



2013 Requirements Management Tool Assessment and Comparison Report

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INTRODUCTION

“If the only tool you have is a hammer, you tend to treat every problem as a nail.” - Unknown

While success is hinged on having the right tools, but it is also dependent on having the underlying skills and expertise. Just as a modern kitchen won't make anyone into a brilliant chef without the underlying skills of slicing, dicing, selecting ingredients, and plating the final dish; a requirements management tool won't make your business analysis team any better at writing requirements without the underlying skills of eliciting, analyzing, writing and validating.

According to the Merriam-Webster Dictionary, “management” is defined as the “conducting or supervising of something”, or as the “judicious use of means to accomplish an end”. In the context of requirements, the requirements themselves are that end. This means that requirements management is not merely the act of collecting, storing and maintaining an inventory of the finished product, it has to also encompass the management of the resources and the processes by which those products are created.

Those resources and processes must be planned, measured, monitored, controlled and reported on in the same way that a chef must plan for the dish, measure the ingredients, control the cooking times, monitor the progress and even report when a dish cannot be made to a customer's satisfaction.

“It is all too common for business analysts to find themselves in the position on a project where part-way or almost all of the way through, they discover serious issues resulting from a lack of pre-planning. These issues must be fixed at significant cost and impact to the timeline of the project.”¹

The last couple of years have given rise to a host of software tools that enable better management of requirements. These tools range in complexity and usability, as well as features and usefulness.

While the use of these tools increases the likelihood of success, the tool itself is merely the enabler of success by the application of proper and methodical data management techniques. These techniques must go hand-in-hand with the management of the resources selected to fulfill the role of business analysis, as well as the processes which they will employ in the regular course of their activities. After all, you would not hire an inexperienced person as the head chef of a restaurant and expect that the stove will do the magic of ‘transforming the ingredients’.

This assessment greatly simplifies the tool selection process, and makes it easy to find what will work for you, and provide the best results in your individual situation. Every tool is unique and may have specific features which will not only appeal to you more than any of the others, but will align to the processes within your organization.

¹ Davis, Barbara; “Mastering Software Project Requirements: A Framework for Successful Planning, Development & Alignment”; J. Ross Publishing; 2013

As the research for this year's report was being conducted, it was apparent that many other companies had jumped into the requirements management tool arena. In fact, while the 2012 report researched some 20+ tools and reported on only 15 of them, this year's report, researched some 54 tools which laid claim to being in the requirements management space, and ultimately reports on the 32 valid RM tools. Tools were excluded for one of two reasons:

1. They did not meet the basic criteria for a requirements management tool (the ability to perform 3 or more functions related to requirements management)
2. If there was not enough information about the vendor supporting the tool to ensure that a customer could hold a vendor liable for support, maintenance and upgrades.

Requirements management tools are one of the crucial success factors in the management and monitoring of requirements from scope through to testing. Companies should be finding that the use of such tools will reap far greater ROI than they can possibly predict today. This is an inescapable fact of technology. The only way to reduce the overall operating costs of development is to manage the people, processes and technologies towards that end.

This document is therefore intended to report the findings of the comparison of available requirements management tools within the marketplace against criteria for the successful development and management of requirements. It is to support the purchase of a tool that meets an individual companies needs by identifying specific business analysis-based criteria and by illustrating the summary of features of each tool as they align to this criteria.

In addition, this report supports making recommendations for the management of requirements in a manner that is consistent with industry standards, addresses the specific management needs of clients based on the other tools within the environment and addresses the business needs for the adoption of tools and techniques that reduce overhead costs associated with technology projects while simultaneously increasing revenues from technology solutions with a decreased time-to-market simply because of the quality and lack of defects, and thereby ultimately increasing the ROI associated with these solutions.

It is intended that this document will serve as a point of reference and provide a definitive set of guidelines for businesses to make a well-informed decisions about the recommended tools contained within this report. It is also intended that the consumers of this document can forego expensive inquiries into a select group of tools and potentially risk missing out on finding the right tool by giving them a place to start in terms of functionality as it relates to their own business needs.

Intended Audience

The intended audience for this document is CIO's, CTO's or CFO's or other C-level executives with the authority, budget, and desire to improve their project success ratio by implementing full suite of managed business analysis services, coupled with a requirements management tool in

order to re-shape the way in which their organization executes, manages, and delivers quality technology solutions.

About RQX Global Training & Consulting LLC

How would you feel if your projects were done on time and you got exactly what you needed? What if your projects did not cost almost 2-3 times the original estimate?

Let's face it, it's not always the up-front cost that hurts the most, it's the unpredictable cost of projects and even failure. Worse, when a product takes longer than expected to get to market, you begin losing money. Money that you're not sure you can recover.

“We were a year and a half, and \$5 million into what was supposed to have been a six month project with a \$1.2 million budget. We implemented the first phase with no ability to back-out changes. We were optimistic.” ~ Development Manager, Public Insurance Company

The faster you get products into the hands of your team and customers, the more money you make. The better those products are, the more money you make. The less time you spend fixing defective products... you guessed it... the more money you make.

We want to make sure that you get your products to market faster and with a higher quality than most firms can deliver. After all, we recognize that time is money.

“Having Barbara Davis work with our team meant that in spite of a two month delay to fix nearly 400 defects from the first implantation, we still implemented the next phase on time. We couldn't believe it. She not only led her team to fix the defects, but she also delivered the next phase requirements. We implemented the next phase with only *two* defects! We actually had to *withdraw a change request* for an additional \$4 million! This has *never* happened in the history of our company and just would not have been possible with her.” ~ Project Manager, Public Insurance Company

Using our approach in combination with your existing PMO and architecture, we work with you to streamline your technology profile, to decrease your costs and losses, as well as to increase your technology-based profits.

Technology management and maintenance is simpler: capability and capacity levels are maximized; technology is more aligned with the business drivers; and loss due to waste, project failure and ongoing support is dramatically reduced.

Don't just be competitive. Don't just beat the competition.

BE the Competition.

How did we get this attitude? From our founder and Chief Information Officer, Barbara Davis.

As a business analyst for many years, Barbara was frustrated by watching companies struggle with high-cost, low-value projects that delivered with far too many defects, and never delivered on time. What she discovered is that most companies are not adequately managing one of the most critical aspects of these projects.

This is exactly why we now help companies get to the root of the problem, solve it and stay on budget, or even save money.

RQX Global provides specialized technology management and profit management services for projects, resources, portfolios and IT services. We help companies to reduce both costs and losses on technology projects, and increase their ability to be more than competitive. We help make them *THE* competition to beat.

What Clients Have Said

In 2010, Barbara Davis was brought in to PECO, to help support an over-schedule requirements and quality assurance project aimed at re-engineering these two critical internal process areas. The project had an unsuccessful delivery of work products and was in danger of critical loss of both revenue and momentum for the engaged consulting firm.

The consulting firm had hired a consultant to create an entirely new requirements methodology to support the new quality assurance initiative. After six weeks, it was discovered that the consultant had not produced anything and was unable to complete the work. The account manager was in a panic about how to bring this to the attention of the client without losing the contract.

The first meeting was in 2 days, and there were no deliverables to show. Barbara quickly digested the needs and goals of the project and set to work. She created the draft of the new process and walked the client through it during that meeting. The client was happy and the remainder of the project moved forward without a hitch.

Barbara was able to turn around the remainder of the deliverables and work products within a record time and introduced internal/external IT Best Practices and improvements. In addition, she advised on purchasing decisions for both requirements management tools and configuration management system.

In the end, here is what the client had to say:

"Awesome! Great job!!! " – Mike Menendez, QA Director, PECO

In 2006, HEB brought Barbara Davis on board in a consulting capacity to support the development of business analysis skills and the development of a managed services area. The analysts were all new to the role and had almost no experience. Many of these new analysts felt

intimidated and even incompetent and abandoned because they had been thrown into a role without any guidance and leadership.

At one point, an analyst approached Barbara in tears. She explained that in every other job, she was able to learn the role very quickly and was able to feel good about her performance. In each of those instances, she had guidelines to perform to and managers to provide guidance and feedback. But in this case, she had been unable to achieve this because there was no management or guidelines to follow, so she felt incompetent. She was ready to quit after 20 years with the company.

Within the company itself, many of the employees were concerned about the quality of IT projects and frustrated by the inconsistent involvement and results of the BA's across different projects. Project managers were overloaded with project work and did not have the time or energy to guide the new analysts.

Barbara was able to define a new practice area including techniques, develop the management infrastructure for the group and then provide training to get these new analysts up to speed very quickly by breaking down barriers to learning and enabling the trainees to tap into transferrable skills they never knew they had.

In the end, here is what the client had to say:

“Thanks for your support during this period when they didn’t have a manager. We could not have come this far by ourselves. Good luck and we may see you again in the future after Mary Ann gets her arms around this group and develops a going forward plan. Thanks again!” – Anna English, HEB

About Barbara Davis

As the author of “MANAGING BUSINESS ANALYSIS SERVICES: A FRAMEWORK FOR SUSTAINABLE PROJECTS AND CORPORATE STRATEGY SUCCESS” (2012, published by J Ross Publishing) and a champion for technology standards and infrastructure for over 13 years, Barbara Davis is not only an international speaker, she also works with Fortune 500 companies to re-align Business Analysis services, critical and struggling projects, and establish operational infrastructure, in order to ensure successful outcomes in the face of conflict and very challenging circumstances.

Barbara Davis has launched Business Analysis portfolios grown them from \$500K to over \$8 million. Over her career, she has grown other service portfolios to over \$51 million, and enabled clients to reduce operational spending by salvaging struggling projects and driving operational changes for clients in excess of \$220 million

She has been published in Strategize Magazine, created the world’s first university-accredited Business Analysis diploma program, and has spoken at Project Summit/BA World conferences across Canada, the United States and India.

Ms. Davis is a proven thought leader and expert in business analysis, project management, and various aspects of information technology management and business. She has been a champion of business analysis and technology standards and infrastructure for the past 13 years, during which time she developed the world's first university accredited business analysis diploma program, as well as proprietary resource maturity and requirements methodologies.

Prior to entering the technology field, Barbara gained more than 15 years of functional business experience in operational management, project management, change management and training which continues to serve her well in the context of her current roles working with Fortune 500 companies to re-align business analysis services and struggling critical projects, and establish operational infrastructure, to ensure successful outcomes in the face of conflict and very challenging circumstances.

BACKGROUND

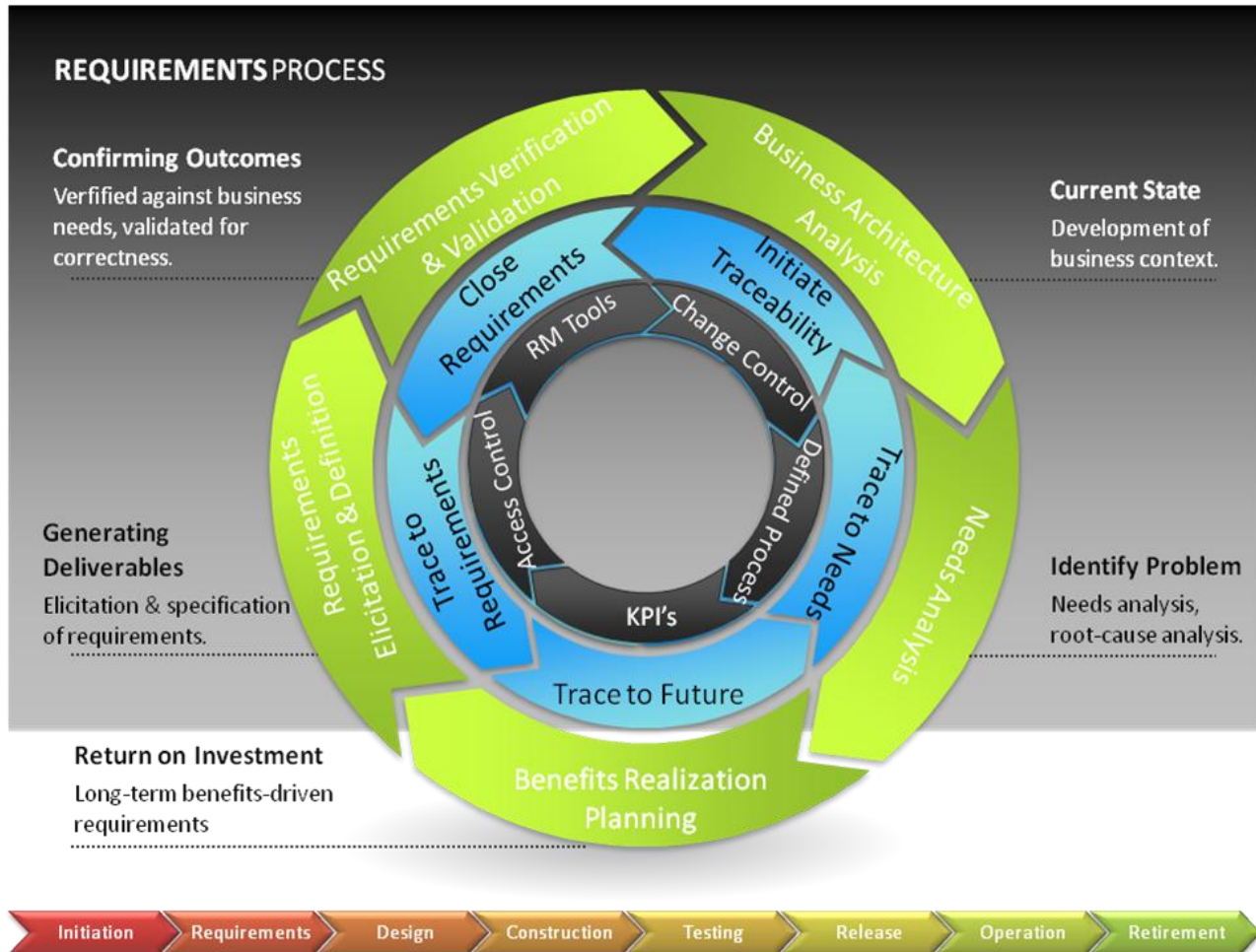


Figure 1: Overview of Requirements Model

The above model illustrates the requirements development process as it relates to both the traceability (blue) and the governance (dark grey) processes. Requirements management and traceability is a process that many people believe starts with requirements. However, in reality, traceability actually begins with the needs and scope of the project. This is because we must be able to validate a solution against the business goals and drivers in order to ensure adequate alignment of the final solution and to ensure overall benefits realization. In this manner, the Business Analyst is really the enabler of the strategic plan, simply because they ensure alignment and “navigation” if you will, towards the strategic goals set by the executive.

Requirements management is the task of controlling, measuring and monitoring the process of developing and delivering requirements from start to finish. Many people believe that it is simply

the collection and management of the requirements themselves. But if we manage only the outcomes of the process without understanding, controlling and quantifying the process, the outcomes will never change. The outcomes are not faulty on their own, or by some accident. The outcomes are faulty because of poor processes used to develop and define the outcomes.

To support the activities and results of business analysis as described above, a requirements management tool must be capable of measuring the process, monitoring it, controlling it, reporting on it, and verifying it by assessing the outcomes.

“Requirements themselves start as the vague intangible concept and evolve to become a clearly articulated set of specifications. In order for this to happen, some of the commonly used industry tools techniques and templates have been adapted. They have been enhanced and quantified, given priority and context, and new tools and techniques have been added.”²

“Finally, we need to understand, plan, and prepare for how requirements will be managed. To do this, we need to ask and answer basic questions about the requirements themselves:

- How will requirements be captured?
- Where will individual requirements be stored?
- Who will have access to edit these requirements?
- How will each requirement be traced back to the corresponding processes and business rules?
- How will each requirement be traced to the corresponding design(s)?
- How will each requirement be traced to the corresponding test plans, cases, and scripts?
- How will other teams (design, development, and test) report on consumption of the requirements and implementation into the product?
- How will issues uncovered later during design, development, and test be reported and managed?
- How will requirements changes be made, managed, and reported back to the teams?
- How will requirement quality be quantified?
- What metrics and benchmarks will be utilized to measure the activities themselves and the results of those activities?”³

While traceability in a tool begins when the needs, scope, goals, drivers and requirements are entered into the tool, we have to ensure that are still able to make the alignment at any point

² Davis, Barbara; “Mastering Software Project Requirements: A Framework for Successful Planning, Development & Alignment”; J. Ross Publishing; 2013

³ Davis, Barbara; “Managing Business Analysis Services: A Framework for Sustainable Projects and Corporate Strategy Success”; J Ross Publishing; 2012

downstream of the originating activities. The checks and balances of traceability are evidenced by the maturity of the metrics and benchmarks we assign early on, as well as our consistency in collecting and measuring them repeatedly throughout the project lifecycle.

This level of traceability coupled with the maturity of metrics and benchmarks, enables sustainability of strategic technology projects.

