Six Things Your CIO Needs to Know
About Requirements Maturity

EXECUTIVE SUMMARY

If your organization is not predictably successful in technology projects, there is likely an issue in requirements. CIO's must take action and own requirements maturity improvement. CIOs are in the best position to sell requirements maturity improvement to the organization and can greatly help the process by effectively communicating required actions, and ensuring a suitable resources allocation. There are 6 things your CIO needs to know to help him/her in their role of requirements change advocate.

CONTENTS

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Gathering and managing business requirements is a process best jointly owned by business and technology, but this is not always possible. With so much performance impact at stake, CIOs often are in the position of having to step in as sole owners of the requirements process when the business is immature in producing business requirements. It then falls to the CIO to:
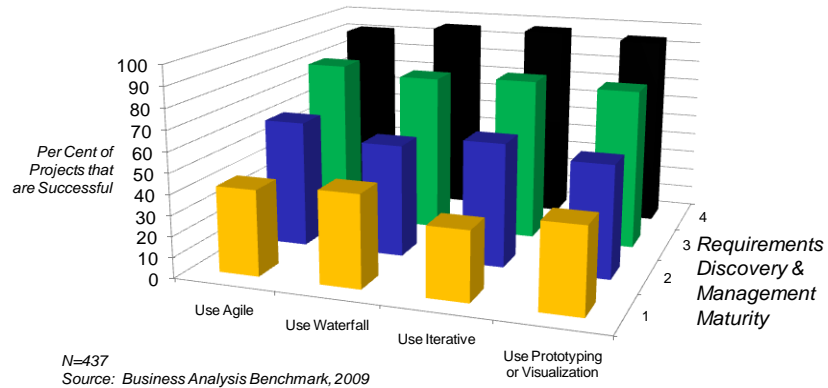
1. Diagnose if requirements immaturity is adversely affecting their organization;

2. Own the path to success for improving requirements practices.

CIOs work hard to improve organizational efficiency, but must also face a wide array of contradictory messages that make it more difficult to see the path to success. The findings below are designed to shed light on a series of misconceptions and highlight major issues the organization must address if it is to get on a path of sustained development success.

Issue #1 – Requirements Maturity is More Important to Outcome than the Development Methodology Selected

Some organizations have attempted to shrug off the demands of maturing requirements practices thinking that by adopting agile or visualization centric methods, requirements practices become secondary. Nothing could be further from the truth. The Business Analysis Benchmark findings show that different development methodologies have no performance difference for any given level of Requirements Maturity.

COMPARISON: MATURITY LEVEL OF ORGANIZATION IN REQUIREMENTS DISCOVERY & MANAGEMENT VERSUS METHOD OF DEVELOPMENT UTILIZED

Per Cent of Projects that are Successful

Use Agile Use Waterfall Use Iterative Use Prototyping or Visualization

Requirements Discovery & Management Maturity

N=437
Source: Business Analysis Benchmark, 2009

This study finds that changing development practices - in the absence of also improving requirements capabilities in the areas of process, techniques, staff, technology, organization and deliverables - only nominally improved or reduced overall success rates on projects. Companies must take these factors into account should they decide to switch methods.

The Business Analysis Benchmark does not endorse any one method over another; IAG has had excellent results with all these approaches. The key issue: the overall level of requirements maturity has a MUCH greater effect on project outcome than the development method selected.

Issue #2 – Myth-Busting: Simply Hire Good Analysts and the Requirements Problem Goes Away

While it is necessary to hire good business analysts, it is also necessary to properly define their role and a host of other factors. The idea that a Level 1 or Level 2 organization can simply hire competent people and the problem of requirements quality will go away is false.

The Hiring Challenge:

Despite their best intentions, Level 1 and Level 2 organizations tend to only attract Level 1 and Level 2 analyst skills. In fact, the level of knowledge, skill, and ability, is far lower than the average skill level employed by high maturity companies. Level 1 and Level 2 organizations cannot hire efficiently since they have poorly defined analyst roles, required skills, testable competencies, expected services to be delivered by practitioners, and measurement of results. How can an organization hire competently when it does not know what to hire?

Conversely, very few organizations surveyed with a maturity level over 3.5 had poor staff capability. Higher maturity organizations are simply better at hiring and developing excellent requirements definition and management capability.

Having good people without the other factors does not materially change level of maturity:

Great people in a poor requirements maturity organization can only produce mediocre results – particularly in comparison to this same level of skill in a high requirements maturity organization. Without question, hiring great people will have some positive benefits, but this will only take the organization a half step forward in maturity. i.e., a Level 2 maturity organization that hires Level 4 competency analysts will get Level 2.5 results. The other capability areas of the Requirements Maturity Model clearly have a significant performance multiplier effect on the skills of analysts.

The figure to the right illustrates *lower* skill level analysts *outperforming* significantly higher skill level staff working for lower requirements management maturity companies. Again, requirements management maturity capability areas have an accelerating effect on performance:

- Maturity across multiple capability areas accelerates personal performance dramatically.

