Tools of the trade

A report from the BA Manager Forum on Friday 20th May 2016

Introduction

Software tools have been utilized by business and IT professionals for over four decades now but, whereas in the early days, their use was limited to early adopters and technology advocates, over the past ten years or so they have become a core part of our daily toolkit.

In terms of business analysis specifically, tools that were originally devised for systems analysts, designers and developers have been adopted to supplement the more general office utilities such as word processing, document management, email, visual presentation and team collaboration tools.

This document explores the more common types of tool in use by BAs and their typical features, and considers the typical benefits and disadvantages of using such tools. Furthermore, we present the findings of the IIBA survey 2015 relating to the use of tools and some independent research undertaken by Certeco into best of breed requirements management tools.

A set of appendices presents the findings from the participants of the BA Manager Forum sessions when asked to discuss the following questions:

1. What problems do BAs try to address by using support tools?
2. Which tools are your teams currently using?
3. Which features does the tool have that you consider valuable?
4. What do they lack?

An overview of software tools for BAs

Since systems development is concerned with the creation of software systems, it is not surprising that developers have turned their attention to whether computers might be employed to assist and support the development process itself.

Over the years, a wide variety of tools has been developed and offered for sale, differing from each other greatly in their scope, richness of features, ease of use and, not least, cost.

Computerised support tools can speed the requirements engineering and development process and improve the quality of the products of development, including the finished system. They can also be of considerable help once the system is installed and is in its maintenance phase. Choice of the right tool is important and purchasers need to be aware of some potential drawbacks too.

Based on recent research by the IIBA (International Institute for Business Analysis), presented later, the most popular software support tools currently being used by BAs fall into five broad categories, as shown in figure 1 below.

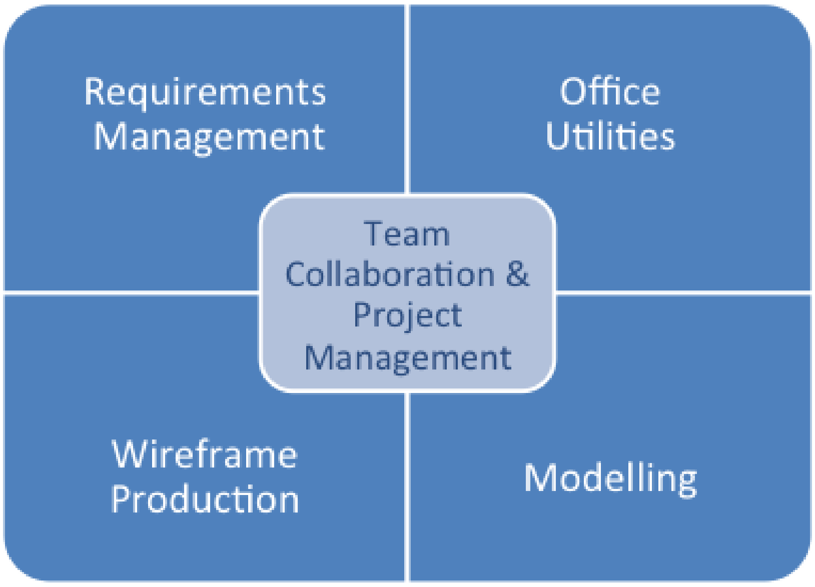


Figure 1: categories of tool

Requirements Management (also known as Computer-Aided Requirements Engineering - CARE)

Keeping control of the vast body of requirements that are captured and that are central to any systems development project requires specialist software to ensure that all relevant stakeholders are working from the same (and most up-to-date) requirements, and also to ensure that requirements are not overlooked, and hence, make it into the final solution. Any requirements that have been rejected for whatever reason should also be managed so that there is an audit trail that can be used to answer questions that may arise after the project has been completed, such as 'why was requirement x rejected?' and 'who agreed that requirement y could be left out of the solution?'

Requirements management tools can overlap with CASE (Computer Aided Software Engineering) tools and configuration management tools.

Office Utilities

Office utilities includes the tools such as Microsoft Office that we often take for granted in our everyday work. These tools support day-to-day office tasks like producing documents, presentations, sending and receiving emails and 'number-crunching'. However, they are being continually extended to support collaborative working by teams, which is covered in its own dedicated category below.

Wireframe Production

The tools that provide a visual guide to a user interface that represents the skeletal framework of a computer system, whether it be a website, a desktop application or a mobile (tablet/smartphone) app.

Modelling (also known as Computer-Aided Software Engineering - CASE)

CASE tools assist in the development and maintenance of software. A distinction is sometimes drawn between *lower CASE* tools (which support the programming stages of a project) and *upper CASE* tools (which support the analysis and design stages).

CASE tools can assist the quality assurance of the pictures and diagrams (models) typically used in structured and object-oriented development methods. These tools will ensure that the diagrams follow the agreed conventions, and, to a certain degree, will also assist in defining the completeness of a particular model.

More advanced CASE tools support such features as, model <-> code synchronization, user-definable patterns and code templates, free-form diagramming, logical and physical database design and web publishing and reporting. Consequently, there can be an overlap between these and wireframe tools.

Team Collaboration & Project Management

Increasingly disparate teams can require a range of support tools to enable ongoing communication, publishing and workflow management, and to ensure a consistency of approach.

The typical features/functionality of each type of tool are defined in table 2 below.