In October 2012, RQX Global Training & Consulting initiated the second assessment of requirements management tools available in the marketplace. The intent was to evaluate and understand the quality of such tools and to be able to assure suitability of particular tools for future clients dependent on their individual needs, as well as to understand how the practices currently being utilized within the IT community at large.

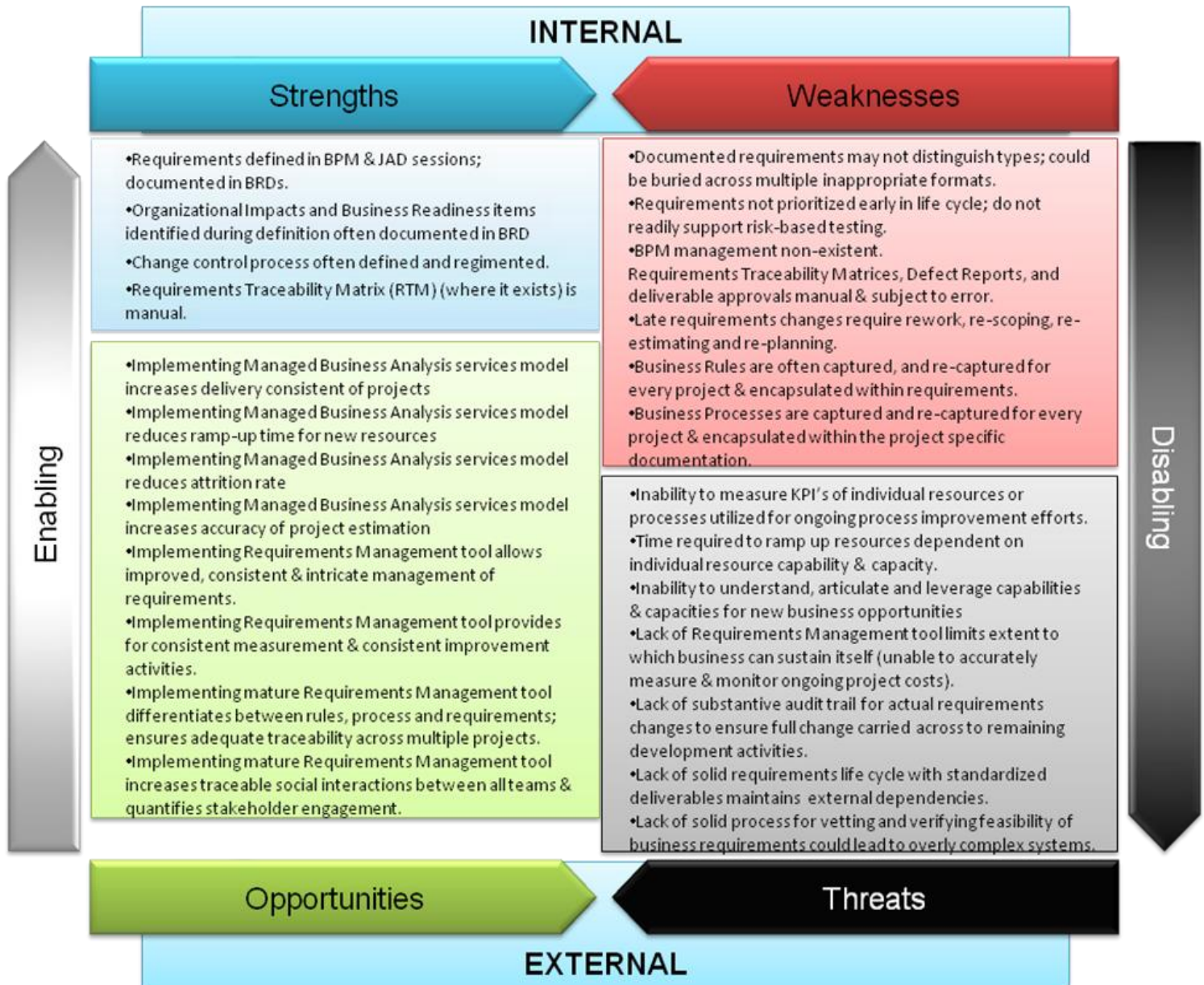
To this end, the Requirements Management Tool Assessment and Comparison Report found that there was a high degree of inconsistency in requirement development and management techniques, varied expectations for traceability, a substantial lack of metrics and benchmarking activities accompanying requirements management tasks. In addition, we discovered an overall lack of intimate understanding of the value of the collateral and data behind traceability activities and their role in the sustainability of individual techno-initiatives, as well as business continuity. It also found that this is complicated by the volatile nature of requirements during the elicitation, analysis and validation process.

While requirements are documented as a standard practice in projects, they are not documented to any standardized level of detail, complexity or completeness in all cases. A significant and varied amount of change occurs throughout the requirements evolution process. It is imperative that these changes are managed throughout the life cycle.

The term “management” implies that there is a degree of measurement, monitoring and control that occurs across requirements and analysis activities. However, the only techniques being applied in many of the requirements management tools to date, are basic “inventory” and tracking. There is still very little or no real quality control, limitation placed on volumes or changes, there is little in the way of evolved base lining techniques, and little or no effort to apply consistent improvement techniques.

The intent of this report is not to draw attention to the weaknesses of any particular tool, nor to discredit any of them. In actual fact, this report is to identify the criteria for tool selection based on the reality of business analysis within a given company; the reduce the costs and efforts associated with individual companies performing this comparison on their own; and to educate companies about the critical tasks and techniques of business analysis.

Figure 2 provides the most important observations from a SWOT analysis conducted on this area.

Figure 2: SWOT Analysis of Average Requirements Development and Management Practices


FUTURE TRENDS & OPPORTUNITIES

Throughout this assessment, there were two key trends which emerged in relation to the requirements management (RM) tools. These were the increases in tools with a social engagement component, and the emergence of some forms of metrics associated to requirements.

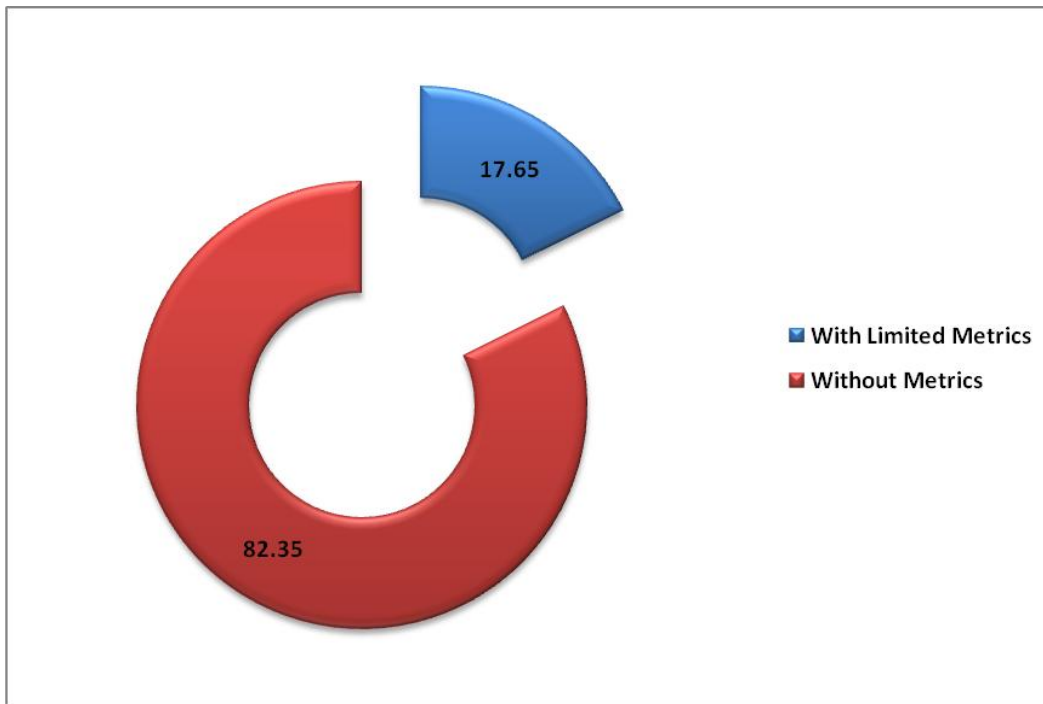


Figure 3: Percentage of Tools Surveyed with Some Form of Visible Metrics

In fact, only 17.65% of RM tools assessed, contained some form of metrics which were visible to the user through a dashboard. The collection and ability to customize any of these metrics and benchmarks were not discernible.

The full and complete measuring and benchmarking of requirements will be the one key factor which enables more accurate estimation of requirements activities. This will improve some of the odds that are currently facing projects in terms of overall estimation and subsequently going over those original timelines and schedules.

Further, it was discovered that 35.29% of tools had the capacity to demonstrate and determine a degree of strategic alignment between the requirements and the overall project objectives and scope. Again, the collection and ability to customize this feature was not discernible. However, the ability, regardless of how limited, to calculate a percentage of strategic alignment means that stakeholders can evaluate the success of projects and the ROI a little better.

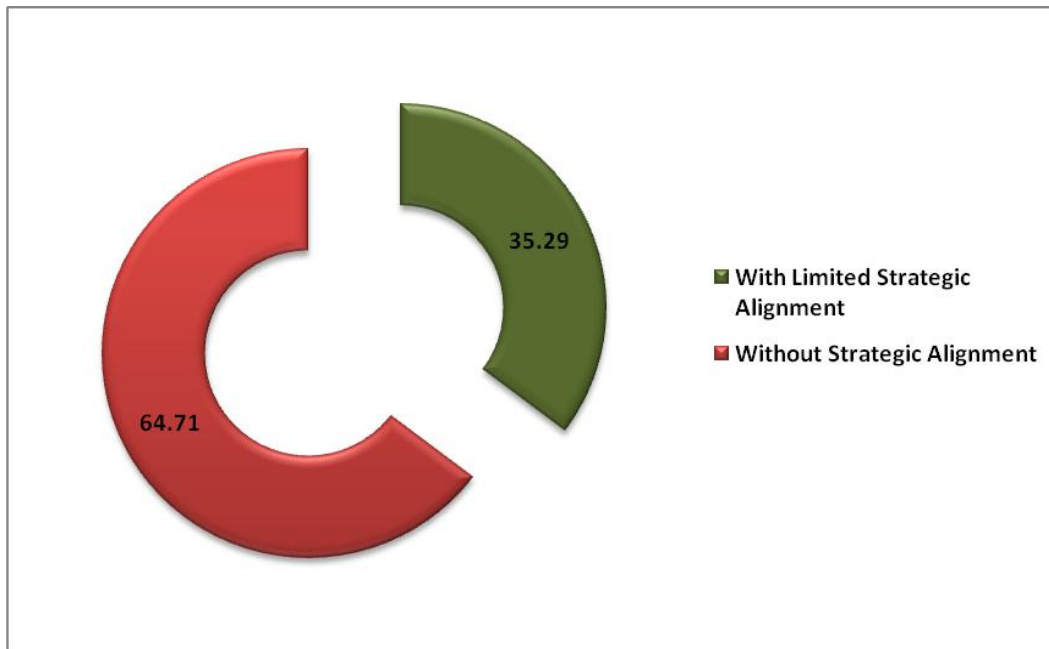


Figure 4: Percentage of Tools Surveyed with Some Form of Strategic Alignment Analysis

As a direct result of both the trends towards metrics and social engagement, as well as the movement to demonstrate consistent improvements to requirements, this report also presents recognition for the Most Forward-Thinking Tool. This recognition was given to the tool which demonstrated functionality in both metrics collection/reporting and social engagement.

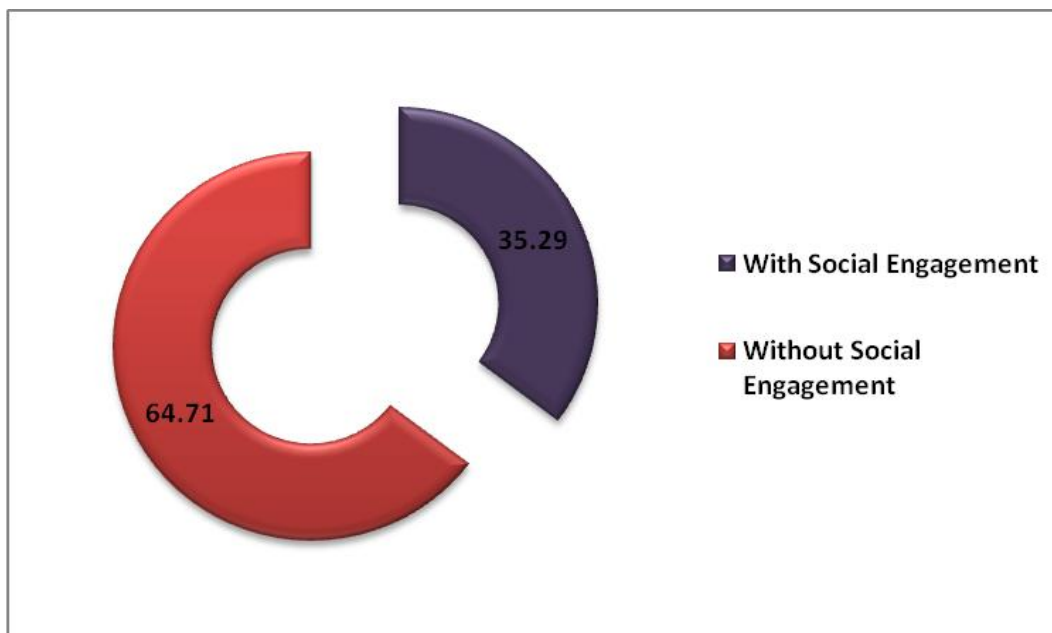


Figure 5: Percentage of Tools Surveyed with Some Internal Communication Module

Analysis of the captured data indicated that 35.29% of all RM tools assessed demonstrated the capability to have project team members and stakeholders communicate within the application, as well as the ability for the application to capture and monitor these conversations as a means of ensuring the information which drives requirements and key decisions throughout the elicitation process.

It was clear that these RM tools are making a concerted effort to create a platform for the documentation, storage, and management of requirements, coupled with mechanisms which are meant to engage stakeholders, track sign-off, and to track all of the water-cooler conversations regarding individual requirements. While this still insinuates that requirements are user-centric and that the project is heavily reliant on these users to provide them, it does increase the likelihood of stakeholder involvement and engagement in ways that previous tools simply could not.

A powerful feature for the involvement of stakeholders can be gained by simply integrating with project engagement solutions such as Spotlight PPM. These foundations will ensure that more projects can engage and manage stakeholders in ways that only social media has been able to do up to this point. One of the most powerful advantages of utilizing such social engagement platforms is the ability to measure and quantify actual stakeholder involvement across the life cycle.

Opportunities for Improvement

The following were identified as opportunities for industry improvement specifically related to the proposed usage of a requirements management tool:

- Requirements traceability generally is begun after requirements are documented and are not traced back to scope, project objectives and business goals and drivers. This leaves a gap in the ability of the analysts to verify that the defined solution and resulting requirements indeed formulate the correct solution and align to the business needs. In addition, it limits the analyst's ability to plan for and trace benefits realization.
In reality traceability begins at the needs analysis and spans the entire project life cycle. Tools must be able to capture and document this bi-directional traceability from idea to implementation.
- The volatile nature of the requirements development process, coupled with the skill of the Business Analysts, and a variety of external factors beyond the control of the team and the business, often means that requirements changes come late in the project life cycle and can necessitate considerable amounts of rework, re-planning and re-estimating. The external factors can include regulatory changes, which are especially frustrating because they are non-negotiable and typically must be accommodated within the current schedule and timeframe.

- Project delays are often attributed to the length of time needed to engage stakeholders during the requirements development process, as well as prolonged stakeholder approval, but can also be impacted by frequent changes to requirements as stakeholders struggle to keep up to date on the latest versions. Social engagement platforms and features can improve this significantly without losing the detailed decisions and conversations related to requirements.
- Business Rules and Business Processes are most often captured, and re-captured for every project initiated and become encapsulated within the requirements and therefore inseparable. This presents an opportunity for RM tools to capture or link to each of these elements in order to generate a full and accurate picture of requirements.
- There is no formal, detailed and consistent “audit trail” and metrics being captured for changes being made to the requirements.
 - The requirements document Revision History table does not necessarily document or detail the actual changes made in all cases and does not provide an accurate benchmark to measure against.
- There is currently an over-dependence by project teams on the business users and stakeholders to provide all of the requirements. This often leads to managing to the exception on the part of the business analyst.
 - Inappropriate and infeasible requirements are added without adequate due diligence in screening.
 - Unused software features has remained fairly constant over the past twenty years

ALTERNATIVES ANALYSIS

Overview

Before conducting this tool comparison, the team determined that there were underlying needs for requirements management and that there were also three (3) basic options for addressing the needs for requirements management across the industry. These options were to do nothing, continue with additional ad-hoc manual solutions or to implement a managed business analysis portfolio including an automated tool for requirements management.