- Significant immaturity in individual areas stifles performance dramatically.

How do these results affect outsourcing or staffing strategies?

If an organization outsources requirements definition and management it would be well served to ensure the consulting firm engaged exhibits all six requirements maturity capabilities. In the absence of this breadth of competency, like using a staffing firm, it is unlikely to change overall project success rates significantly.

TOTAL PER CENT OF DEVELOPMENT BUDGET COMMITTED TO
REQUIREMENTS DISCOVERY AND MANAGEMENT, BY
MATURITY LEVEL, ON AN AVERAGE $1 MILLION PROJECT
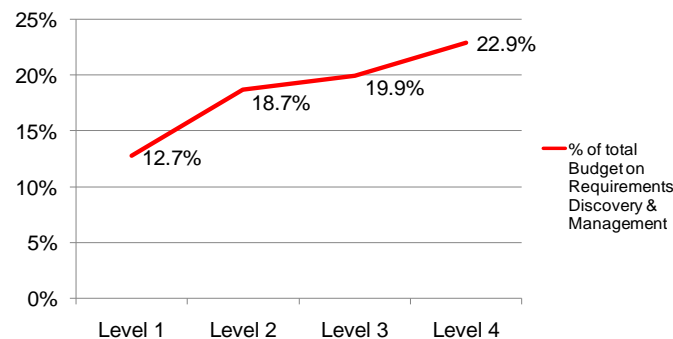
Issue #3 – Requirements Definition and Management takes a Significant Commitment of Time and Effort

Maturing an organization requires that stakeholders understand the impact of poor requirements processes on their overall business performance, and agree to participate in a more mature process. For companies unfamiliar with spending $100,000 or $200,000 without a single line of code being written, this can be a significant culture shock. However, IAG found a direct correlation between the amount of effort applied to requirements definition and management, and the overall maturity of organizations generally. Higher maturity companies dedicate more effort to ensuring that requirements are right versus their low requirements maturity counterparts. The challenge for CIOs is to have the faith to front-end-load expenditure, knowing that overall costs on the project drop precipitously as a result.

Requirements Timeliness Needs to Improve in the Industry

The study shows that the average $1 million project required between twelve and nineteen weeks to prepare requirements. IAG believes this is too long and is the direct result of sub-optimal processes. Dramatic compression in time to deliver requirements can be brought to a mature organization – irrespective of its development methodology. Hence, there needs to be a focus not only on establishing best practices, but continuously optimizing practices.

Level 5 (continuously optimizing) organizations would be far more focused on making the stakeholder experience more efficient. For example, IAG itself, on the average $1 Million assignment would complete:

- Business requirements (process flow, data flow, business rules, structured statements of system capability, ERD, and the start of the data dictionary) in no more than 10 to 15 working days (as opposed to taking more than a month).

- Detailed requirements would not take longer than 5 to 10 weeks (about a third the time period averages found in the study).

CIOs need to expend effort to ensure stakeholders participate in gathering requirements. As a whole, the industry also needs to further optimize so that higher quality requirements can be generated with far less consumption of stakeholder time, and in far shorter time periods.

Issue #4 – Fixing Requirements Definition and Management Maturity is not Free

The requirements practice area tends to be underfunded by organizations that are immature. Underfunding improvement creates a self-propagating cycle where the organization cannot materially change maturity levels. Underfunding results in a lack of impact across a broad spectrum of requirements definition and management maturity areas and therefore limits change to overall performance on projects. The cycle of underfunding change becomes self-perpetuated when first forays into improvement are met with less than stellar success. The likely result will be waning interest in continued focus on change. Unlike low maturity organizations, the Business Analysis Benchmark indicates that high requirements maturity organizations invest a tremendous amount to achieve their goals.

Luckily, the business case for investment in improving requirements maturity can be easily made based on a relatively small volume of projects. Assume the following baseline scenario: an average Level 1 organization, doing three projects in a year with an application development budget of $966,000. On average, each project expected to be $250,000 likely ends up costing $322,000, and carries an additional $34,400 in maintenance post deployment to make up for missed requirements during development.

The comparative: a Level 4 maturity analyst at a Level 4 company will end up doing four projects of equal magnitude in that same time period taken by the Level 1 analyst, each of which would end up costing being a mere $6,000 over expected cost on average rather than $72,000 and have negligible additional maintenance as a result of missed requirements. Therefore, if IAG assumes the company achieves the average performance for their level of maturity, the productivity and performance gain, per analyst, of improving requirements maturity to Level 4 for the Level 1 organization, would be:

- $199,000 savings in direct development or 20.6% increase in projects depending on what is desired

- $103,200 in maintenance post deployment is avoided and dropped from the maintenance budget (not included in above).

