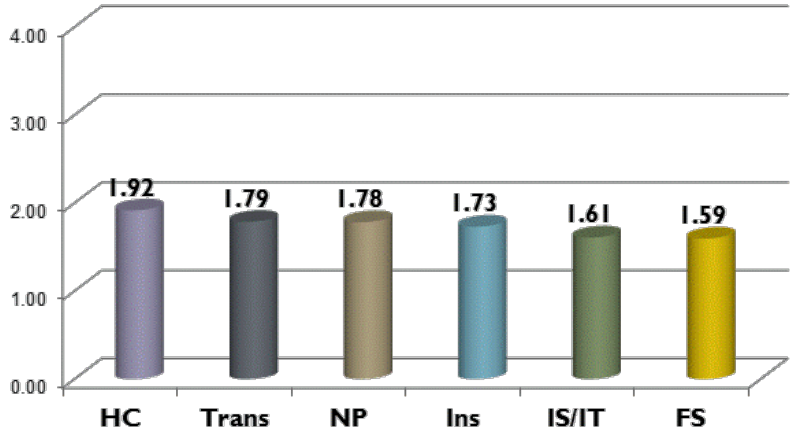
Elicitation



Requirements Management & Communication

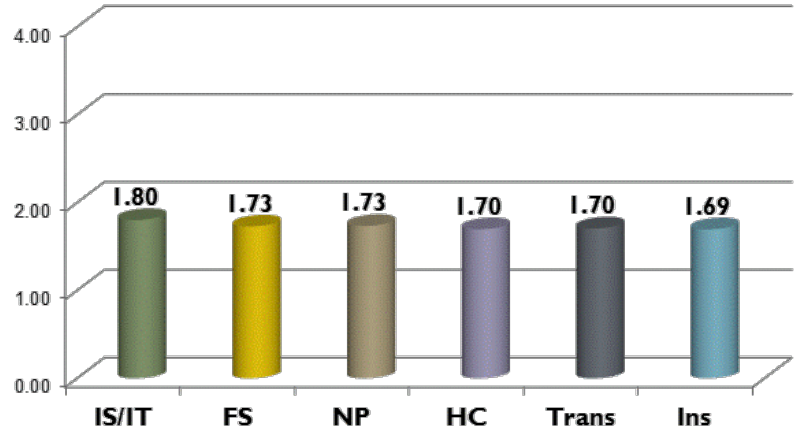


Enterprise Analysis

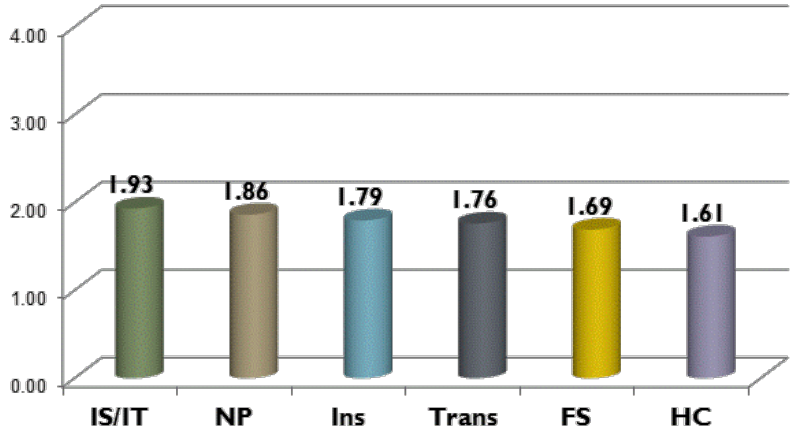


Appendix B (cont.): BA Knowledge Areas Maturity – Industry Detailed Findings

Requirements Analysis