Alternative Solutions

Do Nothing

By doing nothing, companies would be opting for the status-quo and continuing on with business as usual. This means that any existing requirements tools and techniques would continue to be utilized until some new impetus again causes the exploration of business analysis and requirements management methods and tools.

What many people don't seem to realize is that doing nothing really is deciding that the burning platform is not that much of a danger, and that the risks are minimized. Too many companies do not have an adequate management framework in place in order to control the workflow and to measure its outcomes and efficiency.

Doing nothing is really a two-fold problem. It maintains the current state of quality, and also introduces risks to sustainability of the solution. This only serves to increase the cost of maintaining it and also decreases the availability of resources as the solution ages.

Further, issues that already exist within the environment begin to compound and eventually negate any other project improvement activities. Because of these risks and the results of this situation, this is not a recommended option.

Risks	Impacts
Quality remains static until it begins to decline	Increased cost to maintain and then fix later
Compounding existing errors	Increased cost to fix later
Decreases the availability of resources as the solution ages	Increases cost to maintain
Inability to manage future substantial	Increased cost to develop

projects effectively	
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Addition of Ad-hoc Manual Solution(s) to Existing Situation

This involves the creation of additional manual tools or techniques for requirements elicitation, documentation and management. It is really just a work-around that enables the company to continue on with the status quo for a longer period and is intended to reduce or delay the amount of capital which is spent up front for a new solution.

Depending on the level of automation, this may involve manual entry and maintenance of every individual requirement. Ad-hoc solutions are only as effective when due diligence and consistency are strictly adhered to.

While this might be considered a viable option in today's economy, it may only seem cost-effective in the short term. In the long run, however, the cost of working and resources only increases.

This solution is at high risk of catastrophic errors due to the dependence on human intervention, management and maintenance. While some customizations could decrease these risks, in reality it is more likely that the company will spend more in the long run.

There is still far too much room for inconsistent application, usage and practice simply because of the heavy manual operations and the lack of a standardized framework to manage, measure and monitor the work. Therefore, simply inserting additional manual solutions is not a recommended option.

Risks	Impacts
Compounding existing errors	Increased cost to fix later
Inability to manage upcoming substantial projects effectively	Increased cost to develop
Change Management and low adoption rate	Decreased credibility of IT in front of resources and a reduced buy-in to the new solution
Introduction of new errors on top of already existing errors, omissions and issues.	Increased cost to fix later. Increased cost to develop. Decreased credibility of IT in front of resources and a reduced buy-in to the new solution.

Implement Managed Business Analysis Service Portfolio Including an Automated Tool for Requirements Management

When it comes to requirements management, the tool is only one piece of a complex puzzle. The tool alone will not ensure the success of your projects, nor will it improve the skills of your analysts.

The implementation of a fully managed portfolio of Business Analysis services is effectively the re-organization and standardization of your business analysis framework. This over-haul will lower costs associated to resource attrition, project delivery cycles, break and fix, and the poor quality of requirements.

This solution dictates that not only is an automated tool implemented for use, but that all appropriate resources know exactly how to leverage that tool across every type or of project and circumstance efficiently. It is the standardization of the BA services themselves which will enable and empower the business analysis teams to produce high quality results in less time.

This solution includes the purchase of a tool that is already in use within the industry. This means that the company purchases or acquires licenses and subscriptions for a stand-alone, a commercial off the shelf (COTS) or software as a service (SaaS) solution.

This will support the company's ability to manage the requirements within the context of managing the business analysis portfolio. What makes this two-fold solution particularly attractive is that it gets right to the root of the issues with requirement quality and creates the means for improving that quality through diligent and quantifiable activities.

The implementation of this well-rounded and complete solution will enable the company to better control and predict the outcomes. Business analysis will be an effective activity performed by consistently trained resources within a managed environment, with the appropriate tools.

Risks	Impacts
Lack of ongoing availability of a single training resource team	Lack of noticeable improvements
Lack of executive buy-in	Cost and length of time to implement increases
Lack of qualified resource to build the new framework	Cost and length of time to implement increases Lack of noticeable improvements
Solution may not have all features requested by the client	Cost to implement and customize increases
Change Management will be critical	Cost to implement and customize increases

<p>Business Readiness will need to be assessed prior to any implementation of a new tool in order to ensure rapid adoption and seamless transition, as well as to ensure that the processes required to support the new tool are in place and resources are trained.</p>	<p>Cost to implement and customize increases</p>
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RECOMMENDATIONS

The recommended solution must provide for a managed framework and appropriate tools in order for any significant improvements to be made in the overall delivery and quality of business analysis activities. One without the other is a partial solution which is not likely to garner the desired results.

The alternatives analysis examined the three most prominent options, and demonstrated that both doing nothing and addition of a manual ad-hoc solution are not going to get the results needed to demonstrate improvement in the requirement quality, which directly impacts the project deliverables, quality and cost.

But what about just implementing a requirements management tool on its own? Again, this goes back to the tool not having the skill, and not being the full and complete end-to-end solution required to make the improvements necessary. Remember the stove doesn't make anyone a better cook. All it does, is create the circumstances that will increase the consistency with which meals are heated, reduce the time to prepare the meal, and enable the chef to better control the progress.

To that end, an appropriate managed framework provides the structure, context, training, key performance indicators (KPI's), competencies and the ongoing delivery mechanisms for business analysis services. One of these delivery mechanisms is the requirements management tool.

It is unrealistic to think that either hiring a manager or buying a tool and implementing it will fix the issues with requirements. The problems with requirements are deeper than either one of these solutions could correct without also having the framework and training in place to manage, quantify and monitor the results, as well as the overall process that is used to gain those results.

Again, the recommended solution is to implement a fully managed portfolio of Business Analysis services in conjunction with an automated tool for requirements management. This solution will provide the best overall value for the time spent and will increase the effectiveness of resources to create, manage and deliver quality results for the business. The ROI is realized more rapidly and the impacts to project success are felt almost immediately upon completion, (if not before).

Specific Actions for Improvement

The following specific recommendations were made by the RQX Global team in order to ensure the future success of technology project initiatives:

- Companies wishing to significantly and dramatically improve their project results, customer engagement and their overall product ROI, should implement a full scale managed Business Analysis services portfolio which includes a suite of appropriate tools.

- Companies wishing to significantly and dramatically improve both their requirements quality and productivity of their Business Analyst teams should implement a centralized Requirements Management tool that provides the capability for linking of business processes and business rules to IT requirements, supports the capture and benchmarking of requirements activities and maintains traceability of business goals and drivers to project scope, to requirements and so on to downstream artifacts such as design specs, code modules and test scripts.
- These same companies should also ensure that business processes and rules are captured and maintained in a centrally accessible repository that is capable of ensuring single-point data management, adhering to content management principles and recognizes that each of the rules and process elements supersedes both requirements and the individual instances of each.
- Finally, that these companies build a “permanent” repository of requirements for all of their core business applications, and that this repository is maintained with changes to requirements and managed utilizing the content management principles of single-point data management.

Recommended Next Steps

The recommended next steps are to identify an appropriate partner for building an effective business analysis management model, and then based on that model, to develop requirements for the tool which best suits the needs of the organization.

There isn't a company around today that doesn't want to improve its processes, lower its costs and create better results. But not everyone is prepared or equipped to build a BA management model and implement a new RM tool on their own. And, there are consulting firms out there who can help.

You just have to ask yourself what is the risk of failure, or the cost of a multi-year development and implementation effort? How does that help us right here and right now?

What does the transition process look like? Are great resources likely to get scared off while this is going on? What input will we have in the new methods and tools (after all, we're not that bad)?

Of course, no company and its resources is bad. No one is saying that anyone is doing a bad job either. This effort should enhance what you're doing and make it more effective and efficient. It should also be able to prove that it is both more effective and efficient. Our team highly recommends these next steps in order to do just that:

Step 1: Identify Vendor Partner to Advise on, Build & Implement the Management Model

The first step taken must be to identify a vendor such as RQX Global Training & Consulting LLC that will provide advice, and then build and implement the appropriate management model. This partner must be able to have the flexibility to provide timely and appropriate advice on the development and implementation if the company should decide to go it alone, as well as the capability to step in if the company should need more hands-on support at any point in the process. This vendor should also have the capability to provide all of the assessments from step one to the building and implementation of this entire solution.

One final note is that it is imperative to find a partner that has solid experience in establishing business analysis-specific KPI's and change management. This experience will ensure appropriate KPI's as well as the processes which support them across the resource assignment and project life cycle.

Step 2: Establish the Partnership with the Vendor

Once the vendor has been identified, it is imperative to establish the working relationship through the master services agreement (MSA) and the appropriate statements of work (SOW) to engage them in the work of developing the management model.

Step 3: Identify Issues with Business Analysis

The next step must be to identify and document the current issues and risks with Business Analysis and Requirements as they exist today. Specifically, the company must seek to answer these questions:

1. What are the major complaints about business analysis from a 360 degree perspective?
2. What are the primary results of business analysis?
 - a. What is the defect rate?
 - b. What is the cost of scrap and re-work?
 - c. What is the average time per analyst to complete requirements?
 - d. How effective are those requirements?
3. How is business analysis currently being managed?
4. What is the current ongoing training for business analysis?
5. What is the attrition rate for business analysts (contract and employee)?

Step 4: Identify the Opportunities for the Company by Addressing the Issues

It is important that once the company understands the length and breadth of the issues they are currently facing in business analysis, to identify the opportunities which they could leverage or capitalize on by addressing these issues. Some of these opportunities may include:

1. Can we increase our customer base?
2. Can we increase our customer engagement levels?
3. Can we decrease our cost to produce?
4. Can we increase product ROI by decreasing the time to market?

Step 5: Prepare Benefits Realization Plan

Every solution must be preceded by a benefits realization plan in order to plan the schedule of benefits across the life cycle. These benefits will enable the company to assess the ongoing value of the solution as well as its progress in meeting the stated objectives. In this case these benefits would be:

1. Percentage of decreases to defect rates
2. Increases to time to market and ROI of new products
3. Decreases to overall costs to produce
4. Decreased attrition rates among resources
5. Increased quality of deliverables
6. Increased competencies
7. Increased rates for resources contracted out to clients

Step 6: Begin the Development of the Management Model

The vendor must then support the development effort according to the terms of the MSA and the SOW. The team accountable and responsible for the development work will begin to develop the necessary frameworks for the management of analysis activities and deliverables. These will include:

1. Requirements life cycle
2. Business analysis activities and templates
3. Governance protocol and policies
4. Sourcing protocol and policies
5. Key performance indicators for the resources as well as the processes utilized

6. Competency models
7. Proficiency levels for career advancement and minimum performance expectations
8. Job descriptions

Step 7: Identify Business and Technical Tool Requirements

Next, the company must collaborate with the vendor partner to identify and document the specific requirements for the tool as it will be utilized and employed within the environment in order to support the business analysis management model. These requirements will include:

1. Business rules based on the new model and processes identified
2. Governance of the requirements themselves
3. Metrics and benchmarks for requirements activities
4. Synergy between the tool and the activities performed
5. Continuous improvement metrics
6. Vendor selection criteria

Step 8: Prepare and Distribute Request for Proposal

Once formal and detailed requirements have been determined, the next step will be to prepare and distribute the RFP as part of the formal proposal process for RM tool selection. This will allow the RM tool vendors to establish pricing and features that will enable them to compete for the client's business and the company will be in the position to negotiate a better deal with individual vendors.

Step 9: Compare Implementation & Ongoing Costs

Once the RFP responses have been received, it will be important to establish ongoing costs as well as the return on investment (ROI) that will be unique to the client's situation. This knowledge will facilitate solid business decisions around the final product selection.

Step 10: Select Solution & Negotiate Contract

The company will need to determine the best-fit solution and to negotiate the licensing contract with the specific vendor.

Step 11: Implement the Selected BA Model & RM Tool

Finally, the company must establish an implementation plan which includes ongoing training plan for all resources. This plan must account for and plan for training new resources during



periods of transition and attrition. The plan must also, include the establishment of a baseline for the initial uses of the tool and a timeline for measuring milestones throughout its lifecycle.

Let us help you

If you are struggling to deliver your planned projects on time, are tired of juggling non-stop change requests that substantially restrict your available budget and you're still not delivering solutions that meet the full business need; then give RQX Global a call. We would love to talk with you about how you too can implement a fully managed business analysis solution.

Your private one hour consultation with Barbra Davis for \$250 dollars has no obligation so you have nothing to lose, and everything to gain.

Call or email us today!

info@rqxglobal.com

1.866.924.3339

ASSESSMENT APPROACH

Overview

The approach taken to comparing requirements management tools available in the marketplace was to identify as many of the tools as possible, with the capacity to capture and manage requirements. The goal was to then assess each of those tools against the needs and trends in information technology.

Not all identified tools were evaluated as a part of this assessment. Our team determined that in order to qualify for assessment under this initiative, each tool had to be able to perform a minimum set of functionality for capturing requirements. While the team determined that the tool must at minimum collect requirements, it also had to demonstrate that it also performed three (3) other tasks directly related to the management of requirements.

Initially, fifty-six (56) tools were identified for the pre-qualification process. The result of this process was that twenty-three (23) of these were disqualified from this year's study. In addition to the lack of substantive functionality related to requirements, some tools were also disqualified if there was too little information found about the vendor, or if it appeared that the tool was no longer available.

Once the tools were qualified, each tool was evaluated against industry standards and expectations for requirements management and then against specific needs for requirements management. This included the ability to generate sophisticated metrics and key performance indicators (KPI's) for requirements and the techniques utilized in their development.

Each tool was scored and then compared against all of the others in order to derive the weighted rating for effective requirements development and management. These ratings were then compared against those of the other tools, in order to create an order from highest to lowest.

In addition, these tools were also ranked in this report for most improved over the evaluation from the previous year, as well as the top new tool, and finally, the most forward-thinking tool.

Identified Business Need

The requirements management tool has been identified as an area of improvement for the development, management and maintenance of requirements throughout the project life cycle. There are two primary schools of thought in this area. These are: a tool is not necessary for requirements, and the other is that a tool will fix all of the issues with requirements.

Neither of these is accurate. The fact is that the best approach to correcting errors in requirements is to adopt a tool as part of a greater initiative to better manage and quantify the processes and outputs of requirements activities.

Subsequent high level alternatives analysis determined that the option for improving the quality of requirements and project deliverables was to implement a fully managed business analysis portfolio which includes a suite of appropriate tools which could be customized and implemented.

Specific Criteria for Automated Requirements Management Tools

Feature Set	Priority	Feature Definitions
Requirement Development	Must Have	Ability to capture business requirements in detail
		Ability to capture Functional requirements in detail
		Ability to capture Non-Functional requirements in detail
		Adheres to industry standards (i.e. BPMN, UML, Eclipse)
Release/Cycle Management	Must Have	Ability to provide integrated configuration management of requirements
		Ability to organize the requirements according to release, sprint and development cycles
		Revision control capability with Comparison
		Ability for Check-In Check-Out, baseline and lock the requirements
Traceability	Must Have	Ability to establish and link relationships among requirements
		Ability to provide a central, secure repository for project requirements
Central Repository	Must Have	Ability to serve as a repository for non-requirements objects. (i.e., UML and other models created by external tools to link them to requirements and specifications)
		Provide unique static identifiers for each requirement
		Ability to integrate with SharePoint
Audit	Must Have	Ability to create Audit records (unique history records) for

Feature Set	Priority	Feature Definitions
		each change
		Ability to highlight the differences between the versions
		Ability to include the reason for the changes
		Ability to track the changes made by whom
Prioritization	Must Have	Ability to prioritize requirements by sorting and filtering (i.e. cost, priority)
Notification	Nice to Have	Ability to notify the responsible users on the requirement changes
Impact Analysis	Nice to Have	Ability to trace the impact of changing requirements across business/other requirements.
		Ability to detect the actual changes to a component level
Reporting	Must Have	Ability to generate system documentation and change history reports, baseline comparison, traceability report and status reports
		Ability to tailor output artifacts to match customer methodology
Import/Export	Must Have	Ability to Import business process modeling or requirements from 3rd-party tools
		Ability to import Visio diagrams (for manipulation)
		Ability to export requirements into HP Quality Center
<i>NEW!</i> Metrics	Must Have	Ability to collect simple metrics for requirements status (% completed/incomplete)
		Ability to collect simple metrics for traceability
		Ability to calculate total numbers of requirements
		Ability to calculate Quality of requirements
		Ability to calculate effectiveness of process, tools & techniques
		Ability to calculate productivity of individual team members
<i>NEW!</i> Strategic	Nice to Have	Ability to trace each requirement to high level, scope and objectives

Feature Set	Priority	Feature Definitions
Alignment Analysis		Ability to calculate alignment ratio
		Ability to identify un-related requirements
		Ability to identify missed scope and objectives
Risk Based Requirements Management	Must Have	Ability to categorize the requirements according to business criticality
Integration – Test Management	Nice to Have	Ability to integrate with HP Quality Center
Adaptability	Nice to Have	Ability to customize directly through the GUI (User Friendly to customize)
Security/ACL	Must Have	Ability to create user groups with different privileges for the access control
		Ability to assign a requirement to the team and review the progress
Environment	Must Have	Standalone desktop configuration
		Server configuration for collaboration & sharing, along with centralized storing of files
		<u>NEW!</u> Saas
		<u>NEW!</u> Cloud Solutions
Administration	Must Have	Ability to reuse the project settings and specification templates
Glossary	Must Have	Ability to compile the Project related terms and phrases
Learning Curve	Must Have	Must be user friendly to learn the tool short time frame
Financial Stability	Must Have	Length of time in business
		Known brand
		Endorsed by another major company
		Consistent revenue growth

Feature Set	Priority	Feature Definitions
Customer Service	Must Have	24/7 Tech Support
		Have they won any customer service awards

RATING CRITERIA

Standard Quality Rating

Rating	0 - Not Available	This feature is either not available or not known to be available for this product.
	1 - Low	Little information and depiction of this feature is available so quality cannot be established.
	3 - Moderate	Quality is established as moderate as the product demonstrates or the literature provides clear indication of the availability and usability.
	9 - High	Quality has been clearly established for this feature either through demonstration, screen captures and rich documentation supporting the full description of the feature.