- 32.4% improvement in analyst productivity

- Over 30% improvement in time required by stakeholders to participate in requirements sessions

- Satisfaction rate with IT projects increases to over 80% from about 50%

Suffice it to say, for almost any reasonable investment, the benefits will more than outweigh the costs, so long as the expenditure is of sufficient magnitude to actually gain the organization Level 4 maturity.

Issue #5 – Everyone Recognizes Requirements are Important – But Do They Take Action?

The simple answer is "they don't take action". Over the course of 2008 and 2009 research, and in discussing these results with tens of thousands of people, IAG concluded that while over 95% of people would say "Having good requirements is important to the outcome of my project", few will change existing behavior to

achieve this result. Low maturity organizations will recognize that they have poor requirements, and, that this dramatically affects project performance, yet they continue to make the same decisions that led to getting poor requirements in the first place on project after project. It falls to the savvy CIO to correct this entropy and force corrective action and the controlling of requirements-related risks.

Only in the face of a visceral reaction to objective data will people take action. The issue for CIOs lies in how you set up a pilot project or other proof of concept, and how to measure and describe the benefits. Benefits must always be described in terms of 'what's in it for the stakeholder'.

For example, showing the organization that requirements change was reduced by 75% may be exciting to the IT organization, but may not lead to the needed reaction that change is needed and compliance to the new change program is warranted. If the CIO instead showed that productivity increased by 40% in all business function areas, while satisfaction with projects shifted by an order of magnitude – folks are more likely to get on board. The challenge for CIOs is that this latter set of statistics is more difficult to baseline and measure.

Issue #6 – There is a High Probability Your Company is a Level 2 or Lower Maturity

The Business Analysis Benchmark 2009 found almost 75% of organizations at a Level 1 or Level 2 maturity in requirements definition and management while relatively few organizations had achieved Level 4. Had this survey been done 5 years ago the curve would have been skewed even further to the left. IAG believes that great strides have been taken over the last 5 years to improve overall industry maturity in requirements definition and management. However, the vast majority of companies have a big job ahead of them if they wish to significantly improve.

CONCLUSIONS FOR THE CIO: GETTING ON THE PATH TO SUCCESS

Ask yourself the question: "Is the business predictably successful in technology endeavors?" If the answer is anything other than an unqualified "yes", chances are there is an issue in requirements definition and management maturity that must be addressed and resolved. The issues involved in achieving this goal are

by no means simple. You cannot simply hire a few people, or throw a few training dollars in the direction of improvement. Improving requirements definition and management maturity requires changing a broad cross-section of competencies. Combine the above challenge with the amount of effort needed to bring stakeholders on-board with the initiative, and it's easy to see why many organizations fail in efforts to make improvement.

The CIO is accountable for being the bridge between business and IT and is focused on more predictably delivering solutions. This results in an inherent focus on maturing requirements definition and management. For 75% of organizations, implementing this strategy yields a quantum improvement in productivity – both within the analyst function, and across development and maintenance organizations. It is a simple fact that, not only do well planned and described projects run better, but few other IT investments will yield the magnitude of return of a requirements transformation program properly designed to improve requirements maturity.

For the CIO, the six issues outlined in this report establish guidelines for a program of change. CIOs need to be the change catalyst in this program. If you wish to accelerate your organization down a path toward success, IAG Consulting has the following message:

1. CIOs own the path of improving requirements maturity. While the process of conducting requirements and optimizing this process is ultimately done in conjunction with the business stakeholders, the magnitude of business impact to the CIO and the organization of poor requirements practices is too great to simply shrug and say, "whatever you guys want is okay by me…"

2. CIOs can help by communicating the steps for effective action and allocating sufficient resources to make improvement. Requirements improvement can only be made by affecting all six requirements capability areas. To achieve gains, CIO need to communicate to the organization that the path toward success includes sustained improvement in all six areas. This means each capability area will need to be resourced and budgeted in addition to setting up the monitoring of performance change.

3. It is the CIO that is best suited to sell path to success to the organization, and show the business benefits of effective action. For too many analysts, organizational resistance and participation problems in the requirements process is so great, it is near

impossible for the analyst to be successful. In lower level maturity organizations, it requires the CIO to break through organizational resistance and showcase improved development effectiveness. The consequences for the low maturity organization are simply too great to ignore or to consider inaction. CIOs must own The Path and sell The Path to success to their organization.

ABOUT IAG CONSULTING

IAG specializes in business and software requirements. Since 1997, our company has worked with 300 of the Fortune 1000 companies, completed over 1,300 requirements projects, and trained more than 100,000 business analysis professionals. Our organization focuses on a practical and practiced approach that is efficient for all stakeholders in both business professional and information technology departments. We bring measurable gains to our clients:

- Reducing time needed to complete requirements
- Ensuring completeness in documentation and reducing change requests
- Issuing RFPs where vendors can bid accurately and clients get better terms
- Reducing costs in systems development
- Salvaging troubled projects

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