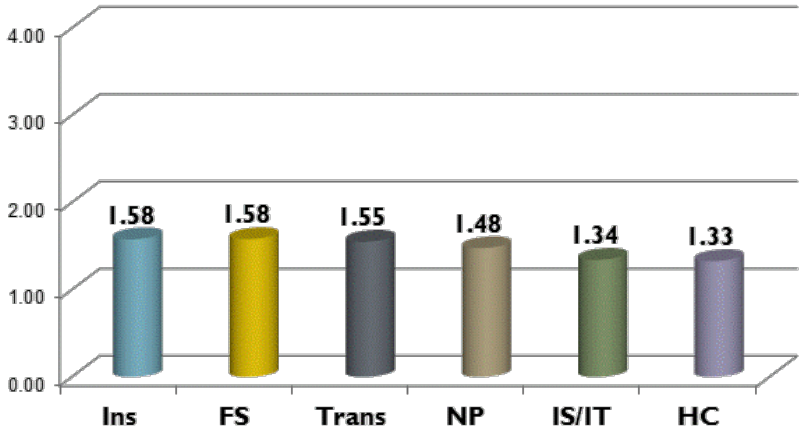
Solution Assessment & Validation



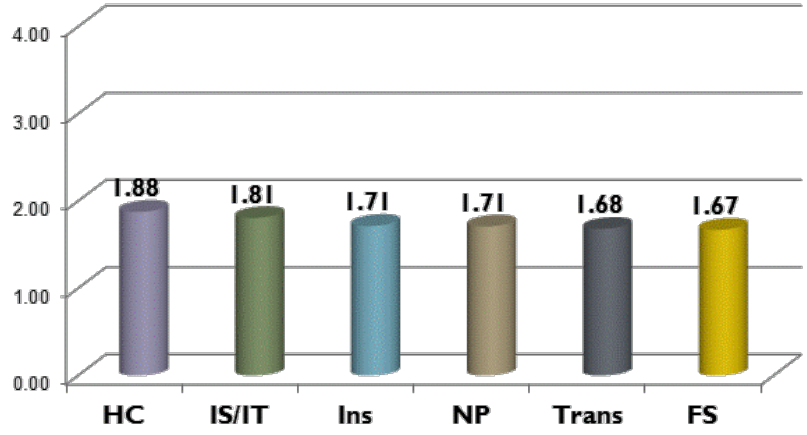
Appendix C: BA Supporting Practice Areas Maturity – Industry Detailed Findings

The following graphs depict the practice maturity ratings by industry for the BA Supporting Practice areas.