Vendor Attributes Tables

Time in Business	0 - Not Available (< 1 yr)
	1 - Low (1 -5 yrs)
	3 - Moderate (5 - 10 yrs)
	9 - High (>10 yrs)

Brand & Alliances	0 - Not Available
	1 - Low (Fortune 500)
	3 - Moderate (Fortune 100)
	9 - High (Fortune 50)

Vendors were also scored on the ability to provide 24/7 tech support and awards that were won and promoted on their websites.

TOOL ASSESSMENT

The requirements management tools were assessed based on the above criteria, industry popularity, and the alignment to business objectives that would have significant potential for a rapid and positive impact to the client’s requirements management efforts. Further analysis of the captured data, illustrated that only 29% of all tools assessed contained greater than 50% of the functionality categorized as required. What is interesting to note is that 11.76% of the tools assessed actually contained less than 25% of the required features identified by this assessment, while only 5.88% contained more than 75% of that same functionality.

Tools Comparative Snapshot

The following table provides an overview of the tools and the overall comparison against the criteria utilized to make the recommendations for an automated requirements management tool. Note that just because a feature set is listed or not listed here, does not necessarily mean that the product did not have the feature. It had to have had more than half of the elements that comprised a specific feature set in order to be listed in this snapshot. Additionally, this snapshot is not indicative of the quality of the features set or the product to perform the operations.

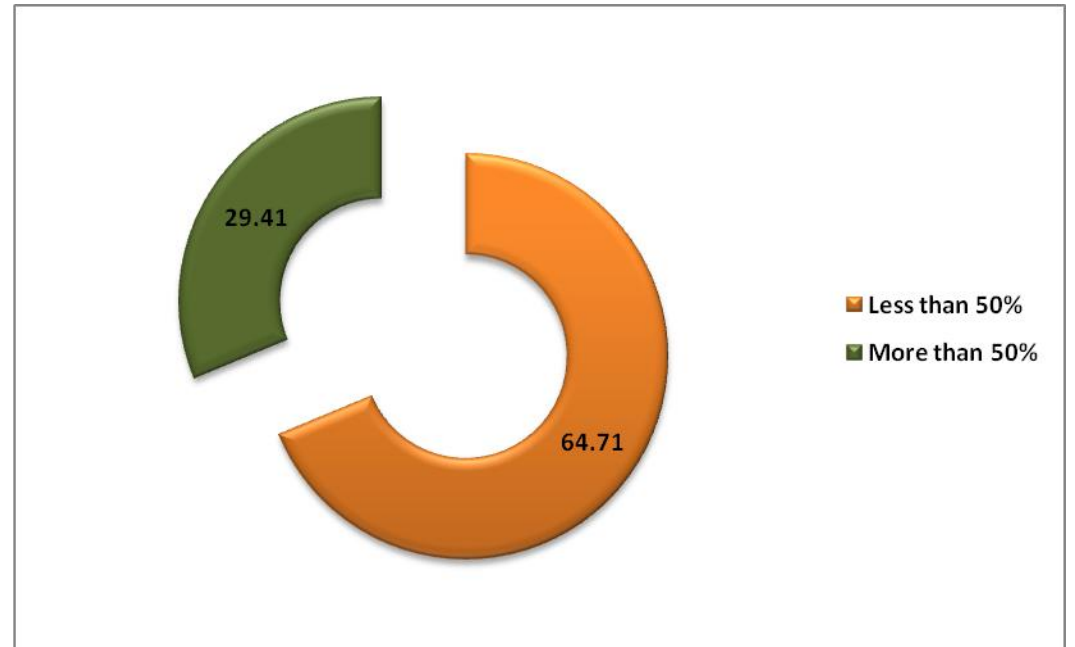


Figure 6: Percentage of Tools with more than 50% of Required Features Identified

Feature Set	Quality Center	iRise	Accompa	Requisite Pro	Rommana ALM	Blueprint	Caliber RM	Doors	Jama	RTM	InteGREAT	Optimal Trace	Enterprise Architect	Composer	OneDesk	EnFocus
Requirement Development		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Use Cases		X	X		X	X	X			X	X	X	X	X		

Feature Set	Quality Center	iRise	Accompa	Requisite Pro	Rommana ALM	Blueprint	Caliber RM	Doors	Jama	RTM	InteGREAT	Optimal Trace	Enterprise Architect	Composer	OneDesk	EnFocus
Release/Cycle Management			X	X	X	X	X		X	X	X	X	X	X	X	X
Traceability		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Central Repository	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Integration – BPM Tools		X		X	X	X	X	X	X		X	X	X	X		X
Audit			X	X	X	X	X	X	X		X	X	X	X	X	X
Project Life Cycle	X	X		X	X	X	X				X	X	X	X		
Prioritization			X	X	X	X			X	X	X	X		X	X	X
Notification			X	X	X	X			X	X	X	X		X	X	X
Impact Analysis			X	X	X	X	X		X	X	X	X	X	X	X	X
Reporting	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X

Feature Set	Quality Center	iRise	Accompa	Requisite Pro	Rommana ALM	Blueprint	Caliber RM	Doors	Jama	RTM	InteGREAT	Optimal Trace	Enterprise Architect	Composer	OneDesk	EnFocus
Import/Export	X	X	X	X	X	X	X	X	X		X		X		X	X
NEW! Metrics										X						
NEW! Strategic Alignment Analysis			X		X	X			X	X					X	X
Risk Based Requirements Management			X	X	X	X	X			X	X	X	X	X		X
Program Management			X		X	X					X		X		X	
Integration – Test Management	X		X	X	X	X	X	X	X		X	X	X	X		
Test Plans/Cases	X			X	X	X	X		X		X	X	X		X	X
Adaptability	X		X	X	X	X			X	X		X	X	X	X	X
Security/ACL	X	X	X	X	X	X			X	X		X	X	X	X	

Feature Set	Quality Center	iRise	Accompa	Requisite Pro	Rommana ALM	Blueprint	Caliber RM	Doors	Jama	RTM	InteGREAT	Optimal Trace	Enterprise Architect	Composer	OneDesk	EnFocus
Environment	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Administration	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Glossary				X	X	X	X				X	X	X	X	X	X
Learning Curve	X	X	X	X	X	X	X		X	X		X	X	X	X	X
Financial Stability	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Customer Service	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X

Feature Set	SpiraTest	LiveDocs	TestTrak	TopTeam Analyst	Requirement One	CaseSpec	Innoslate	Verametric	Visure	RmToo	Cockpit	Gatherspace	Axiom	Qpak	CodeBeamer	Yonix
Requirement Development	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Feature Set	SpiraTest	LiveDocs	TestTrak	TopTeam Analyst	Requirement One	CaseSpec	Innoslate	Verametric	Visure	RmToo	Cockpit	Gatherspace	Axiom	Qpak	CodeBeamer	Yonix
Use Cases	X			X	X	X	X	X	X		X	X	X			
Release/Cycle Management	X	X		X	X	X	X		X		X	X	X		X	X
Traceability	X	X	X	X	X	X	X		X		X	X	X	X		X
Central Repository	X	X	X	X	X	X		X						X		X
Integration – BPM Tools								X			X	X				
Audit	X	X	X	X	X	X				X	X		X			X
Project Life Cycle				X			X					X		X		
Prioritization	X			X	X	X	X		X			X	X	X		X
Notification				X		X										X

2013 Requirements Management Tool Assessment and Comparison Report

Feature Set	SpiraTest	LiveDocs	TestTrak	TopTeam Analyst	Requirement One	CaseSpec	Innoslate	Verametric	Visure	RmToo	Cockpit	Gatherspace	Axiom	Qpak	CodeBeamer	Yonix
Impact Analysis	X		X								X					X
Reporting	X	X	X	X	X	X	X	X	X		X	X	X			X
Import/Export			X	X	X											X
<u>NEW!</u> Metrics	X															
<u>NEW!</u> Strategic Alignment Analysis					X	X							X	X		X
Risk Based Requirements Management	X						X							X	X	X
Program Management													X	X	X	
Integration – Test Management									X							
Test Plans/Cases	X	X	X	X	X				X	X	X		X		X	

Feature Set	SpiraTest	LiveDocs	TestTrak	TopTeam Analyst	Requirement One	CaseSpec	Innoslate	Verametric	Visure	RmToo	Cockpit	Gatherspace	Axiom	Qpak	CodeBeamer	Yonix
Adaptability				X	X	X	X		X		X	X		X		X
Security/ACL				X	X	X	X	X			X	X		X	X	X
Environment	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Administration				X	X											X
Glossary			X		X							X				X
Learning Curve	X	X	X	X	X						X	X				X
Financial Stability				X		X	X				X	X				X
Customer Service		X	X	X		X	X			X			X			X

Functional Coverage

Of the seventy-four (attributes) identified for this study, fifty-four (54) were considered to be mandatory elements of a requirements management tool. The remaining attributes, were those which assessed the integration capabilities for the enterprise architectural needs, administrative needs, and vendor trustworthiness.

It was uncovered that key functions such as use case development, configuration management of requirements, revision control and locking of the requirements during changes, as well as a secure repository, static identifiers, change control, audit trails, prioritization, benchmarking, and strategic analysis, were covered by less than 75% of tools and very often less than 50%.

For each of the attributes of key performance indicators (KPI's) for both the process and the resources employing that process, as well as the ability to calculate alignment of requirements to scope or objectives, and the ability to identify missed scope or objectives, 100% of tools did not have these capabilities.

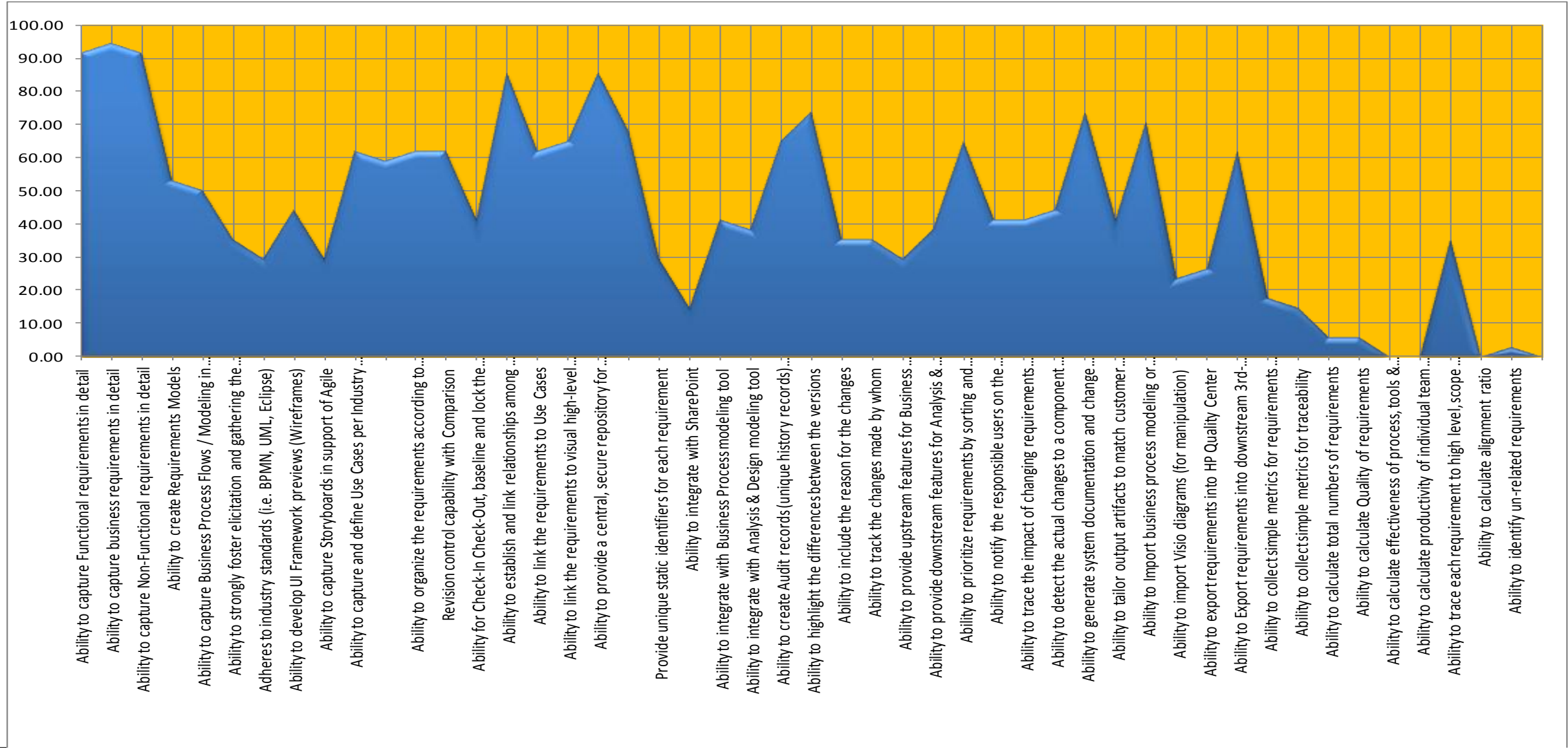


Figure 7: Functional Coverage of Required Features Across All RM Tools Assessed

Weighted Ratings

The requirements management tools were each scored according to features and ease of use of the particular feature, and then assigned a weighted rating from 1 to 5 based on the overall industry standard requirement for the feature.

For example, if the industry determined that the need to gather business requirements was high, then the possible weighted score of the feature was 5. This was then averaged across all scores for the individual product.

Figure 3 illustrates the 2013 results for the requirements management tool comparison.

