

# THE STATE OF REQUIREMENTS MANAGEMENT:

The results of a recent industry survey shed light on the latest trends, challenges & solutions in software product development.

**Reality or hype?** Whether your role is Product Manager, Project Manager, Business Analyst, Development Director, QA Manager or Chief Requirements Guru, if you are involved in the planning and development of products, software applications or systems at your company, this report is for you. Gain insights into:

- What are the biggest challenges in innovation that companies face?
- Where are companies getting their next great product ideas?
- What are the top barriers to success?
- Which metrics matter most when measuring success?
- Is the Agile process over-hyped?
- Which tools top the wish list?
- How does collaboration apply to requirements management?
- What frustrates people more – scope creep, unrealistic expectations or lack of testing?
- Which genre of music is most popular? OK, that one we threw in just for fun.

## ❖ About the survey

This survey was conducted by Jama Software in partnership with Ravenflow. The report includes data collected from 203 survey participants from April 15 to May 9, 2008. Professionals were invited to complete the online survey in return for a copy of this published report. For privacy, all survey participants, responses and comments remain anonymous in this report. Ninety percent of participants completed the entire survey. Survey participants represented a world-wide audience and a diverse sampling. Thanks to everyone who participated. Here are the breakdowns by role, company size, industry and average project team size.

**67%** of teams will use or would like to use requirements collaboration and management software in the next 12 months.

### ROLE in the organization

- 40% Business / Requirements Analyst
- 19% Project Management
- 10% Product / Program Management
- 9% Product Development / Engineering
- 8% Outside Consultant
- 5% Executive Management
- 3% Research / Usability / Design
- 7% Other

### INDUSTRY of organization

- 28% Technology / Software
- 17% Financial Services / Insurance
- 17% Aerospace / Defense / Government
- 11% Healthcare / Medical Devices
- 8% Telecommunications / Media
- 3% Automotive / Consumer Products
- 3% Energy / Chemical / Utilities
- 12% Other

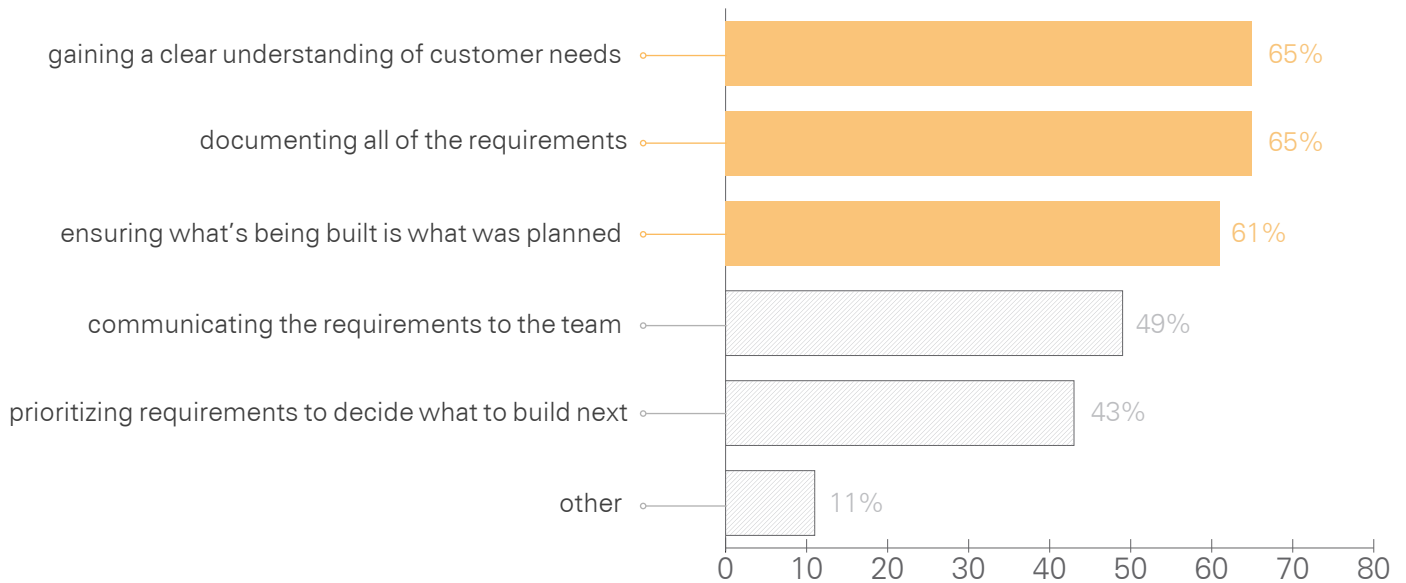
### COMPANY size (annual revenue)