Category	Typical features / functionality	Comments
Requirements Management / CARE	☑ Repository of requirements	A central repository and standard Requirements Catalogue template for defining requirements that can be shared with all relevant stakeholders.
	☑ Searching, filtering & reporting	During requirements analysis (a key stage within Requirements Engineering) it is necessary to group and filter requirements based on different criteria, such as by business area, type of requirement, and so on. Similarly, during the validation stage of Requirements Engineering it is necessary to filter the requirements by owner, so that each owner can validate their specific requirements prior to sign off by the project sponsor. Furthermore, during solution development it is necessary to filter requirements by priority, especially if an incremental approach to solution delivery is taken. The requirements management tool should also enable ad-hoc querying of the requirements catalogue to identify the audit trail for a given requirement to support traceability and ensure all requirements have been resolved (i.e. report on those requirements without a resolution, or whose status is not 'Complete').
	☑ Traceability	Cross references between requirements in the repository to identify inter-dependencies and the elaboration from

Category	Typical features / functionality	Comments
		high-level business objectives down to more specific functional and non-functional solution requirements. Furthermore, establishing links from individual requirements through the rest of the solution development lifecycle to the delivered solution, and vice versa, back to the original source of the requirement and any supporting documentation.
	☑ Change & version control	Support for a formal process to manage any changes to requirements, including the analysis of the impact of the change and authorisation for making the change. Additionally, the baselining of requirements once validated and approved and the maintenance of all versions of each requirement to support traceability.
Office Utilities	☑ Document production (word processing)	Basic word processing facilities to simplify the process of document creation, including cut/copy and paste and extensive formatting options to produce high-quality documents.
	☑ Spreadsheets	Provides the ability to perform complex numerical calculations, reporting and presentation of data. More recent versions of popular spreadsheets also provide pivot table facilities for OLAP (On Line Analytical Processing) with multi-dimensional data sets.
	☑ Presentation graphics	Advanced graphics capabilities for producing diagrams, pictures and presentations. Modern tools also enable animation to bring presentations to life.
	☑ Email / messaging	Mailbox services for sending and receiving messages electronically with the ability to attach a variety of artefacts to messages, including photos, documents and media files. More recent instant messaging facilities deliver messages directly to the recipient’s desktop or smartphone/tablet to facilitate real-time chat and even group conversations in real-time.
	☑ All/general	Proofing and change tracking facilities are also provided to enable collaborative document production, review and approval.
Wireframe Production	☑ Mock-ups of screens & reports	These tools provide the facility to build mock-ups of potential screens that might be included in an information system solution, to help clarify and validate the requirements. Typically these screen mock-ups have no – or limited – functionality behind them but they can be useful for defining the content and layout required to support particular tasks within a business process. This can also aid the definition of data requirements and the building of domain/data models (see below).
	☑ Basic animation / navigation	Some, more specialist, tools support the building of wireframes, which effectively link a series of screen mock-ups together to enable potential users to explore – and define – navigational requirements from screen to screen, such as with a website.

Category	Typical features / functionality	Comments
Modelling / CASE	☑ Functional models ☑ Data models ☑ State models	Diagramming tools to describe a required solution using logical models such as use case diagrams (functional model), class diagrams (data or domain model) and state machine diagrams (state or event model). Modelling tools often incorporate additional features to support system development, and are then referred to as CASE (Computer-Aided Software Engineering) tools. CASE tools can provide a library of standard shapes to create graphical representations of the models. A data dictionary / repository is used to store the definitions and supporting documentation for the graphical models. In active dictionaries, it may be possible to generate many changes automatically. This is particularly true of data validation changes where the rules for validation (format, length, value ranges, etc.) are maintained in the dictionary rather than within program code. Thus, changes are only defined in one place (the dictionary entry) not in all the programs that access that data. A further feature of the data dictionary is that the information about data items can be used in data value definition in later systems testing.
	☑ Cross-checking	Diagramming rules are used to ensure that models are technically correct and consistent. A consideration with any CASE tool is whether or not it should be 'close coupled' to a particular development method or notation. If it is, it will enforce, for example, any modelling conventions in the method, which assists consistency; but it can also prove inhibiting to experienced practitioners who may wish to adapt the method to the needs of the particular project.
	☑ Code generation (prototypes)	Some CASE tools offer automatic code and schema generation from the analysis models, converting logical process definitions into classes or programs and logical static structures into physical files, tables or database schemas. Where the system has been automatically generated from a CASE tool (often referred to as round-trip or forward engineering), changes to the code are automatically applied to the models. A variant on round-trip engineering is model-driven development; also referred to as Model-Driven Architecture (MDA). With this approach the model is the solution as the solution is automatically generated from a set of models defined in the CASE tool, without further intervention by a developer. Hence, if any changes are

Category	Typical features / functionality	Comments
		made to the model - after checking for completeness and consistency – the whole system is re-generated. The generation facilities provided by a CASE tool may also be used to produce prototypes for inputs and outputs based on the logical definitions defined in the dictionary entries. This is a particularly useful feature for supporting evolutionary prototyping within agile systems development projects.
	☑ Reverse engineering	Arguably a sub-set of round-trip engineering discussed above, reverse engineering facilities provide the ability to generate models directly from program source code. This provides the analyst/developer with the ability to understand legacy systems that perhaps were not particularly well documented during maintenance work. This can be useful to understand existing functionality that needs to be carried forward to a replacement solution.
	☑ Query / reporting	CASE tools have flexible and comprehensive reporting facilities. In fully integrated CASE tools the documentation is central because that is where the code originates and where it is tested and maintained. The documentation ***is*** the system.
Team Collaboration & Project Management	☑ Document sharing (publish & subscribe)	A key feature of collaboration tools is the ability to disseminate documentation amongst key stakeholders. Hence, there are mechanisms for defining distribution lists for automatic notification/distribution of document updates to ensure that all stakeholders are made aware of changes and are using the latest version of a document.
	☑ Wikis, forums, intranets	Facilities to enable knowledge sharing and post questions and answers to other team members. These facilities are often integrated with document sharing facilities.
	☑ Alerts & notifications	Again, often integrated with other facilities, team members can requests alerts when key documents that they subscribe to change or when key events occur or some action is required (for instance when there is a hand-off from one team member to another within a workflow).
	☑ Config. management and version control	The ability to control different versions of a document and to enable different people to work on the same document in a controlled manner, for example, with check-out and check-in functionality to ensure that one person cannot overwrite the changes of another. The ability to 'baseline' a new version of a document is also important when publishing the document and approving/rejecting changes.
	☑ Online planning & task management (agile boards)	Creation of tasks and allocation to team members for tracking. These tools work particularly well in agile projects where the use of online agile boards (also known as Kanban boards) track the progress of 'user stories' and

Category	Typical features / functionality	Comments
		project features during the build of a new product. In these situations the tool also provides a degree of requirements management (see Requirements Management tools above).
	☑ Time tracking	Logging of time spent by team members on planned (and unplanned) tasks to provide management information and inform future estimates.
	☑ Budget management	As with time tracking but logging of actual money spent against budgets.