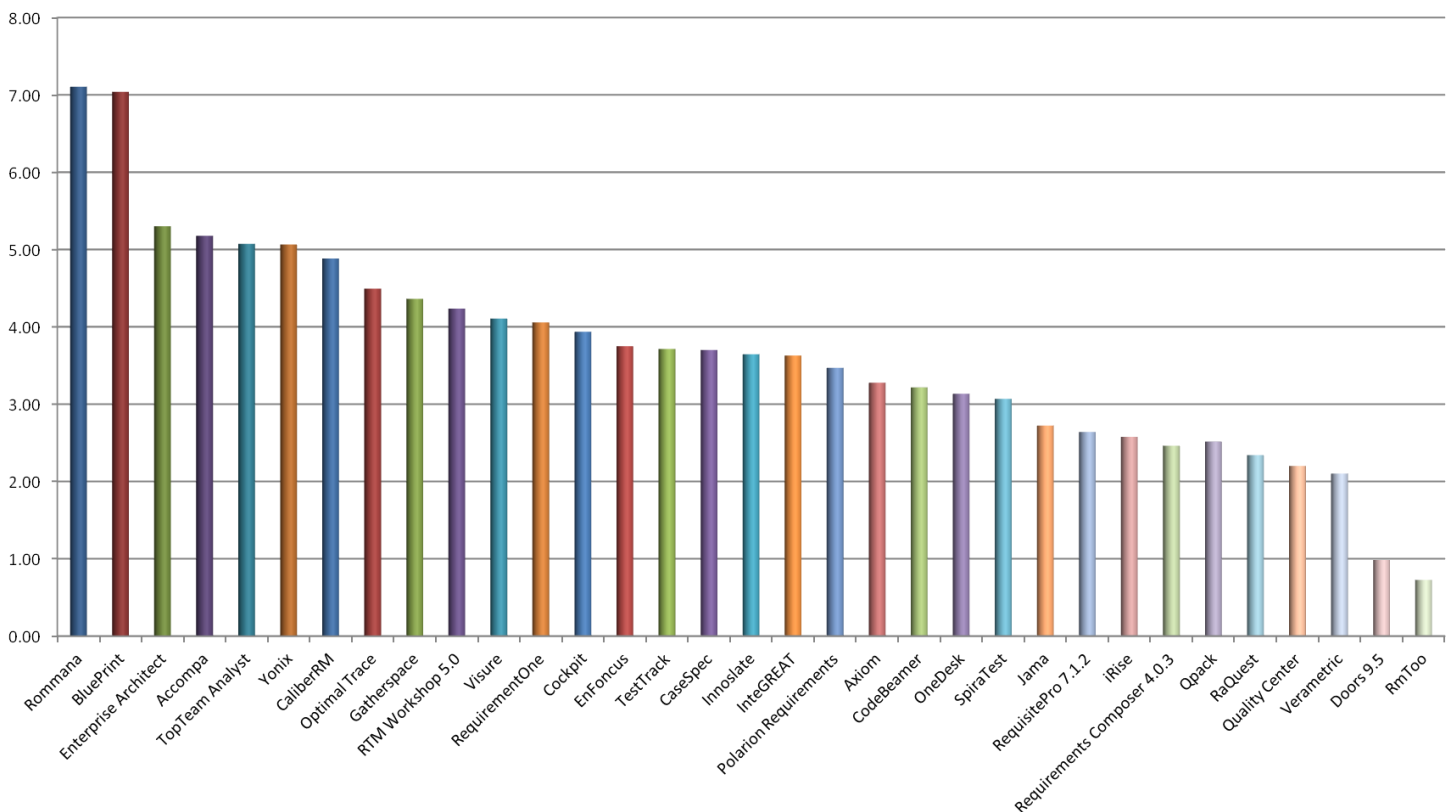


Figure 8: Overall Weighted Ratings by Product

2012 Tools Then & Now

Figure 4 on the other hand illustrates a comparison between those tools scored last year and their own current results for the 2013 results for the requirements management tool

comparison. While it may appear that some of these tools did slightly worse than they did last year, in fact there were some additions made to the criteria this year (metrics, strategic alignment, SaaS and cloud) which affected the weighted rating each tool received.

Comparison of 2012 to 2013

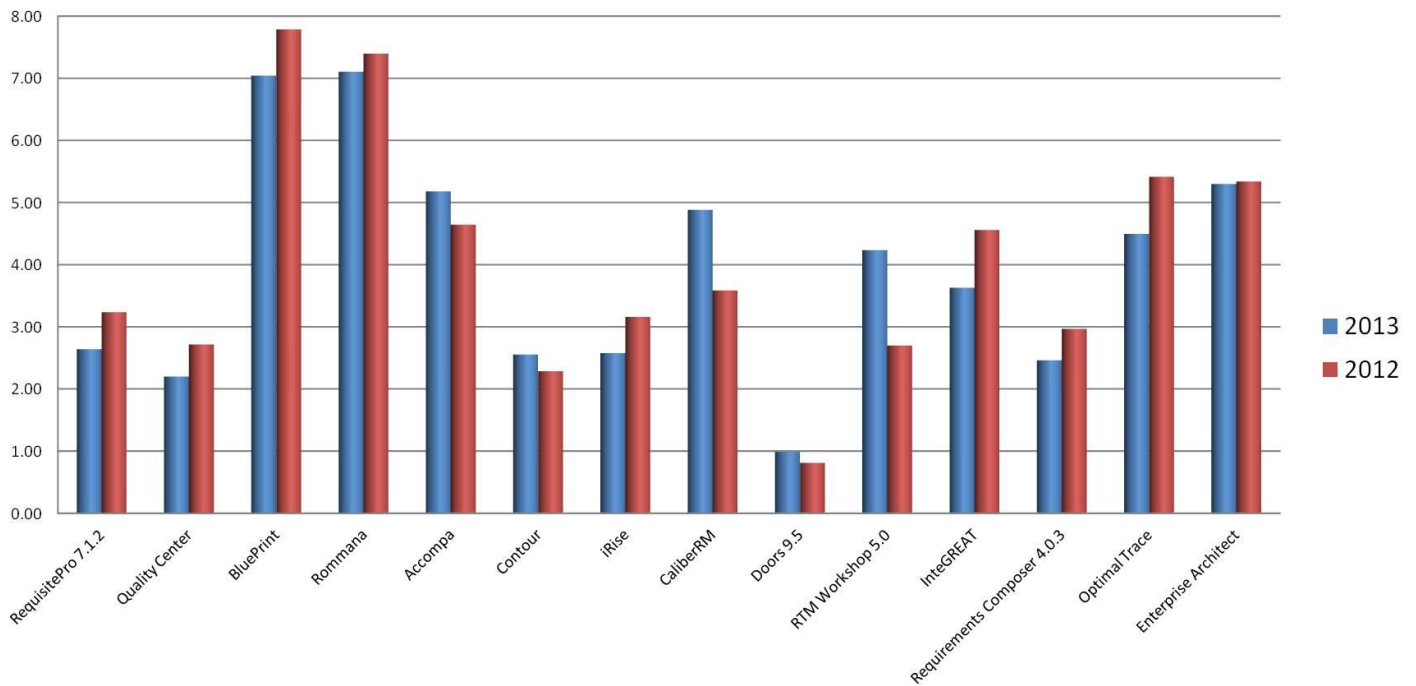


Figure 9: Overall Weighted Ratings by Product Comparing 2012 with 2013 Results

Most Improved Tools from 2012 to 2013: RTM & CaliberRM

Figure 5 below illustrates that tools can always improve. Both RTM Workshop and CaliberRM have notice for the most improved tools (an increase of 1.58 and 1.30 respectively). This kind of improvement is important to note, because it demonstrates a commitment to the customer and the needs of the industry, as well as the willingness to adapt to it.

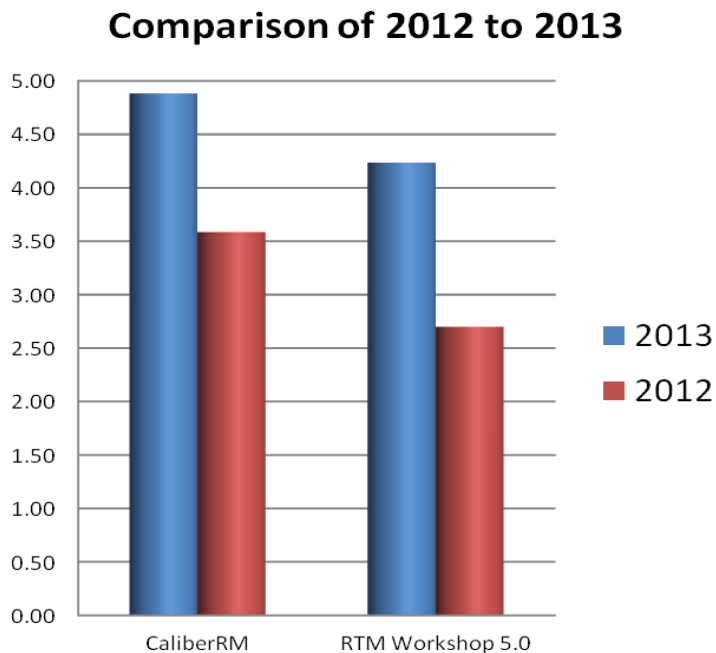


Figure 10: Most Improved RM Tools by Comparing 2012 with 2013 Results

Best Cloud Solutions Assessed in 2013: Rommana, Blueprint, Accompa, Yonix

In this assessment, twelve (12) of the tools were found to be either completely cloud-based or had an option for an independent cloud-based subscription. To derive the best of these tools, RQX Global organized the tools according to weighted scores, and then according to percentage of feature coverage. The top four tools in this category are Rommana, Blueprint, Accompa and Yonix.

Top Three (3) New Tools Assessed in 2013: TopTeam, Yonix & Gatherspace

This year RQX Global took the time to analyze the tool data and score in various ways. This analysis of the data was used to find the best new tools in the marketplace. As illustrated in figure 6 below, these top three new tools are TopTeam Analyst, Yonix and Gatherspace.

While some of these tools have definitely been around longer than just a year, we felt it was important to recognize the tools which are new to this report in 2013.

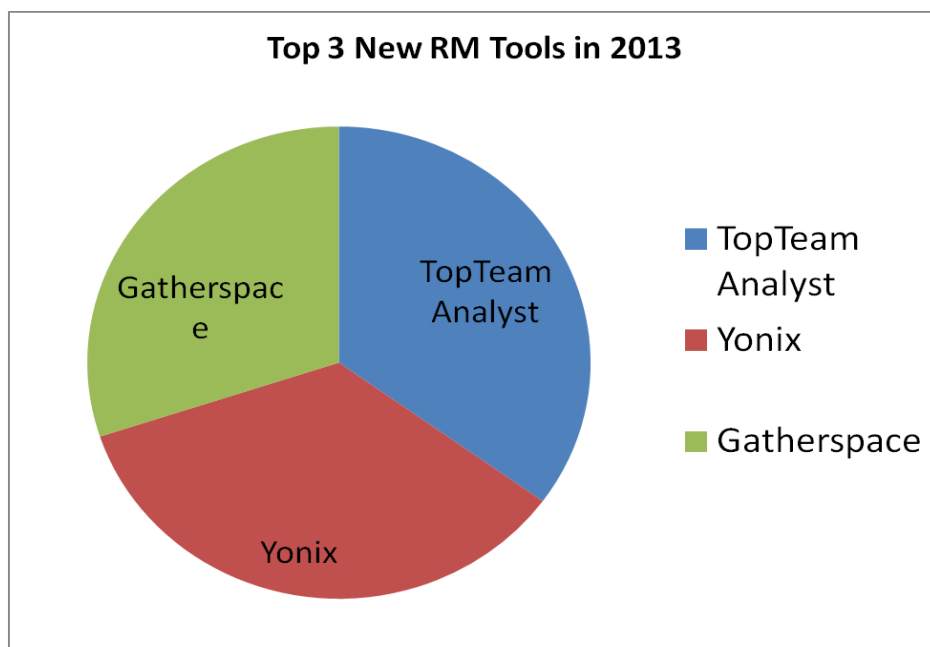


Figure 11: Top 3 New RM Tools in 2013

Most Forward-Thinking Tool Assessed in 2013: Jama

RQX Global looked for a tool which could best be described as the most forward thinking. This meant that it not only captured requirements, but that it was evident that the vendors were working towards the development of features such as metrics, strategic alignment analysis and stakeholder engagement.

Only one tool had some elements of two out of three of these criteria, and as such, we have named it our pick for the most forward thinking tool. This was **Jama**. For companies, this means that this tool stood out as one with significant potential to meet their anticipated future needs.

Best Tool for Independent BA Contractors Assessed in 2013: Yonix

One of the key features of this year's assessment, in addition to the greater degree of data analysis, is the identification of tools which would make life easier for the average Business Analyst, regardless of the ability to sell the organization on an enterprise-wide implementation. In other words, how can the results of this report support the average analyst working as a contractor amongst multiple clients.

Yonix came out as the recommended tool for BA contractors, hands down for two big reasons: no overhead to sign-up for the tool and because of its intelligent usage of the built-in RACI matrix to manage stakeholders in a visual dashboard.

Best ALM Tool Assessed in 2013: Rommana ALM

Of all of the tools assessed this year, RQX Global identified a total of 5 application life cycle management (ALM) tools. These tools were included in this assessment in order to quantify their ability to capture and manage requirements as a part of the overall project life cycle. While this assessment is not an assessment of their overall functionality and how each of these tools performs in other areas of the project life cycle, it does indicate which of these tools best enables the capture and management requirements.

The best tool in this category is **Rommana ALM** for its seamless ability to both capture and manage requirements across the project lifecycle with 100% traceability from needs analysis to test cases and scripts, to implementation and defect management.

While many of the particular ALM tools assessed, tended to favor one side of the project life cycle or the other (either Planning to Requirements or Requirements to Testing), Rommana ALM was the only tool which demonstrated a remarkable consistency across the entire project life cycle. This consistency demonstrates that requirements do not start at elicitation and move forward, nor do they stop at sign-off. Instead it illustrates the point the requirements must be developed and managed across the entire project life cycle from needs analysis and project initiation, right through to testing and implementation.

INDIVIDUAL TOOL DESCRIPTIONS

RmToo

The RmToo requirements management tool is a basic solution designed to collect requirements. It is billed as a “no frills” requirements tool.

Website URL: www.flonatel.de

What Makes this Tool Unique:

What makes RmToo unique is two-fold. First, it is an open source requirements tool. Second, it has the capability for generating a requirements dependency map which links everything together and provides a distinct view of all of the elements. This view is useful for the application of techniques such as logic Modeling.

Key Benefits of RmToo:

- RmToo is a simple and very basic platform for the entry of requirements utilizing text editors
- It is open source, so there are many possibilities which a company could bring to this tool

Key Disadvantages of RmToo:

- The simplicity of the tool would mean heavy investment into customizing it for anything other than simple collection and data entry of requirements
- The common management features of requirements which would actually support and enhance the process of development are non-existent

About the Vendor:

- Flonatel
- Limited information available about this German-based company

Weighted Rating: 0.72

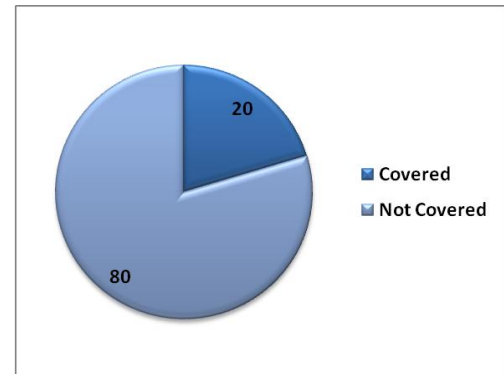


Figure 12: Percentage of Required Feature Coverage of RmToo

Approximate Licensing Costs:**\$N/A**

- No details Available

Doors 9.5**Weighted Rating: 0.98**

The Doors requirements management tool is a solution designed to manage requirements across the project life cycle. The essentials being the collection of requirements information.

Website URL: <http://www-01.ibm.com/software/awdtools/doors/>

What Makes this Tool Unique:

Doors is one of if not the oldest requirements management tool in the marketplace.

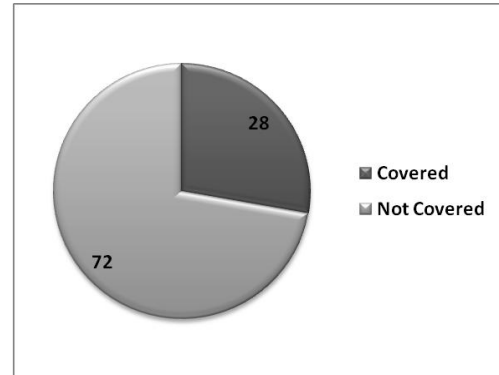


Figure 13: Percentage of Required Feature Coverage of Doors

Key Benefits of Doors:

- Doors provides a solid secure central requirements repository and requirements are accessible to the whole team.
- When coupled with the Next Generation, Jazz platform, and Passport, access to IBM's resources becomes easier and less cumbersome.

Key Disadvantages of Doors:

- Realistically, Doors is not an intuitive application built with user-friendly guidelines in place
- Cost of the product is heavy as is the cost of support with IBM resources

About the Vendor:

- IBM is a solid company that has built its reputation around computer hardware, outsourcing and consulting over the past 70+ years
- IBM's customers unquestionably account for some of the world's largest businesses and organizations

Approximate Licensing Costs:**\$N/A**

- No details Available

Verametric

Verametric requirements management tool is a solution designed to capture and manage requirements across the project life cycle. It supports requirements elicitation primarily through the use of visualization.

Website URL: <http://verametric.com/>

What Makes this Tool Unique:

What makes the Verametric solution stand-out from every other tool in this report is its real-time requirement status dashboard. The premise of this dashboard is that the project is only as complete as its requirements (from idea to implementation).

Key Benefits of Verametric:

- The primary benefit is the ability to see at-a-glance, the status of the requirements and understand the completion rates.
- Integrates seamlessly with iRise to create mock-ups and visuals which will enhance the business understanding of the product being delivered.
- Effective tool for creating user-friendly interfaces with highly involved stakeholders.

Key Disadvantages of Verametric:

- Identifying requirements by utilizing diagrams, wireframes and mockups leaves a lot of room for ambiguity and missed requirements
- Difficult to obtain any information about the vendor and their stability or track record.

About the Vendor:

- No information is available about this vendor and their business on their website.