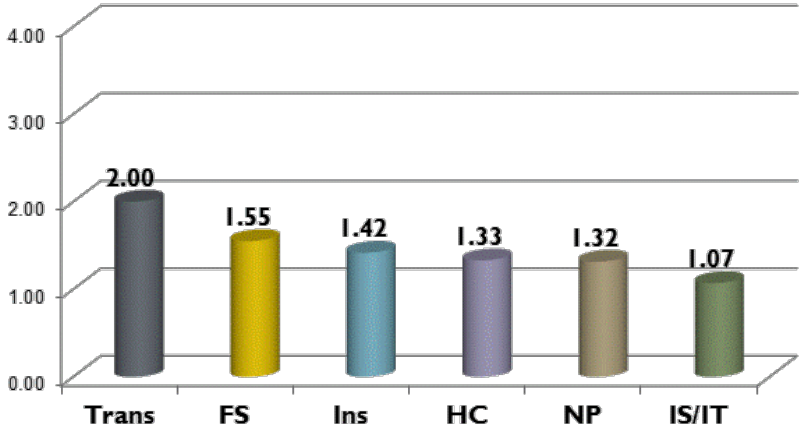
BA Methods, Metrics, & Tools



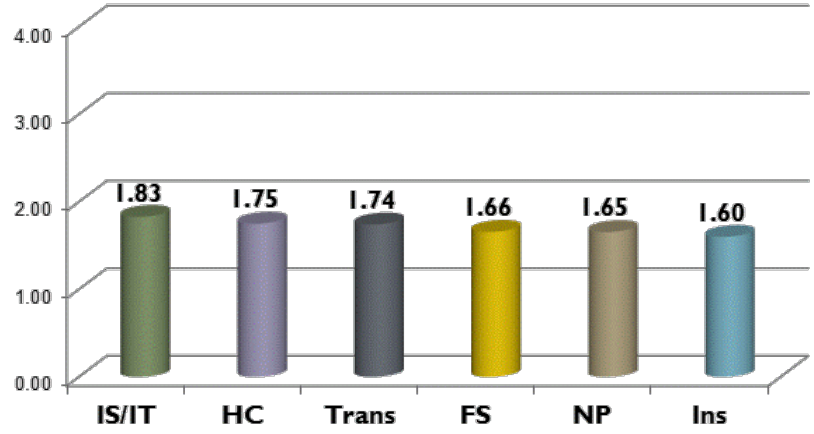
Knowledge Management



BA Practice Support and Governance

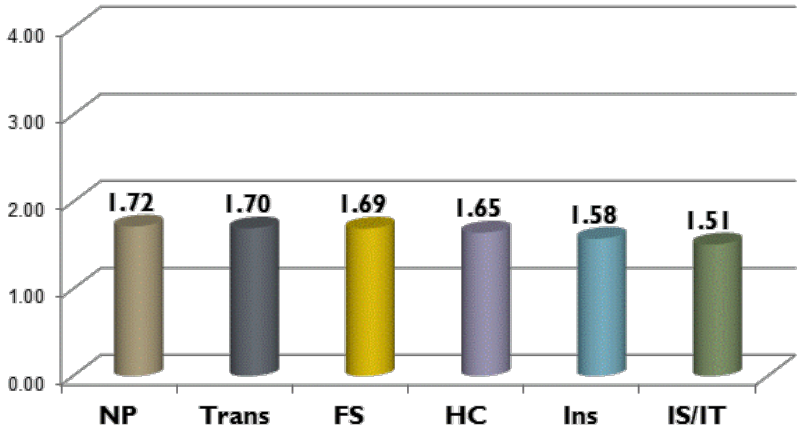


BA Competency, Career Development, and Practice Development

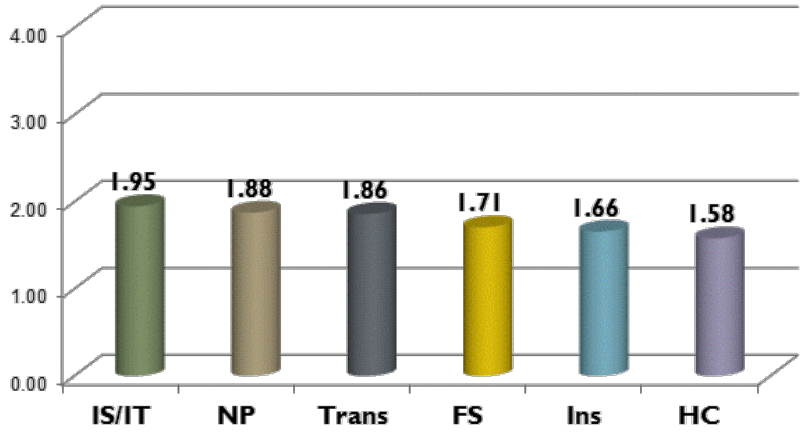


Appendix C (cont.): BA Supporting Practice Areas Maturity – Industry Detailed Findings