Table 1: typical features of tools

Benefits and disadvantages of using computerised support tools

Anyone who has used software tools to a reasonable degree of success will know how useful they can be. However, the selection and successful deployment of tools is a balancing act, as highlighted in figure 2.

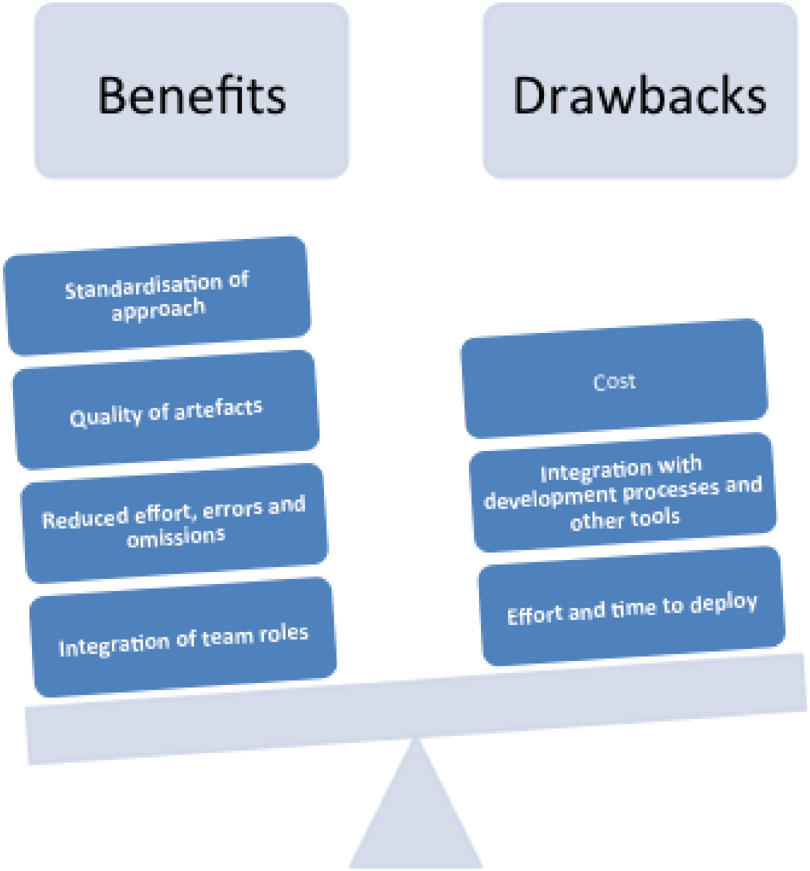

Benefits
Drawbacks
Standardisation of approach
Quality of artefacts
Reduced effort, errors and omissions
Integration of team roles
Cost
Integration with development processes and other tools
Effort and time to deploy

Figure 2: balancing the pros and cons

Typical benefits include:

Precision & quality of artefacts	The artefacts (diagrams, models, documents and prototypes) produced using computerised tools are much more accurate than those developed, for example, with freehand drawing packages. This greater precision also leads to a higher-quality of

development product – and hence to higher quality in the finished system.

Reduced effort

Because much of the ‘management’ work associated with requirements engineering and solution development is taken care of by the tool, the effort involved is greatly reduced.

Reduced errors and omissions

Well-designed support tools – especially those closely coupled with development methods have validation and error-identification routines built in, which reduces the errors in the finished documentation and delivered solution.

Standardisation

Particularly with a large development project, with a significant number of analysts, designers, developers and testers involved, the use of computerised tools helps to ensure that all artefacts are created to consistent standards.

Traceability

Traceability – back to source documentation and forward to the completed solution – is important in systems development and is made very much easier with a computerised tool. It is important because, often, more information is needed about why a piece of software has been designed as it is; and also so that it can be shown how a particular requirement has been dealt with.

Control of solution development processes

Computerised tools provide more control over the processes of software development by managing the plethora of documentation that is produced and keeping it together, in a standard format, in one place. Some tools can also aid the process by monitoring the speed of development of products, monitoring productivity and so forth.

Integration of team roles

A good computerised tool greatly assists the different roles – for example, analysts, designers and developers – in working together in an integrated way instead of in functional ‘silos’.

As with most things, where there are benefits to be realized, there are also potential downsides and risks that must be considered when procuring and adopting the use of computerized support tools. Some of the more common disadvantages include:

Cost

All computerised support tools involve some initial expenditure in the purchase, and ongoing support costs. Some – those with the fullest sets of features – are very expensive indeed, especially when multi-user licenses for many users are required.

Effort and time to deploy

An extensive support tool requires a considerable amount of time and effort to deploy effectively. Unfortunately, very few tools are genuinely “plug ‘n’ play” these days.

Effort and time to learn

As a generalisation, the more power and features that a support tool has, the longer it takes to master it. Some very powerful tools are not, in fact, used all that effectively or extensively for this reason.

Deployment across teams

It can be difficult to roll out the same tool across a significant number of project teams, especially when they are at different stages in the lifecycles of their projects. This can mean that different teams are working with different tools – or sometimes with no tools at all – which rather negates the standardisation benefit of having tools in the first place.