Approximate Licensing Costs:

\$20/seat

- Relatively low cost solution. Free trial is available

Weighted Rating: 2.1

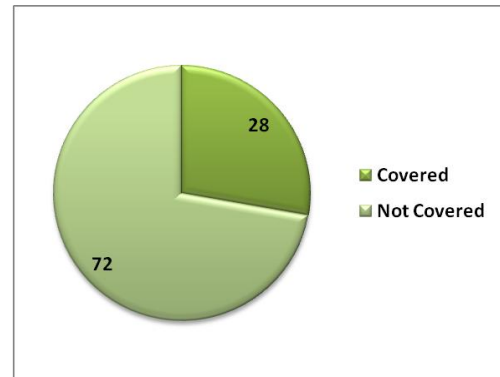


Figure 14: Percentage of Required Feature Coverage of Verametric

Quality Center

The Quality Center test suite tool is a solution designed to manage quality assurance across the testing phase of the project life cycle. The essentials being collecting information and data to build and manage test plans, cases and scripts.

Website URL: <http://www8.hp.com>

What Makes this Tool Unique:

Quality Center manages requirements from a testing perspective. While this may create some headaches for the business analysts trying to collect and compile them within the tool itself, this tool supports the testability and coverage aspects of requirements in a way that most tools simply do not.

Key Benefits of Quality Center:

- Traceability from requirements to test plans, cases and scripts is an inherent part of this application
- Test coverage can be analyzed as a part of Quality Center's routine functions

Key Disadvantages of Quality Center:

- The traceability of requirements begins at the needs analysis stage not at requirements.

About the Vendor:

- HP (Hewlett-Packard) is a solid company that has built its reputation around computer hardware over the past 70+ years
- Customers range across multiple industries around the globe for HP's numerous product line

Approximate Licensing Costs:

\$N/A

- No pricing information is available on the vendor's website

Weighted Rating: 2.2

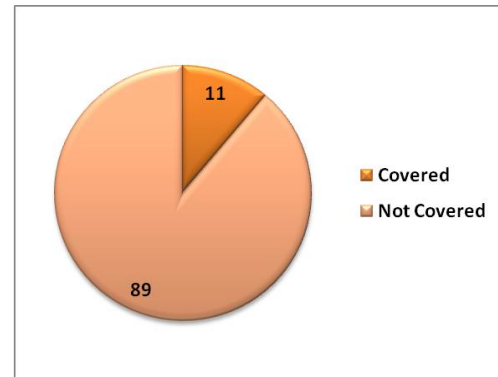


Figure 15: Percentage of Required Feature Coverage of Quality Center

RaQuest

The RaQuest is designed as a UML modeling tool for Sparx Systems Enterprise Architect application. One of the features is to collect and to manage requirements across the project.

Website URL: <http://www.raquest.com/>

What Makes this Tool Unique:

RaQuest has the advantage of looking familiar. It looks like any other Windows Explorer box for searching folders and files on your computer. This will automatically remove any fears for the newcomer about how to use it and navigate its features.

Key Benefits of RaQuest:

- Familiar interface for the collection of requirements
- Simple tabbed view of the requirements elements such as UML and use cases which allows the user to see the items connected to a particular requirement all in a single place.
- Date and time stamping as well as approvals for each requirement are included with the write up for each element.

Key Disadvantages of RaQuest:

- RaQuest was not specifically designed as a requirements management tool. This often leads to deficiencies in features and functionalities required for business analysis tasks.

About the Vendor:

- Sparx Systems has been in business for 10+ years

Approximate Licensing Costs:

- Multiple purchase options available online

\$N/A

Weighted Rating: 2.3

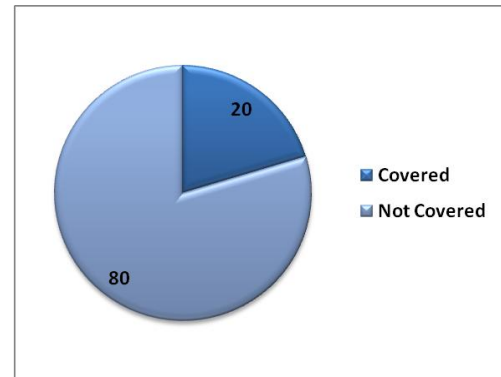


Figure 16: Percentage of Required Feature Coverage of RaQuest

QPack

The QPack is an application life cycle management (ALM) solution designed to collect, manage and audit requirements across the project life cycle.

Website URL:

<http://www.orcanos.com/compliance/products/qpak-alm-suite/>

What Makes this Tool Unique:

QPack is unique because it integrates with Orcanos own test suite for a more seamless transition between requirements and testing.

Key Benefits of QPack:

- The familiar looking interface makes it easy to navigate as it looks similar to Windows Explorer and reduces the ramp up time of resources

Key Disadvantages of QPack:

- The key disadvantage of QPack is that it does little out of the box thinking in terms of requirements

About the Vendor:

- One of the strengths that Orcanos brings is its impressive management team and its diversity of industries which tend to lean toward the more highly-complex. These industries tend to have a lower margin of tolerance for error due to the consequences of catastrophic failure and this would lend to a need for a more thorough product which supports lower defect rates.

Approximate Licensing Costs:

- No details Available

Weighted Rating: 2.5

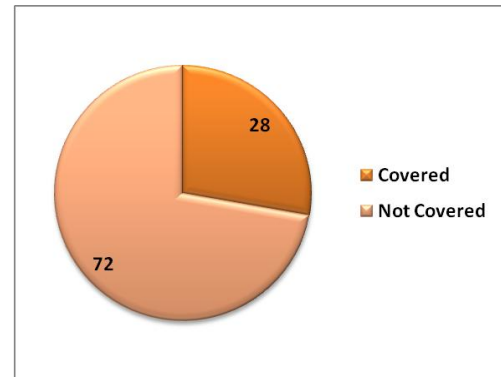


Figure 17: Percentage of Required Feature Coverage of QPack

Requirements Composer

Weighted Rating: 2.5

The Requirements Composer requirements management tool is a desktop solution designed to manage and maintain requirements across the project lifecycle. It simplifies the tasks of gathering, tracking, and managing requirements.

Website URL: <http://www-01.ibm.com/software/awdtools/rrc/features/>

What Makes this Tool Unique:

Requirements Composer is one of the first generation of requirements management tools in the marketplace.

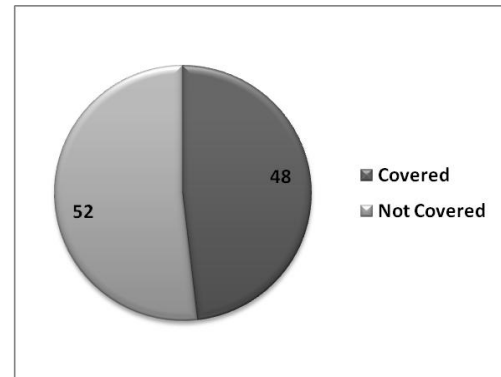


Figure 18: Percentage of Required Feature Coverage of RequirementOne

Key Benefits of Requirements Composer:

- Comes with the backing and international support of IBM

Key Disadvantages of Requirements Composer:

- Doesn't provide metrics for quality and effectiveness of requirements

About the Vendor:

- IBM is a solid company that has built its reputation around computer hardware, outsourcing and consulting over the past 70+ years
- IBM's customers unquestionably account for some of the world's largest businesses and organizations

Approximate Licensing Costs:

\$N/A

- No details Available

Jama

The Jama requirements management tool is a cloud solution designed to manage and maintain requirements across the project lifecycle. It simplifies the tasks of gathering, tracking, and managing requirements.

Website URL:

<http://www.jamasoftware.com/contour/features.php>

What Makes this Tool Unique:

Jama is unique for two big reasons. Firstly, because it leverages social media style hash tags and feed handles which make searches for key elements such as decisions quicker and easier. Second, it is unique because of the review status dashboard for approvals on individual requirements.

Key Benefits of Jama:

- The key benefit of Jama comes from the dashboard and the engagement features. Having the ability to see the individual status of requirement approvals by each of the identified stakeholders could actually shorten the process of peer reviews and stakeholder sign-off, while simultaneously creating a conversation thread which traces the discussions on each requirement ambiguity and approval.
- Jama also provides a mature test coverage analysis of requirements to ensure that important and appropriate requirements are tested to the right level of detail.

Key Disadvantages of Jama:

- Jama could benefit from the addition of more detailed and mature requirements metrics and benchmarks.

About the Vendor:

- Jama Software is an emerging company that is working to rapidly improve the way requirements are developed and managed across the life cycle.
- Customers include SpaceX, The Department of Defense, VW, time Warner, GE, United Healthcare and Amazon.com

Weighted Rating: 2.7

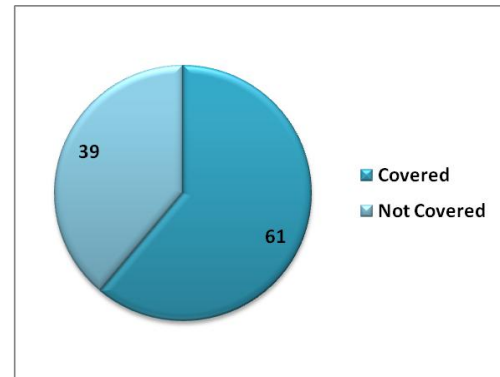


Figure 19: Percentage of Required Feature Coverage of Jama

Approximate Licensing Costs:**\$N/A**

- Pricing available by contacting vendor

Requisite Pro**Weighted Rating: 2.5**

The Requisite Pro requirements management tool is a solution designed to manage requirements across the project life cycle. The essentials being organizing the project, gathering requirements and managing the requirements, with each discipline defines the help to control the development process.

Website URL: <http://www-01.ibm.com/software/awdtools/reqpro/>

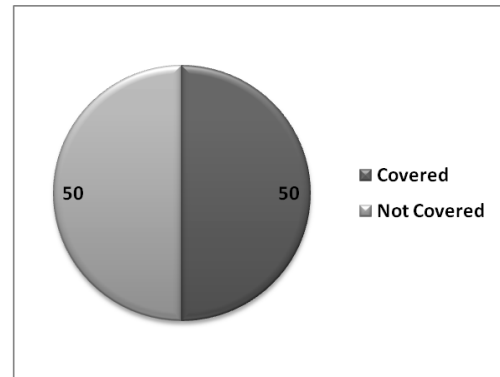


Figure 20: Percentage of Required Feature Coverage of ReqPro

What Makes this Tool Unique:

ReqPro collects and manages requirements as individual data elements within a central project repository. This feature is the key to accurate configuration management, change control and baselines in requirements management.

Key Benefits of Requisite Pro:

- Secure central requirements repository which links the requirements to documents in Microsoft Word meaning that updates to these elements take place in the repository and cascade across to all documents.

Key Disadvantages of Requisite Pro:

- ReqPro does not actually have any of the metrics and benchmarking capabilities that would make it invaluable as an RM tool.
- Numbering is not fixed and can be edited by deleting the text and requirement from the document and reassigning a the number to a new requirement

About the Vendor:

- IBM is a solid company that has built its reputation around computer hardware, outsourcing and consulting over the past 70+ years
- IBM's customers unquestionably account for some of the world's largest businesses and organizations

Approximate Licensing Costs:**\$N/A**

- No details Available

iRise v8.5**Weighted Rating: 2.6**

iRise is an intuitive UI modeling tool that is gaining substantial popularity for its ability to create “live” and interactive mock-ups and then attribute business processes and requirements to those mock-ups. While it is an intelligent tool suite for developing mock-ups, the ability develop and manage requirements is left to the integration between IBM’s RequisitePro and then to HP’s Quality Center for testing.

Website URL: <http://www.irise.com>

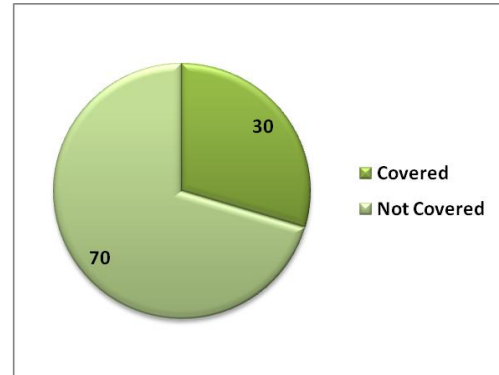


Figure 21: Percentage of Required Feature Coverage of iRise

What Makes this Tool Unique:

iRise is unique in that it is a wonderful tool for the design and visualization of processes and interfaces.

Key Benefits of iRise:

- Ability to mock-up and demonstrate UI interfaces is perfected to the point of allowing business user to see and make changes

Key Disadvantages of iRise:

- iRise is primarily a UI modeling tool and provides extensive functionality for modeling but is limited in the scope of requirements development and management
- Represents a dramatic change from industry standard requirements gathering and validation
- Potential for view/demo to lead to reverse engineering of the final product
- Presents the business user with an interactive UI that could lead them to
 - Believe the product is almost complete
 - Believe requirements are not necessary
 - Get stuck on the look and feel of the mock-ups instead of the actual product that may or may not look and feel exactly the same

About the Vendor:

- iRise is an emerging company that has built its reputation around visualizing better models before code is written and has been around for over 7 years
- Major customers include Accenture, Honeywell, General Motors and Bank of America

Approximate Licensing Costs:**\$N/A**

- No current information pricing available

SpiraTest**Weighted Rating: 3.1**

SpiraTest is a quality assurance (QA) and testing platform which also happens to have the functionality for managing requirements.

Website URL: www.inflectra.com

What Makes this Tool Unique:

In terms of QA tools this product is unique because it actually enables the user to input individual requirements and then view them in a hierarchical manner. Further, within this view, is a requirement-by-requirement test coverage and pass/fail dashboard.

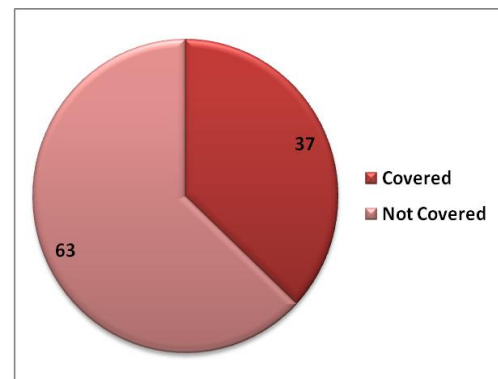


Figure 22: Percentage of Required Feature Coverage of SpiraTest

Key Benefits of SpiraTest:

- SpiraTest allows for the generation of use cases linked to both the requirements and the subsequent test cases.
- Pass/fail dashboard for individual requirements within the hierarchical view

Key Disadvantages of SpiraTest:

- Additional metrics and benchmarks could be captured and would make an excellent addition to its RM functionality

About the Vendor:

- Inflectra is a company founded on providing solid value for the money. They have been around for 7 plus years and are located in Maryland.
- Inflectra offers a 30-day no questions asked, money back guarantee.

Approximate Licensing Costs: **\$5.99+/seat**

- A range of reasonably priced options are available on the company's website

OneDesk

Weighted Rating: 3.1

OneDesk is a customer engagement solution which happens to encompass a requirements management function. This solution provides for customer engagement before product development, during development and test, as well as after delivery. The two primary features of this solution are the market research and the help desk functions. These two functions are linked by requirements and test cases.

Website URL: www.onedesk.com

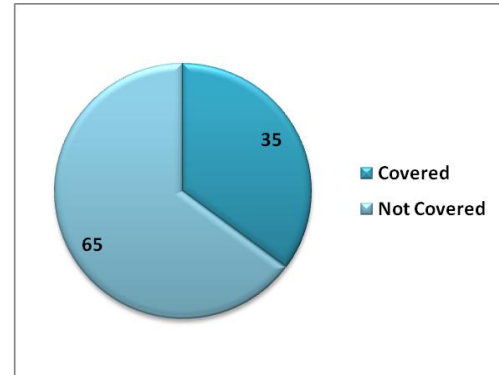


Figure 23: Percentage of Required Feature Coverage of Onedesk

What Makes this Tool Unique:

OneDesk is unique because it provides a sophisticated needs analysis component. This component incorporates both social media market research and focus group features into this mechanism.

Key Benefits of OneDesk:

- OneDesk provides 100% traceability from stakeholder needs to requirements to test cases and defects.

Key Disadvantages of OneDesk:

- The primary disadvantage of OneDesk is that it places the full emphasis of requirements gathering and elicitation on the user community instead of a balance between the users and the capabilities and capacities of the business and enterprise architecture.

About the Vendor:

- Limited information available about this Canadian-based company.

Approximate Licensing Costs: **\$30/seat**

- Free trial is available on the vendor's website

CodeBeamer

Weighted Rating: 3.2

CodeBeamer is an application life cycle management (ALM) solution which includes a requirements management module is a solution designed to manage requirements across the project life cycle.

Website URL: <http://intland.com>

What Makes this Tool Unique:

The requirements management module can be purchased and implemented without the remainder of the ALM. Further CodeBeamer includes an Agile project management dashboard with a burn-down chart.