BA Training and Support

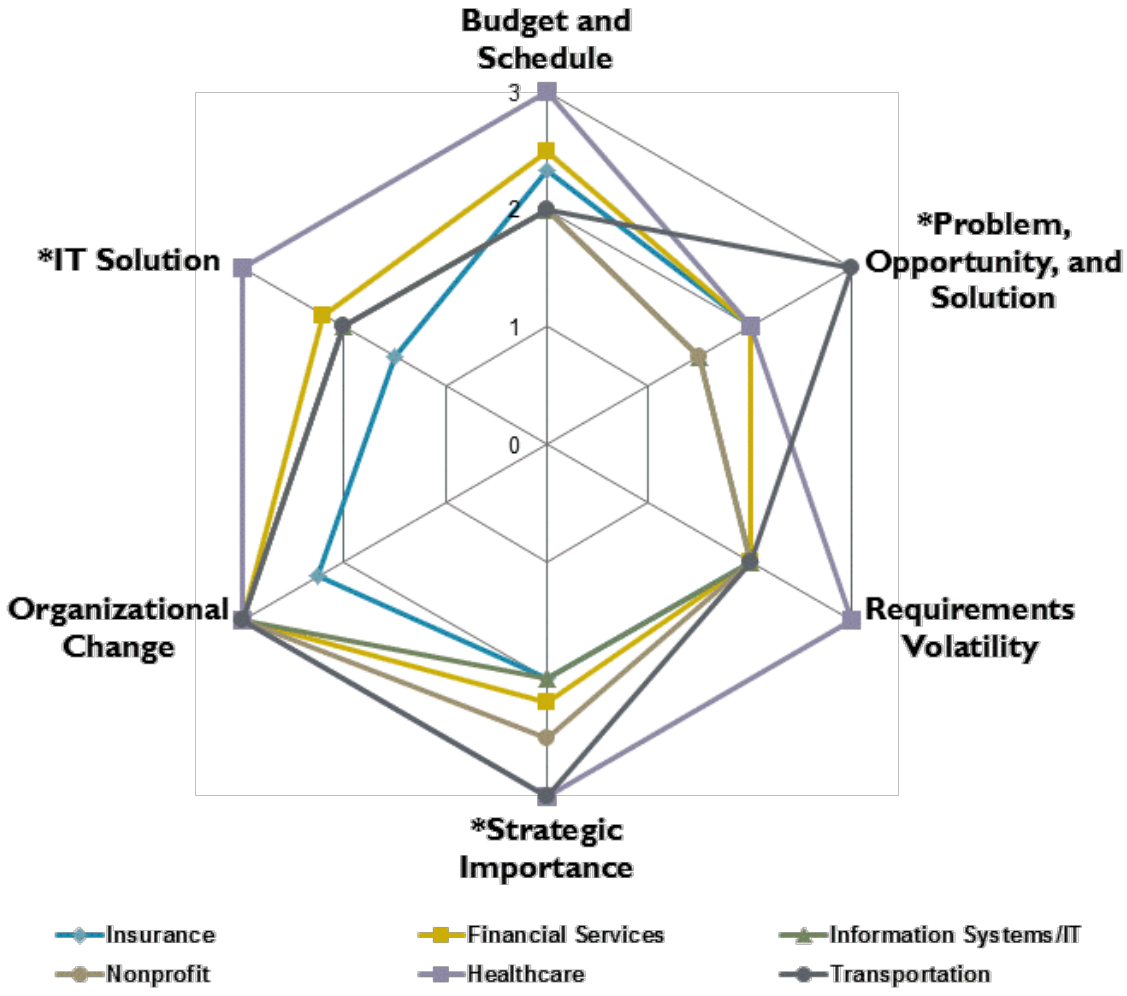


Customer Relationship Management



Appendix D: Average Project Complexity by Industry

This graph depicts the average project complexity by industry. In the Healthcare industry, organizations indicated greater complexity in their projects for most complexity dimensions. Furthermore, in most industries, project complexity was higher due to the enterprise-level change associated with the projects included in the study.



Appendix E: Challenged Projects by Industry – Detailed Findings

This graph presents the industry findings for the percentage of challenged projects for Budget, Schedule, and Scope Status (BSS) and forecasted Business Benefits (BB). In the Healthcare and Transportation industries, organizations reported more projects that were greater than 30% over for at least one component of BSS. In the Nonprofit, Financial Services, and Insurance industries, organizations indicated most projects were 10% over for at least one component of BSS. However, most industries indicated most projects were on track to achieve forecasted BB.