Integration with other tools and methods

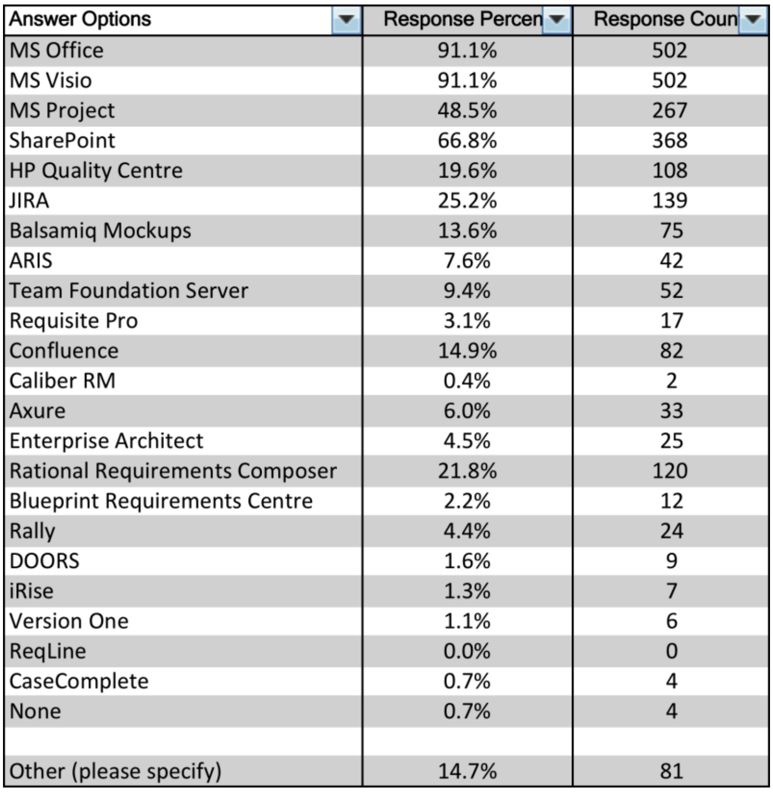
Sometimes, the chosen support tools do not integrate with other tools (for example the Integrated Development Environments used by software developers), already in use within the organisation. Occasionally, too, special procedures and/or software have to be written to transfer information between incompatible tools. Another problem can occur when a tool is purchased which does not, in fact, support the organisation's – or even a partner organisation's – chosen development approach or method.

Popular tools used by business analysts

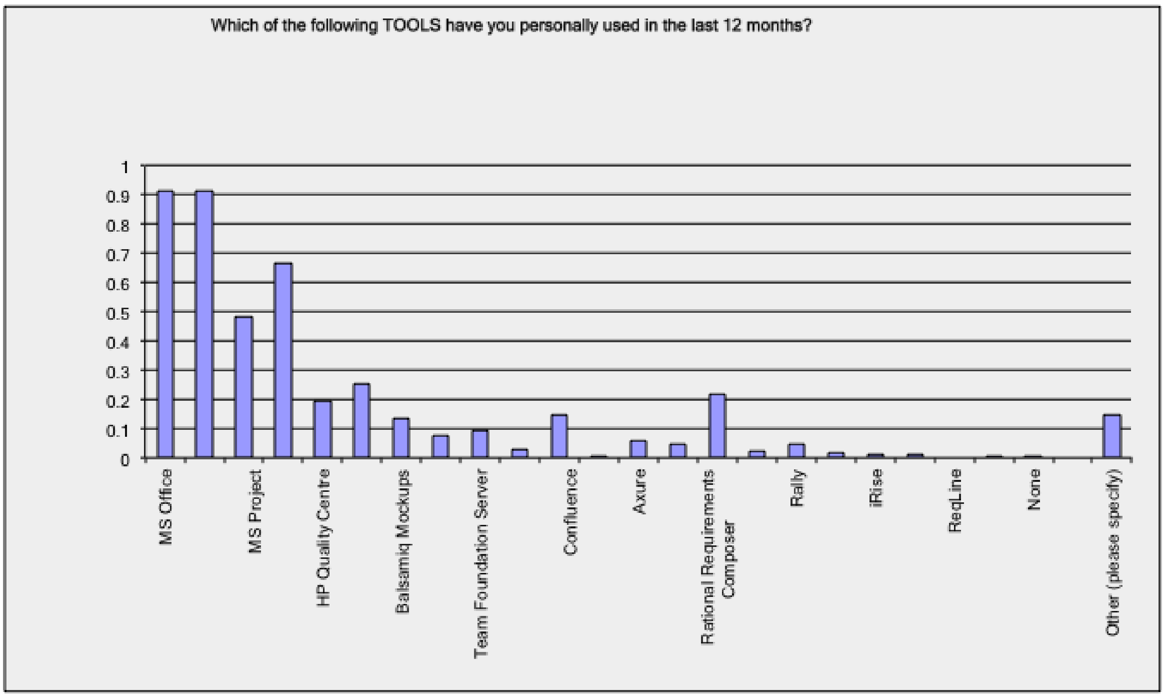
In this section we consider the most popular tools by presenting the findings of two studies. The first is based upon a recent IIBA survey of practicing BAs and the second is based upon independent research, specifically into requirements management tools and vendors, undertaken by Certeco.

IIBA survey

In a recent survey of 551 business analysts as part of the IIBA annual survey 2015, the respondents were asked to list which software tools they had used within the past 12 months. The results are shown below.



Answer Options	Response Percen	Response Coun
MS Office	91.1%	502
MS Visio	91.1%	502
MS Project	48.5%	267
SharePoint	66.8%	368
HP Quality Centre	19.6%	108
JIRA	25.2%	139
Balsamiq Mockups	13.6%	75
ARIS	7.6%	42
Team Foundation Server	9.4%	52
Requisite Pro	3.1%	17
Confluence	14.9%	82
Caliber RM	0.4%	2
Axure	6.0%	33
Enterprise Architect	4.5%	25
Rational Requirements Composer	21.8%	120
Blueprint Requirements Centre	2.2%	12
Rally	4.4%	24
DOORS	1.6%	9
iRise	1.3%	7
Version One	1.1%	6
ReqLine	0.0%	0
CaseComplete	0.7%	4
None	0.7%	4
Other (please specify)	14.7%	81



Certeco study of requirements management tools and vendors

INCORPARATE BACKGROUND/INTRO TO THE STUDY.