- 26% Greater than \$1 billion
- 14% \$500 million – \$1 billion
- 17% \$100 – \$500 million
- 14% \$25 – \$100 million
- 29% Less than \$25 million

### TEAM size (project team & stakeholders)

- 61% Less than 25 people
- 28% 25 – 50
- 6% 50 – 100
- 3% 100 – 250
- 2% More than 250

In your opinion, what are your company's biggest challenges when it comes to innovation? (Mark all that apply)



## Three fundamentals of requirements management top the list.

The buzz around “innovation” is everywhere – in the news, at events, on the Web. A Google search will deliver up over 150 million pages related to innovation. For context, that’s more than Britney Spears. Despite all the enthusiastic chatter, innovation is easier said than done.

What are the real challenges that teams face when developing products their customers really want?

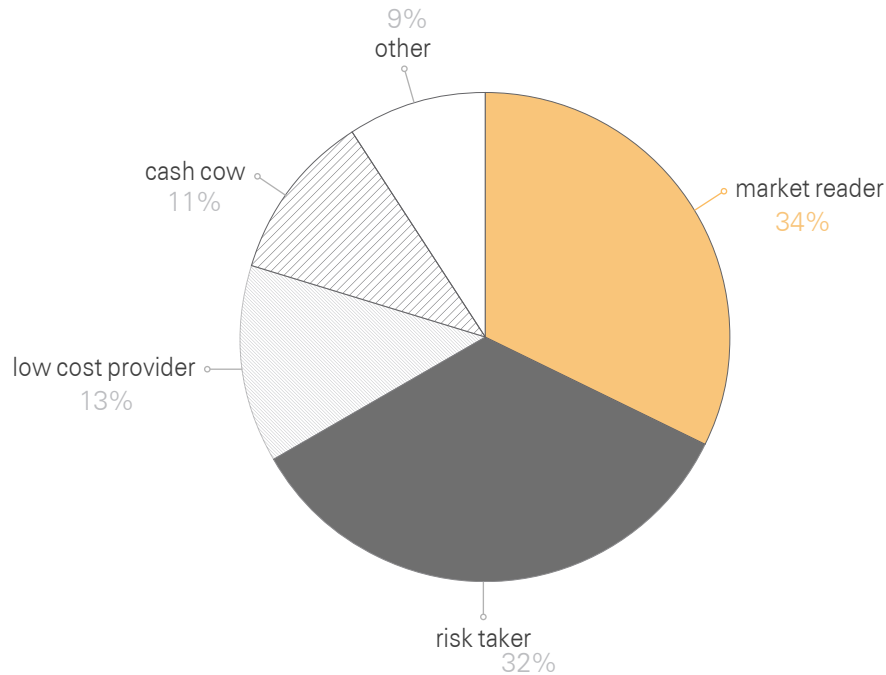
One thing is clear – in order to innovate successfully, you must manage requirements successfully.

As the data shows, the top challenges map to three fundamentals of requirements management – gaining a clear understanding of what customers want, documenting all the requirements and then ensuring what’s being built is what was planned. There’s no substitute for the fundamentals.

“Managing the rapid change of requirements & traceability is our toughest challenge.”

– Survey participant

## How would you characterize your company's approach to innovation?



## When it comes to product innovation – speed does matter.

A McKinsey Research report shows that over 70% of senior executives say that innovation will be at least one of the top three drivers of growth over the next three to five years. So, what approaches are companies taking?

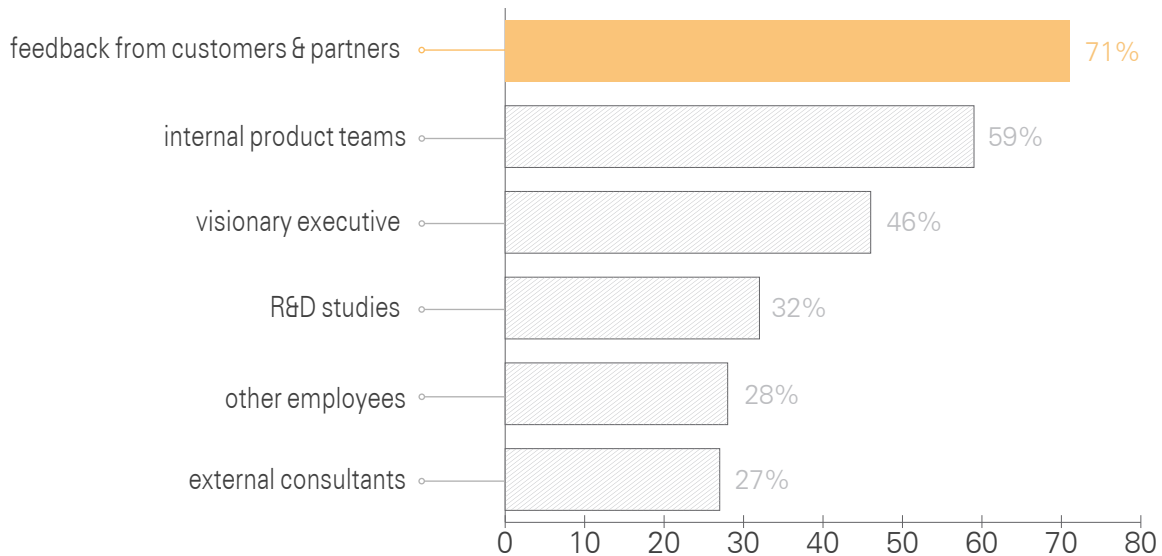
Be first to market with a breakthrough product or be fast to follow with a better one – that's how the majority of those we surveyed characterize their company's approach to innovation.