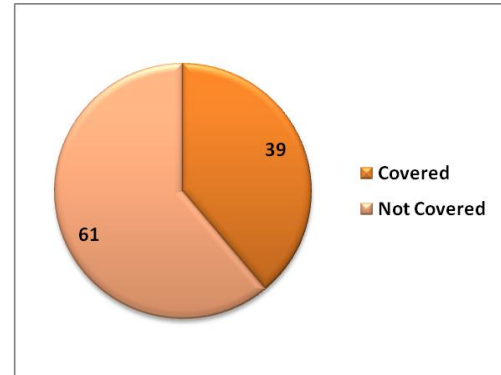


Figure 24: Percentage of Required Feature Coverage of CodeBeamer

Key Benefits of CodeBeamer:

- CodeBeamer allows for the generation of use cases linked to both the requirements and the subsequent test cases.
- Pass/fail dashboard for individual requirements within the hierarchical view
- Test coverage analysis for individual requirements within the hierarchical view
- Features a sophisticated defect tracking dashboard

Key Disadvantages of CodeBeamer:

- CodeBeamer would benefit from the addition of more mature metrics for the analysis of requirements effectiveness and quality.
- CodeBeamer would benefit from a social engagement platform to facilitate more rapid sign-off of requirements

About the Vendor:

- Intland Software has a 15 year history in the ALM and requirements management space.
- It has won awards from Jolt for productivity and from ITK for knowledge management

Approximate Licensing Costs:

\$600+/seat

- Free trial is available on the vendor's website

- A variety of pricing options are available on the vendor's website

Axiom

Weighted Rating: 3.3

The Axiom solution is a requirements management solution which provides UML capabilities in addition to requirements collection, documentation and management..

Website URL: <http://www.iconcur-software.com/index.html>

What Makes this Tool Unique:

Axiom is a free requirements management solution which enables the user to generate wireframes and UI mock-ups quickly.

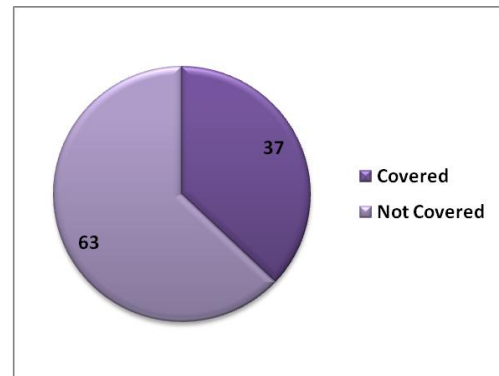


Figure 25: Percentage of Required Feature Coverage of Axiom

Key Benefits of Axiom:

- Ability to create use cases, UI mock-ups and wireframes

Key Disadvantages of Axiom:

- Requirements are uploaded into Axiom.

About the Vendor:

- Limited information is available in the iConcur website.

Approximate Licensing Costs:

\$0

- Axiom is a free requirements management tool
- Free trial is available on the vendor's website

Polarion Requirements

Weighted Rating: 3.5

Polarion Requirements with LiveDocs is an application Life cycle management solution which includes the capability to manage requirements across the project life cycle.

Website URL: www.polarion.com

What Makes this Tool Unique:

Polarion Requirements has the unique ability to import requirements documents from Microsoft Word by leveraging LiveDocs and to segregate each of the requirements into its repository for editing and management across the life cycle.

In addition, Polarion contains a library of standardized IEEE documents and templates for reference purposes.

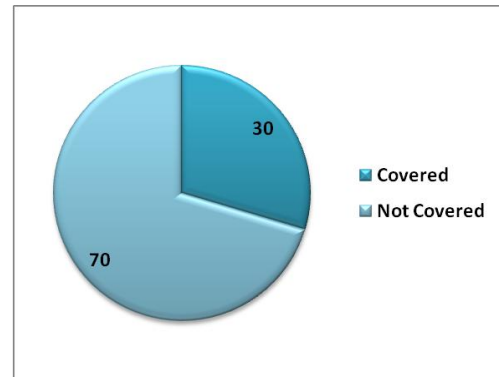


Figure 26: Percentage of Required Feature Coverage of Polarion

Key Benefits of Polarion:

- The ability to upload previous requirements documentation and then segregate each of the individual requirements into its repository for editing and management across the life cycle.
- Incorporates an easy to use process modeler for capturing detailed business processes.
- Traceability from requirements definition to testing and implementation.

Key Disadvantages of Polarion:

- The Polarion Requirements solution is basically an online word processor with advanced functionality

About the Vendor:

- Polarion boasts a strong management team though limited other information about the company is available.
- Polarion has been around for 8 years, and now claims over 1,000,000 customers

Approximate Licensing Costs:
\$1490/seat

- Trial is available on the vendor's website

InteGREAT
Weighted Rating: 3.6

The InteGREAT requirements management tool is a cloud solution designed to manage and maintain requirements across the project lifecycle. It simplifies the tasks of gathering, tracking, and managing requirements.

Website URL: <http://www.edevtech.com/>

What Makes this Tool Unique:

InteGreat is unique in that it captures a larger set of metrics than some of the tools reviewed in this report.

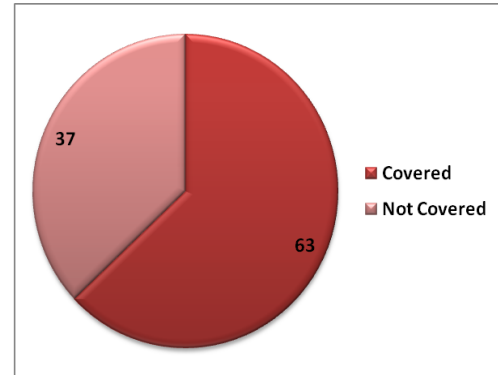


Figure 27: Percentage of Required Feature Coverage of inteGREAT

Key Benefits of InteGREAT:

- Ability to capture requirements in detail

Key Disadvantages of InteGREAT:

- Non user-friendly interfaces, not intuitive.
- inteGreat would benefit from mature auditing, and metric reporting dashboard

About the Vendor:

- eDev Technologies is an emerging company that has built its reputation around requirements management.

Approximate Licensing Costs:
\$N/A

- No details Available

Innoslate

Weighted Rating: 3.6

The Innoslate solution designed to manage requirements across the project life cycle.

Website URL: www.innoslate.com

What Makes this Tool Unique:

Innoslate leverages a powerful modeling interface which enables the analyst to link models to individual requirements. In addition to its modeling capabilities, Innoslate allows for the import of documents which contain requirements and then allows the user to extract the individual requirements as entities for manipulation and management within the tool.

Above all, what makes Innoslate unique is its internal mechanism for validating requirements and assessing a quality score for each requirement.

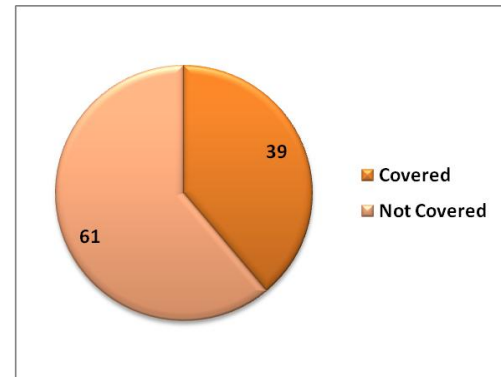


Figure 28: Percentage of Required Feature Coverage of Innoslate

Key Benefits of Innoslate:

- Ability to validate requirements and assess a quality score for each requirement.
- Architecture modeling capabilities

Key Disadvantages of Innoslate:

- Innoslate would benefit from a more mature metrics and status dashboard

About the Vendor:

- SpecInnovations has been doing business for 20 years.

Approximate Licensing Costs:

\$0-199/seat

- Free option is available on the vendor's website
- Multiple pricing options available on the vendor's website

CaseSpec

The CaseSpec solution designed to manage requirements across the project life cycle.

Website URL: www.analysttool.com

What Makes this Tool Unique:

What makes CaseSpec unique is that it allows the user to import requirements from both text documents and spreadsheets. In addition, it enables the analyst to import from both html and MS Outlook files.

Key Benefits of CaseSpec:

- Provides the ability to build a simple XML workflow diagram.

Key Disadvantages of CaseSpec:

- CaseSpec would benefit from the addition of mature metrics to assess quality and effectiveness of the requirements.

About the Vendor:

- Goda Software has been in business for 13 years and is based in Arlington, Virginia.

Approximate Licensing Costs:

\$1000+/seat

- Free trial available on the vendor's website
- Multiple pricing options available on the vendor's website

Weighted Rating: 3.7

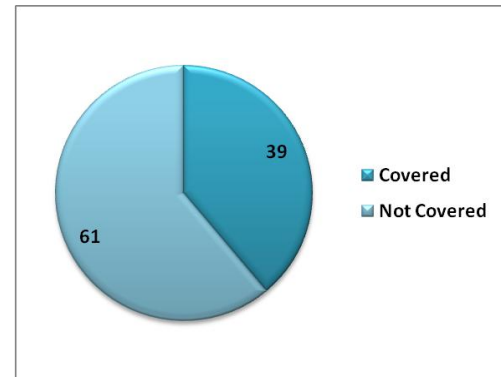


Figure 29: Percentage of Required Feature Coverage of CaseSpec

TestTrack

TestTrack is a QA and test management solution with requirements development and management capabilities.

Website URL: <http://www.seapine.com/ttpro.html>

What Makes this Tool Unique:

TestTrack is unique because it provides a mechanism for identifying Suspect items which identifies the linked items (requirements, test cases, defects, change requests, etc.) that must be reviewed when a related items are changed.

Key Benefits of TestTrack:

- Automated change reviews are a big benefit from the TestTrack RM tool.
- You can perform an impact analysis to view the related items, assess the risk of making changes, and identify the items that need to be reviewed based on the changes

Key Disadvantages of TestTrack:

- TestTrack would benefit from more mature requirements metrics for quality and effectiveness.
- This solution would also benefit from a social platform for engaging stakeholders in the approval process.
- This solution would also benefit from traceability from the business objectives, through scope and across the remainder of the project life cycle.

About the Vendor:

- Seapine Software has been around for nearly 20 years.
- Recommended by major companies

Approximate Licensing Costs:

- No details Available

Weighted Rating: 3.7

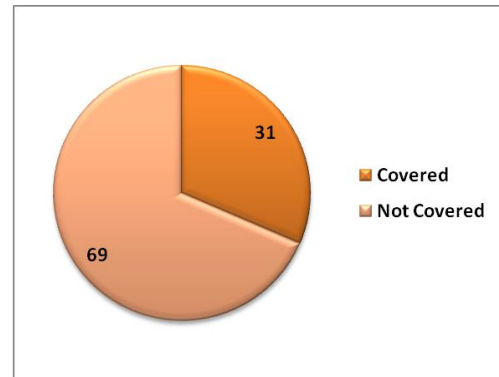


Figure 30: Percentage of Required Feature Coverage of TestTrack

\$N/A

EnFocus

Weighted Rating: 3.7

The EnFocus solution designed to manage requirements across the project life cycle.

Website URL: <http://enfocussolutions.com/>

What Makes this Tool Unique:

EnFocus has a vibrant dashboard which provides real-time status of the requirements deliverables. In addition, it provides templates and checklists to enable analysts of all skill levels to adapt quickly and to develop requirements.

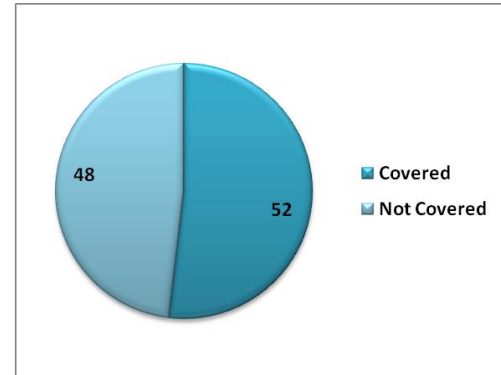


Figure 31: Percentage of Required Feature Coverage of EnFocus

Key Benefits of EnFocus:

- Encompasses a stakeholder engagement platform for enhanced involvement
- Captures user needs and stories
- Provides an e-Learning portal for step-by-step business analysis utilizing the product

Key Disadvantages of EnFocus:

- EnFocus would benefit from more mature requirements metrics for quality and effectiveness.
- Does not capture UML, use case or other workflow models

About the Vendor:

- EnFocus Solutions Inc. is headquartered in San Antonio, Texas
- Limited information available.

Approximate Licensing Costs:

\$N/A

- No details Available

Cockpit

The Cockpit solution designed to manage requirements across the product development process.

Website URL: www.cognition.us

What Makes this Tool Unique:

Cockpit is compliant with the baseline requirements management standard established by INCOSE. In addition, it provides a component for risk management which includes Hazard Analysis and FMEA.

For tangible products, Cockpit also provides the capability of creating bills of material (BOM's) which would be required to build the physical product based on the defined requirements.

Key Benefits of Cockpit:

- Cockpit provides a component for risk management within the tool itself.
- This solution also provides Hazard analysis

Key Disadvantages of Cockpit:

- Cockpit would benefit from the addition of modeling capabilities
- This solution would also benefit from mature requirements metrics for quality and effectiveness.

About the Vendor:

- Cognition Corporation has been in business for over a decade.
- Limited information available.

Approximate Licensing Costs:

- No details Available

\$N/A

Weighted Rating: 3.9

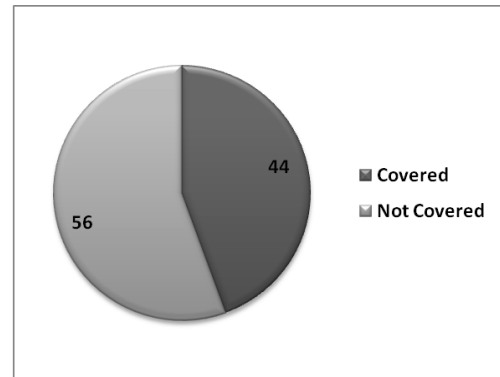


Figure 32: Percentage of Required Feature Coverage of Cockpit

RequirementOne

Weighted Rating: 4.1

The RequirementOne solution is a module-based application life cycle management (ALM) tool with the capability to manage requirements across the project life cycle.

Website URL: www.requirementone.com

What Makes this Tool Unique:

What makes RequirementOne unique is the fact that it is a customizable ALM through the purchase of needed modules for planning, requirements, issues and feedback.

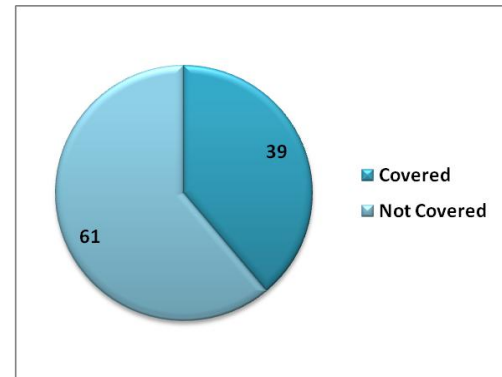


Figure 33: Percentage of Required Feature Coverage of RequirementOne

Key Benefits of RequirementOne:

- This solution enables business case tracking and traceability from case items to requirements

Key Disadvantages of RequirementOne:

- RequirementOne would benefit from the addition of modeling capabilities
- This solution would also benefit from mature requirements metrics for quality and effectiveness.

About the Vendor:

- RequirementOne is based in Sunnyvale, California
- Limited information available.

Approximate Licensing Costs:

\$19 – 2200/seat

- Multiple pricing options available on the vendor's website
- Free trial is available on the vendor's website

Visure

Weighted Rating: 4.1

The Visure solution designed to manage requirements from capture to testing.

Website URL: www.visuresolutions.com

What Makes this Tool Unique:

Visure utilizes a project meta-model to define the overall project structure and how items will link together throughout the life cycle.

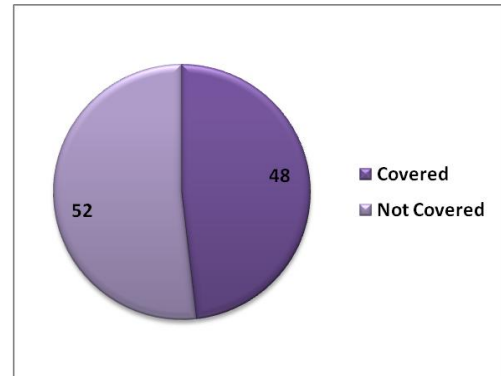


Figure 34: Percentage of Required Feature Coverage of Visure

Key Benefits of Visure:

- This solution provides the capability to create catalogs of re-useable components which include requirements.
- This solution provides an impact analysis mechanism for assessing changes to requirements.

Key Disadvantages of Visure:

- Visure does not capture and establish traceability back to the business objectives and scope and does not report on implementation at the end of the project life cycle.

About the Vendor:

- Visure Solutions is located in San Francisco, California with resellers all over the globe.
- Limited information available.