- Market Analysis
- Compare & Contrast
- Shortlist

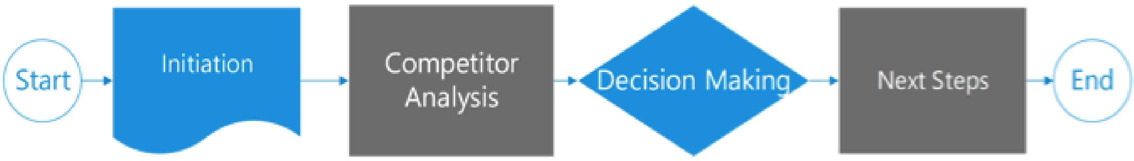
- Inform our clients
- Challenges

- Chaos
- Uncertainty
- Complexity
- Volume of requirements

"The delivery of effective software solutions begins with the effective capture of the business objectives, desired business outcomes and software requirements. Too often, requirements appear to be the leading source of delivered defects in software." (Gartner)

The basis for the study

Each product was scored based on three sets of criteria: key features, other criteria and additional (not critical) features, as shown below. Each sub-criterion was weighted and a maximum score assigned, to ensure that certain features counted more than others in the overall assessment.



- Understand objectives
- Agree RM scope & definition
- Define approach

- Research market
- Identify package key features
- Understand implementation challenges

- Define evaluation criteria
- Score using pre-defined criteria
- Obtain demos where possible
- Identify shortlist

- Document / present findings
- Consider training plan for identified RM packages

Definitions

Requirement

Condition or capability needed by a stakeholder to **solve a problem** or achieve an objective

Condition or capability that must be met or possessed by a solution or solution component to satisfy a contract, standard, specification or other formally imposed documents.

Requirements Management

The process of **documenting**, **analysing**, **tracing**, **prioritising** and **agreeing** on requirements and then **controlling change** and **communicating** to relevant stakeholders.

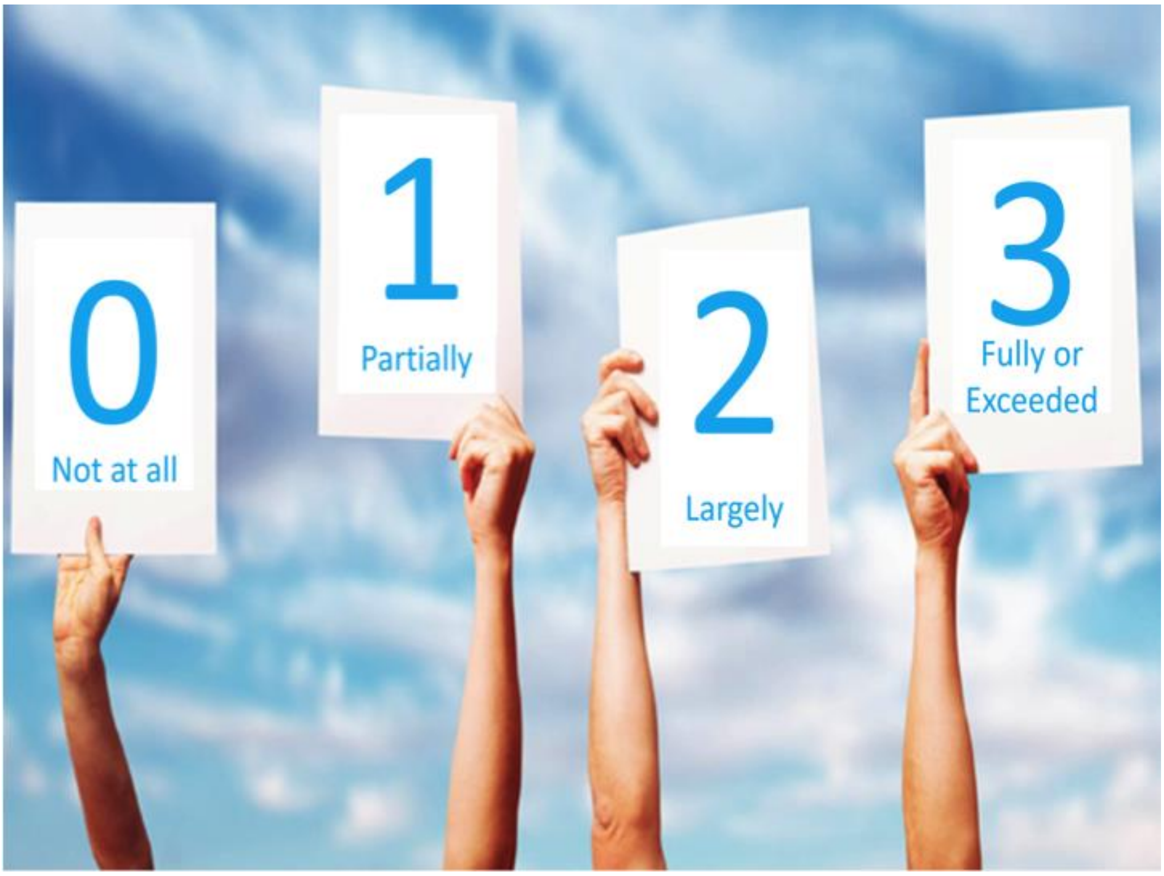
Ref: BABOK Glossary

Key Features

- Requirements traceability
- Requirements prioritization
- Requirements relationships
- Data import/export
- Collaboration enabler
- Reporting
- History tracking/audit
- Customisation
- Integration with existing systems

Additional Criteria

- Product/License costs
- Configuration/implementation costs
- Number of users allowed by license
- Training costs
- Support costs
- Free trial
- Company details
- Known clients using the solution
- Usability
- Hosted v on premise
- Scalability