Approximate Licensing Costs:

\$N/A

- Free trial is available on the vendor's website
- No pricing information is available on the vendor's website

RTM Workshop 5.0

Weighted Rating: 4.2

The RTM Workshop solution is designed to capture initial business requests, then to enable the analysts to transform those requests into requirements and subsequently to manage those requirements across the project life cycle.

Website URL: www.serena.com

What Makes this Tool Unique:

What makes RTM Workshop is that it leverages visualization capabilities for the development of user interfaces.

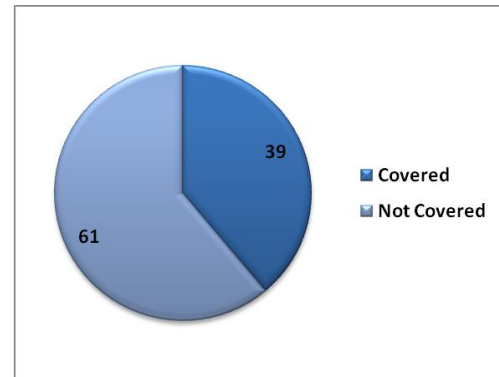


Figure 35: Percentage of Required Feature Coverage of RTM Workshop

Key Benefits of RTM Workshop:

- Leverages the visualization capabilities for the development of user interfaces and associating those with requirements

Key Disadvantages of RTM Workshop:

- Doesn't offer metrics for quality and effectiveness of requirements
- Large critical feature sets are absent from the listing including central repository, auditing, reporting and integration with other tools
- Heavily dependent on user input into requirements

About the Vendor:

- Serena as a is a solid company that has built its reputation around supporting development improvements through automation with offices and presence across the world
- Customers include AT&T, Lockheed Martin, and Lexmark.
- Serena Software is based in San Mateo, California.

Approximate Licensing Costs:

\$N/A

- No details Available

GatherSpace

Weighted Rating: 4.4

The GatherSpace solution designed to manage requirements from the high level concept and needs analysis to requirement sign-off.

Website URL: www.gatherspace.com

What Makes this Tool Unique:

GatherSpace enables the creation of project iterations to manage requirements on Agile projects.

Key Benefits of GatherSpace:

- Provides for the ability to create use cases associated to each requirement or groups of requirements

Key Disadvantages of GatherSpace:

- Doesn't offer metrics for quality and effectiveness of requirements

About the Vendor:

- Gatherspace has been in business for 10+ years and is based in Santa Monica, California
- Limited information available.

Approximate Licensing Costs:

\$9+/seat

- Multiple pricing options available on the vendor's website
- Free trial available

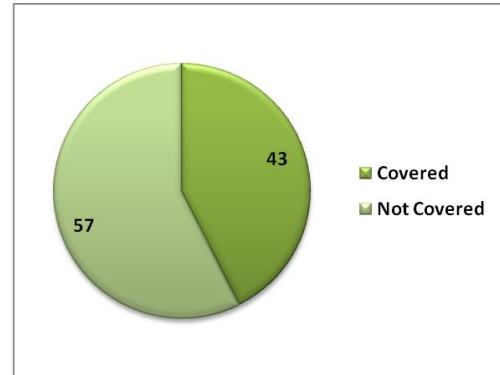


Figure 36: Percentage of Required Feature Coverage of GatherSpace

Optimal Trace

Optimal Trace is a requirements capture and management tool.

Website URL: www.microfocus.com

What Makes this Tool Unique:

What makes Optimal Trace is that there seems to be little or no vendor other than resellers who have any affiliation to this product.

Key Benefits of Optimal Trace:

- Ability to capture requirements in detail

Key Disadvantages of Optimal Trace:

- Inadequate information readily available about the primary manufacturer and vendor
- This solution would benefit from the addition of some mature metrics for benchmarking and auditing of requirements.

About the Vendor:

- It is extremely difficult to find a company which is accountable for Optimal Trace.

Approximate Licensing Costs:

\$5,989/seat

- Concurrent User License with Subscription Plus (Annual support + updates)

Weighted Rating: 4.5

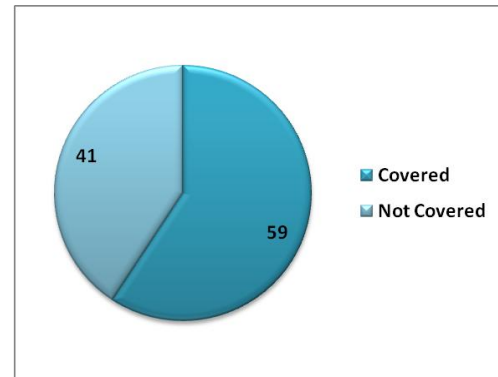


Figure 37: Percentage of Required Feature Coverage of Optimal Trace

Caliber RM 2009

Caliber RM is a requirements management suite that enables users (business customers) to enter requirements into a configuration management style system that manages requirements and allows the business user to track progress of their specific requirements from end to end. The visibility and the data storage, provides a level of traceability unlike previous tools, and explaining the rise in popularity in Caliber RM.

Website URL: www.borland.com

What Makes this Tool Unique:

What makes Caliber RM unique is that it leverages an API to integrate multiple solutions at the discretion of the user/client entity.

Key Benefits of Caliber RM:

- Supports standardized electronic processes based on Requirement Interchange Format

Key Disadvantages of Caliber RM:

- Takes multiple products to get the functionality of some of the other tools available in the marketplace

About the Vendor:

- Micro Focus as a is a solid company that has built its reputation around supporting development improvements through automation for over the past 30+ years with offices and presence across the world
- Some of the largest customers are Comcast, Avis, HBC, and Mercedes-Benz

Approximate Licensing Costs:

\$N/A

- Free trial is available on the vendor's website
- No details Available

Weighted Rating: 4.9

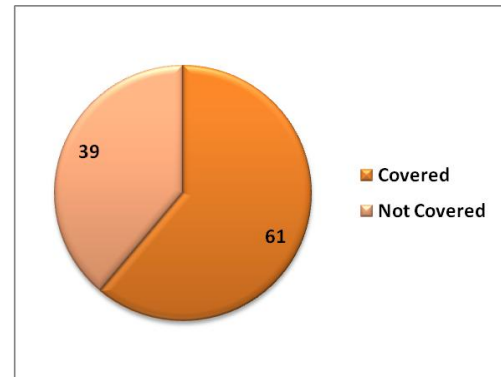


Figure 38: Percentage of Required Feature Coverage of CaliberRM

Yonix

Yonix is a solution designed to manage requirements from business objectives across the entire project life cycle.

Website URL: www.yonix.com

What Makes this Tool Unique:

What makes Yonix unique is that it utilizes a RACI matrix built right into the application to assign roles to stakeholders and team members. This RACI matrix then drives notifications to those team members and stakeholders throughout the requirements development process.

Key Benefits of Yonix:

- Yonix incorporates a stakeholder engagement platform for the involvement of the business team throughout the process.

Key Disadvantages of Yonix:

- Yonix would benefit from the addition of some mature metrics for benchmarking and auditing of requirements.
- Yonix would benefit from the ability to create and manipulate business workflow models in the application

About the Vendor:

- Yonix was founded by an award-winning business analyst in New Zealand in 2008.

Approximate Licensing Costs:

\$45/seat

- Free community edition for individual BA's
- Reasonably priced Team edition for enterprises with multiple analysts

Weighted Rating: 5.06

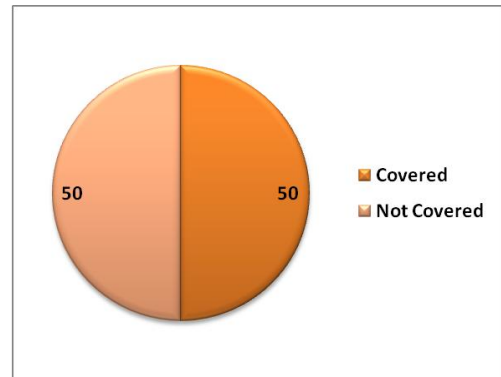


Figure 39: Percentage of Required Feature Coverage of Yonix

TopTeam Analyst

The TopTeam Analyst solution designed to manage requirements across the project life cycle.

Website URL: www.technosolutions.com

What Makes this Tool Unique:

TopTeam Analyst is unique because it enables the capture of data entity relationship diagrams. This features makes this tool useful for data architects as well as business analysts.

Key Benefits of TopTeam Analyst:

- Provides visualization and the ability to create user interface mock-ups
- Provides UML capabilities

Key Disadvantages of TopTeam Analyst:

- TopTeam Analyst would benefit from the addition of some mature metrics for benchmarking and auditing of requirements.
- This solution would also benefit from a social platform for engaging stakeholders in the approval process.

About the Vendor:

- TechnoSolutions Corporation has been in business for 18 years and is based in Vancouver, Washington

Approximate Licensing Costs:

- Free version available

\$N/A

Weighted Rating: 5.1

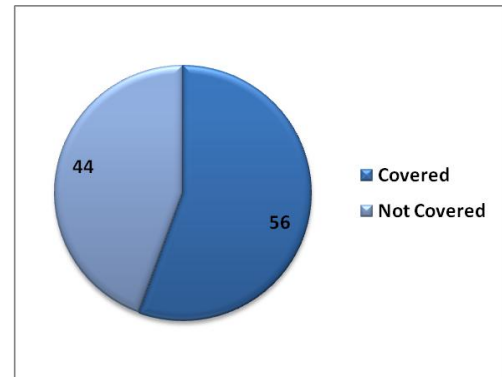


Figure 40: Percentage of Required Feature Coverage of TopTeam

Accompa 2010

The Accompa requirements management tool is a cloud solution designed to manage and maintain requirements across the project lifecycle. It simplifies the tasks of gathering, tracking, and managing requirements.

Website URL: <http://www.accompa.com/index.html>

What Makes this Tool Unique:

What makes Accompa unique is the ability to connect with users via mobile devices for input into requirements. In addition, Accompa enables a per-requirement ROI calculation to support decision making and prioritization.

Key Benefits of Accompa:

- Calculation of ROI for individual requirements
- Mobile interface for increased stakeholder engagement

Key Disadvantages of Accompa:

- Analyst would benefit from the addition of some mature metrics for benchmarking and auditing of requirements.
- Only does requirements management. Doesn't offer other features like project management or issue tracking or test case generation

About the Vendor:

- Accompa is an emerging company that is working to rapidly improve the way requirements are developed and managed across the life cycle.
- Customers include Adobe, Cisco, Intel and HP

Approximate Licensing Costs:

- A free product trial is available for this product.

Weighted Rating: 5.2

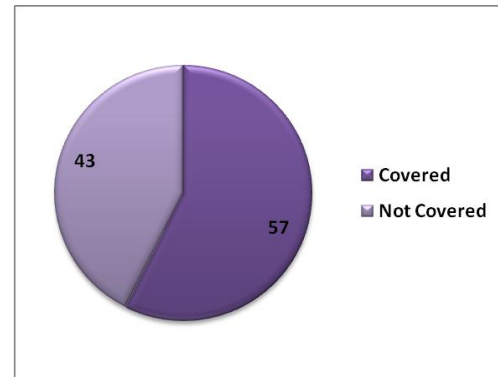


Figure 41: Percentage of Required Feature Coverage of Accompa

Enterprise Architect

Weighted Rating: 5.3

Enterprise Architect is a UML analysis design tool.

Website URL:

<http://www.sparxsystems.com/products/ea/index.html>

What Makes this Tool Unique:

What makes Enterprise Architect unique is that it is actually an architecture and design tool that also happens to capture requirements.

Key Benefits of Enterprise Architect:

- Ability to capture requirements in detail

Key Disadvantages of Enterprise Architect:

- Inability to import Visio diagrams (for manipulation)

About the Vendor:

- Sparx Systems has been in business for 10+ years.

Approximate Licensing Costs:

- Multiple purchase options available.

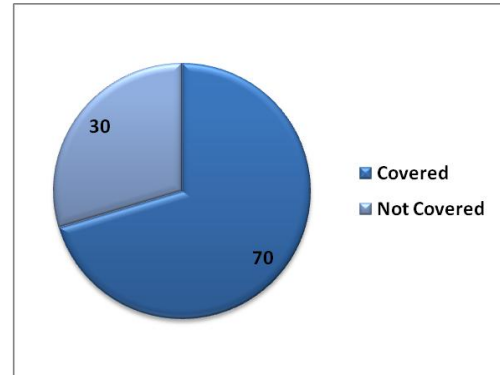
\$135 – \$699/seat

Figure 42: Percentage of Required Feature Coverage of Enterprise Architect

Blueprint

Weighted Rating: 7.0

The Blueprint requirements management tool is a dynamic tool suite that includes full spectrum requirements development and management deliverables from elicitation of detailed requirements to UI mock-ups and test generation. The advantage is user-defined traceability across the board from every business input through every deliverable on the project.

Website URL: <http://www.blueprintsys.com>

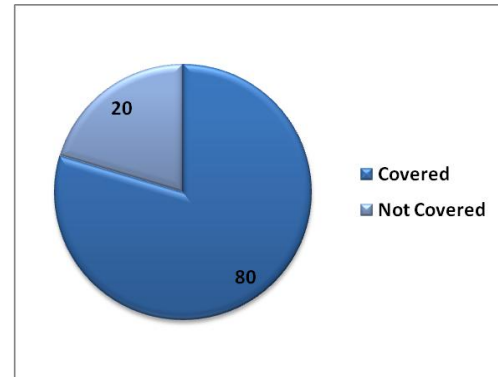


Figure 43: Percentage Required Feature Coverage of Blueprint

What Makes this Tool Unique:

What makes Blueprint unique is that it provides a familiar-looking user interface design tool which enables the analyst to create more useable graphical interfaces. In addition, this solution provides the capability of developing and managing requirements on large, complex, distributed Agile projects.

Key Benefits of Blueprint:

- Requirements development and management software that enables detailed development visibility, searchable threads and extends traceability across the testing activities

Key Disadvantages of Blueprint:

- Inability to provide requirements-based estimation to plan project scope, schedule, and resources throughout the software development lifecycle

About the Vendor:

- Blueprint is a company that is focused entirely on requirements products and has been selling its requirements platform since 2004.
- Blueprint focuses on the Global 2000 and has large name-brand customers such as Citigroup, JPMorgan, Lowes, LexisNexis, and Merck.

Approximate Licensing Costs: \$N/A

- Online demonstration videos are available

Rommana ALM 13.2**Weighted Rating: 7.1**

The Rommana requirements management tool is a component of Rommana ALM Suite that includes full spectrum project management deliverables from charter to detailed requirements and test generation. The advantage is traceability across the board from every business input through every deliverable on the project.

Website URL: <http://www.rommanasoftware.com>

What Makes this Tool Unique:

Rommana's ability to take the user from needs analysis to implementation with traceability from start to finish is really impressive. It provides for the capture and manipulation of the necessary data and information across the entire life cycle and actually does requirements quite well.

Where some other application lifecycle management (ALM) tools seem to be trying to be everything without much thought given to how well each component should work at each stage of the project life cycle, Rommana ALM, actually is the full deal.

Rommana ALM is the only tool in this assessment to be integrated with Bugzilla. In addition, it has the ability to perform risk analysis to determine test priorities of scenarios and features to a level which other tools imply do not.

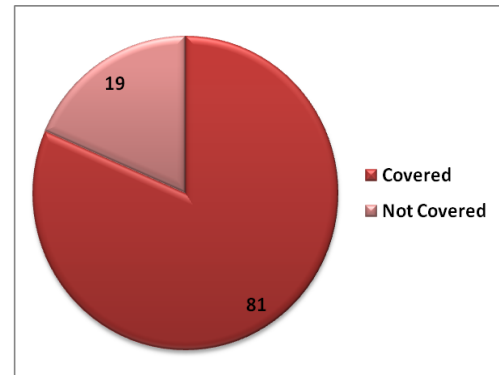


Figure 44: Percentage Required Feature Coverage of Rommana ALM

Key Benefits of Rommana ALM:

- Team members can now collaborate to review requirements and scenarios. All collaboration notes are now a permanent part of the requirement record.
- Graphical representation of Project Timeline and Task duration reports showing specific tasks for each requirement group, resources assigned, and duration. Reports are active in the sense that any of this information can be changed write on the report.
- A comprehensive interactive dashboard that provide up to the minutes details on critical project status such as burn-down charts and test coverage.

Key Disadvantages of Rommana ALM:

- Metrics could be more mature
- While the project team can access all elements and documents, teams would benefit from a more social engagement component
- Would benefit from the addition of an estimation and audit tool

About the Vendor:

- Rommana Software is a subsidiary of Software Dimensions, a company that was founded in 1996 and has been built on the reputation of Dr. Magdy Hanna, the founder and CEO of the IIST (International Institute of Software Testing) over the past 15+ years.

Approximate Licensing Costs:**\$0 - \$2000/seat**

- A free product Team version is available for this product.