35+

Leading Vendors

Blue Prints Requirement Centre

IBM Rational DOORS

JAMA

Rally

Atlassian – Jira Agile & Jira

Rising Vendors

Tracecloud

Inflectra - Spiratest

Accompa

Polarion – Polarian Requirements

Workspace

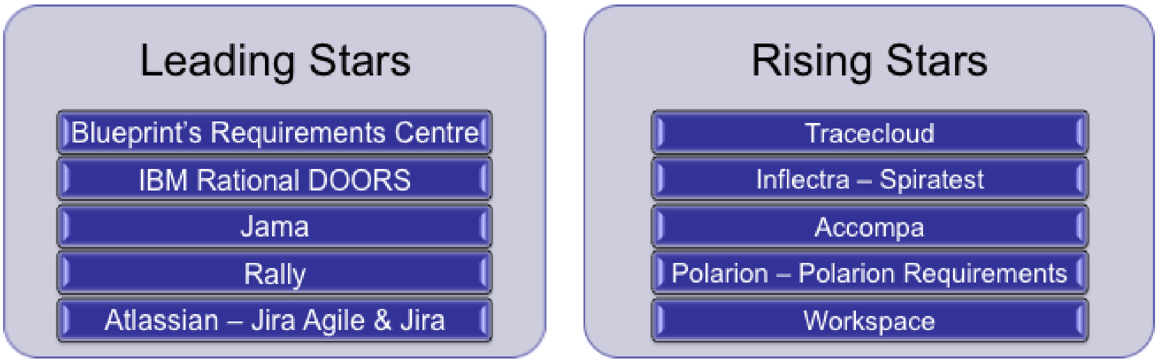
#	Features/Criteria	Weighting	Max Score
Key Features			
1	Requirements Traceability	1	3
2	Requirements Prioritization	1	3
3	Requirements relationships (parent-child relationships)	1	3
4	Data import/export (E.g. to excel)	1	3
5	Collaboration enabler	1	3
6	Reporting (progress)	1	3
7	History tracking/ audit	1	3
8	Requirements trade-offs	1	3
9	Customization	1	3
10	Integration with previous/current systems	0.5	1.5

Additional Features (not critical)
Test Management
Risk Management
Mobile Access
Task Management

#	Features/Criteria	Weighting	Max Score
Other Criteria			
1	Licences costs	1	3
2	Product costs	1	3
3	Config/ implementation costs	1	3
4	Number of users allowed by licence	1	3
5	Training costs	1	3
6	Support costs	1	3
7	Free Trial	0.5	1.5
8	Company detail	0.5	1.5
9	Known clients using the solution	0.5	1.5
10	Training	1	3
11	Support	1	3
12	Usability	1	3
13	Platform	0.5	1.5
14	Hosted or installed	0.5	1.5
15	Scalability	1	3

The shortlist

Based on the above criteria, Certeco shortlisted ten products that were categorized as either leading stars or rising stars, depending upon their current uptake and potential, as follows.



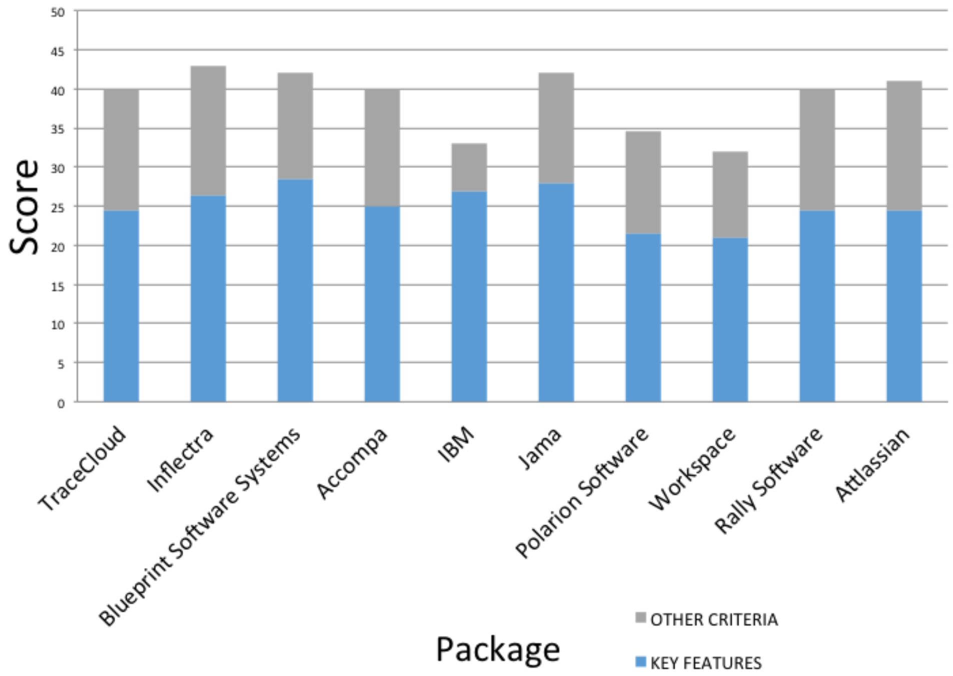
Leading Stars

- Blueprint's Requirements Centre
- IBM Rational DOORS
- Jama
- Rally
- Atlassian – Jira Agile & Jira

Rising Stars

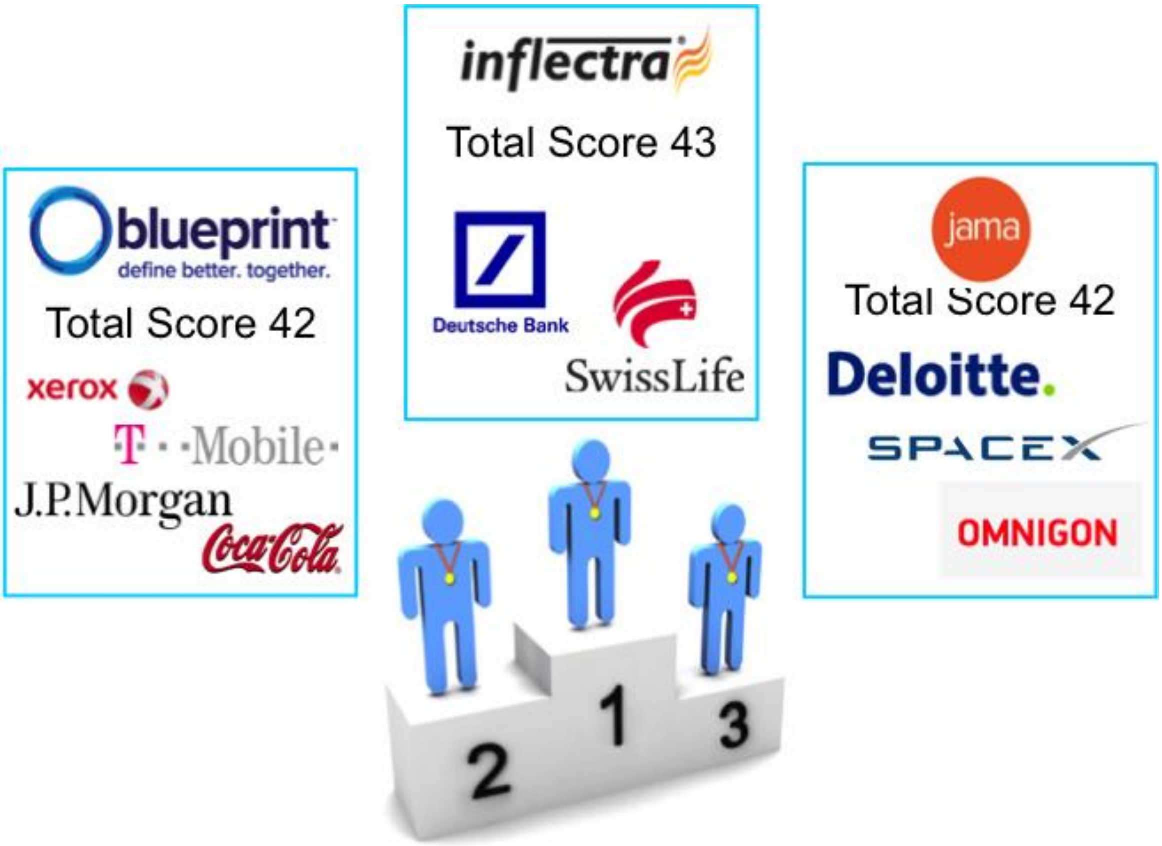
- Tracecloud
- Inflectra – Spiratest
- Accompa
- Polarion – Polarion Requirements
- Workspace

The breakdown of the results from the shortlisted products were as follows:



The top three

In the final assessment, Certeco focused on the top three products; the results were incredibly close and indicated that there was a leader with two equal runners up, as follows:



Rank	Product	Score	Description	Clients
1	Inflectra - Spiratest	43	A cloud-based solution. Enables the capture and management of a product's requirements, features and use-cases.	Deutsche Bank, SwissLife, TNS, Leaseplan
=2	Blueprint Software Systems - Blueprints Requirements Centre	42	A cloud-based solution. Supports the user with requirements definition and management throughout the entire requirements lifecycle."	JP Morgan, Xerox, Coca-Cola, T-Mobile
=2	Jama	42	A web based product and requirements management software tool.	Deloitte, SpaceX, Omnigon

- Adoption - new way of working
- Existing systems
- Content migration
- Time / investment - Implementation

Appendix A – What problems do BAs try to address by using support tools?

- Control and structure
- Information sharing
- Mask shortcomings in people and processes
- Single source of information
- Re-use – corporate memory
- Ensure security
- Management information
- IIP
- Drive and govern stakeholder behaviours
- Uniformity and consistency of approach
- Quality assurance/Rigor
- Enforces governance/clarity of structure
- Traceability
- Collaboration with other teams
- Reporting
- Audit trail
- Collaboration with other artefacts (shared repository)
- Consistency of terminology
- Efficiency and speed – ease of use
- Accessibility of information
- Dependency management
- Automation
- Visualisation
- Compliance/standards/configuration mgt
- Coverage – checklist of deliverables
- Communication with stakeholder – tailoring comms, stakeholder mgt
- Industry best practice
- Repeatable templates – builds BA team confidence
- Business improvement initiatives
- Notation checking
- Benefits management tracking
- Team alignment/collaboration
- Past lessons captured
- Estimation
- Prioritisation
- Solution or gap definition
- Knowledge mgt
- Monitoring stage gates, tracking approvals and owners
- Learning and development
- Community support
- Understanding and improving processes
- Reqs management
- Single version of truth
- Task management
- Versioning control
- Information sharing
- Skills/resource management/recruitment
- Project management – RAD
- Impact assessment
- Evidence value of BA input/output
- Saving time
- Getting buy-in/gaining approval
- Linking testing to reqs
- Central repository
- Scope control
- Progress/status
- Connected eco-system
- Efficiency

Appendix B - Which tools are your teams currently using?

Tool Name	Vendor	Valuable Features	Features Lacking
Aris	Software AG	Process Modelling centralized	Unfamiliar notation to business
Balsamiq for JIRA	Balsamiq	Basic wire framing Integration to Atlassian products Cheap Centralised in JIRA Great visualisation Some hyperlinks Used widely in software firms Mocks up wireframes Demos back to organisation Basic to use Good for context – usability user story	Rich prototyping Animation of wireframes Enhancements to existing screens Export / use options – licensing Lack of traceability back to BA world
Casewise	Casewise	Process modelling, repository, metadata, integration	Blunt & plain, quirky
Confluence	Atlassian	Useable on mobile Configurable Integrates with JIRA	Hard to manager/Needs a lot of work
Post it notes & Brown paper	N/A	Moveable, visible	Rework to document
ProVision	Opentext	Breadth and Depth	Complex (when very detailed)
Visio	Microsoft	Easy, flexible Templates, flexible, easy, standard, accessibility, cost familiar	Not great on simple version of the truth – Create inconsistency. Integration, usability, interoperability, traceability, metadata definitions Error checking except in Professional version. No repository / re-use

Tool Name	Vendor	Valuable Features	Features Lacking
Enterprise Architect	Sparx	UML, Relationship modelling, flexibility Cheaper thank Rational Rose – UML, useful for data models Document production, HTML view Audit trail / change control	Maintenance overhead Not that user friendly Ease of use / training overhead Heavy duty, force down a particular path, steeper learning curve, Inaccessible.
Excel	MS	As Visio	No set, templates (e.g. modelling)
Whiteboards and pens	-	Inspires creativity, MS Office lens as a sharing mechanism	
IDA	Soft32		Licensing/training
iRise	IRise	Fast prototyping Customisable widgets Fade / Rough sketch functions Working prototype	Licenses not suitable for large number of occasional users
iserver	Orbus	Business process modelling Business architecture Wes – portal Catalogue processes Application blueprint Impact Analysis	
Lucidchart (online Visio)	Lucidchart	Great for knowledge share and collaboration	
Blueworks	IBM	Cloud based Light – tool BPMN	Relational Database
Triaster		Process modelling – web based intuitive	
Pro-vision		Automation of process flow	
Adonis		Process Modelling	
Stories on Board		Links into Atlassian (Jira etc.) (storyboard)	
Gliffy	Atlassian	Supports UML	
PowerPoint	MS	Everyone knows it/has it	Doesn't support BPMN or UML. Not designed as a modelling tool

Tool Name	Vendor	Valuable Features	Features Lacking
Rational Rose	IBM	Part of a suite for the whole project lifecycle	Not initiative / needs expertise
ARIS (&MEGA)	Stayware	Enterprise (high level) Standard Op Procedures	Expensive (License) Training
Team Foundation Server	Microsoft	Planning boards	
Google docs		Collaboration	
Mingle	Mingle	User stories, Sizing, Prioritisation Planning, Testing effects	
SVN		Version control, allows re-use of reals	More of a code reposition rather than management
TFS/VSO		Links with Coke repo/traceability	Expensive
Good docs		Free accessible Collaborative Portable Feature transferability	
TFS	Microsoft	Requirements Capture, Traceability	Lack of full requirements Engineering support
ALM	HP	Requirement capture and traceability	Does not support end to end requirement lifecycle
Blueprint	Blueprintsys	Requirements development / management, wire framing, process mapping, supports Agile Collaborative featured Prioritising Communications with Requirements Traceability, HP-ALM/QC integrated Apply requirements directly	Usability poor
RRC	IBM	Traceability	Support from vendor User adoption – dependent on how implemented
Clarity	Clarity	Resource scheduling	
Excel	Microsoft	Flexible, cheap, functionality, familiar, user friendly	Not good enough for big projects Collaborative not great Limited function for requirements management Excel dependent upload

Tool Name	**Vendor**	**Valuable Features**	**Features Lacking**
Focal Point	Access Group	Business Case Development	
JIRA	Atlassian	Traceability – risk required to test Very flexible, good for agile, reporting and configurability, link artefacts, easy to use, integrated into development toolset (trade info code) Multiple functionality Cross read and Project Management All teams using/accessing Collaboration Ties in with delivery tasks/Trainability/Customisable	High level requires summary Ease of use for stakeholders Ability to scale Buy add ins Sharing information for stakeholders Needs discipline to avoid it having useless output
Case Complete		Reporting, Requirements Management	
Quality Centre	HP	Ease of traceability Link requirements and test capability	
Rally (AC)	Agile Control	Combined Requirements/Project management function – potential single source specific for Agile Delivery	No finance tracking capability
Rationale Suite	IBM	Ties in with complete lifecycle	Poor performance Time consuming and difficult for analyst to use
Requirements Composer (Rational)	IBM	Traceability	Can't use it for UML, very slow, usability not good (may de deployment related)
Requisite Pro	IBM		Avoid clunky – not user friendly (Superseded by Rational Requirements Composer?)
TFS	MS	QA/Testing collaboration	Not specialist
Jama		East to use Traceability	Stakeholder engagement License cost
TFS	MS	Good for delegates Good reposting	Not helpful to Bas – have to copy and paste in Just repository

Tool Name	Vendor	Valuable Features	Features Lacking
Axure	Axure	Visual prototyping Very rich screen designs Basic code generative Simple to use Use mock-ups to drive our requirements Working prototype Collaboration Interactive – prototyping Collaboration, high flexibility	Integration to Requirements Management Expensive. Large learning curve Licenses Template couldn't be customised
Mockups	Mockups	Good basic screen prototypes	
Just in Mind		Ability to wireframe mobile Apps	
Excel	MS	Quick, accessible and basic	Really basic, no enhanced functionality
Snip it / Snag it		Screen grabbing	Very basic wire framing
iRise		Mock-up Prototypes using workflow Take Photos of existing screens and add features	Early in adoption stage
Paint		Test timings of a process Build on existing screens	
Draw 10	Atlassian	Integration with Atlassian Free	Light
Prezi	Prezi	Online presentations Free version online	Lack of compatibility with other tools
Survey Monkey		Free Open Access	Basic questions Security
Skype/Lync (instant messaging)		Easy for large audiences to understand (e.g. presentations)	Collaboration (again e.g. excel)
Social media Twitter Facebook		Good for sharing externally i.e. remote workers or TP's Free	Needs to be monitored
Post it App		Free – capture handwritten "post its" and sort	
Google docs	Google	Free Collaboration /Sharing & edit	Low on features comparable to Excel Security? Low compatibility with MS tools

Tool Name	Vendor	Valuable Features	Features Lacking
Sharepoint		Flexibility Multi-user doc editing	Compatibility Becomes default for repository Admin overhead – must be maintained and managed Admin & Maintenance Size
Link/Skype (Not skype for business!)		Links to outlook outbox/inbox Can record conversations Notifications History of conversation	Size of videos can cause this to crash
Yammer		Social media Easy to share with 3rd parties Part of office 365	Generation Z thinking
Base Camp		File sharing Dairies	Lack of search
Keyed IN for Project Management		Links to Resource Management	Restricted Access (company specific)
RTC	IBM	Project reporting – task management (for developers)	Vendor Support
Project Planview	MS	Project Management	App support / ongoing Configuration overhead
Rally		Agile PM Tool	
Perdoo		Collaboration tool for objectives – provides clear line of sight of objectives	
Facebook at Work		Enterprise-wide	Replicated other systems
Hive		Combination of Sharepoint/Email/Instant messaging/Facebook/LinkedIn type facilities	
Hack Pad		Document sharing and real time collaborative editing	
Huddle.com	Huddle	Cross organisation if required	
Project Server		More collaborative than Project	Cross Project Dependency
Team Foundation Server	MS	Integration with all Project levels (Build/Deficits)	