Did different industries answer differently? What about the size of a company? Surprisingly, neither size nor industry had a significant variance when we filtered the survey results. The common theme represented by the responses and comments provided is that whether a risk taker or a market reader, the majority of those surveyed viewed rapid product development as a key driver to their ability to innovate.

**"We're a fast follower. We watch the competition closely and then make it better."**

– Survey participant

## What are your sources of new product ideas and requirements? (Mark all that apply)



## Think R&D studies hold your next great idea? Ask your customers.

A similar “a-ha” is occurring at companies everywhere – they are embracing the fact that customers are willing to openly share their ideas and participate in the product planning and development process. It’s less expensive, real-time, and as unfiltered and pure as a good Hefeweizen.

In the world of customer-driven product development, it’s a trend that’s been underway for several years, but it’s recently hit another gear with the explosion of online customer communities and Web-based collaboration tools.

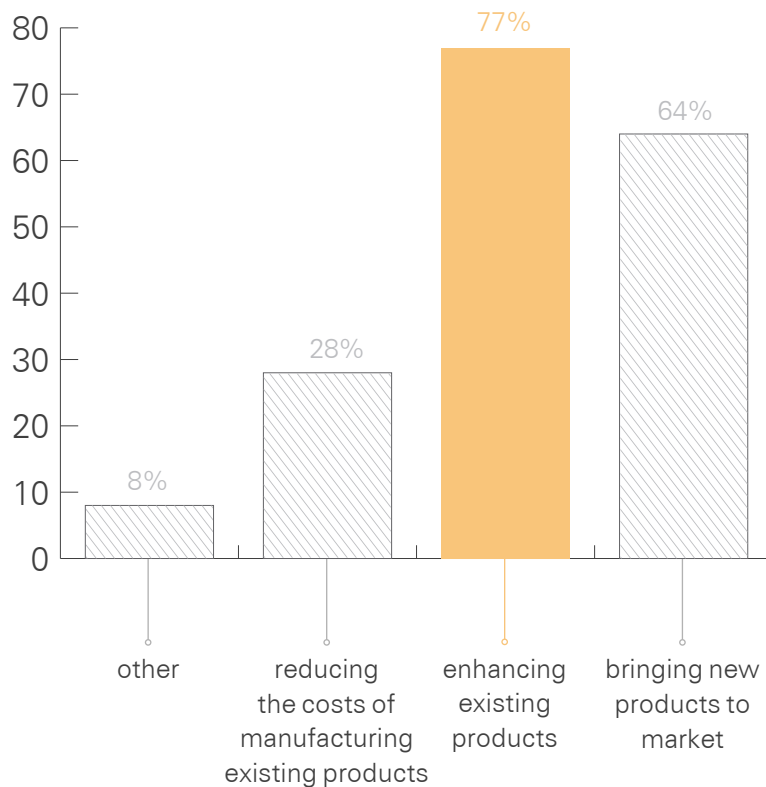
As this data illustrates, the #1 source for product ideas & requirements is feedback from customers and partners.

Does this mean traditional R&D goes away? Does it mean your visionary executive takes a back seat? Not necessarily. It simply means that companies that achieve greater alignment with their customers achieve greater results. Your customers are leading the conversation. Are you listening?

**“Lavish R&D budgets  
don’t deliver better  
performance.  
Customer focus does.”**

– Booz Allen Hamilton,  
Global Innovation 1000 Report

What are the goals of projects your team works on? (Mark all that apply)



## Enhancing existing products outweighs developing new ones.

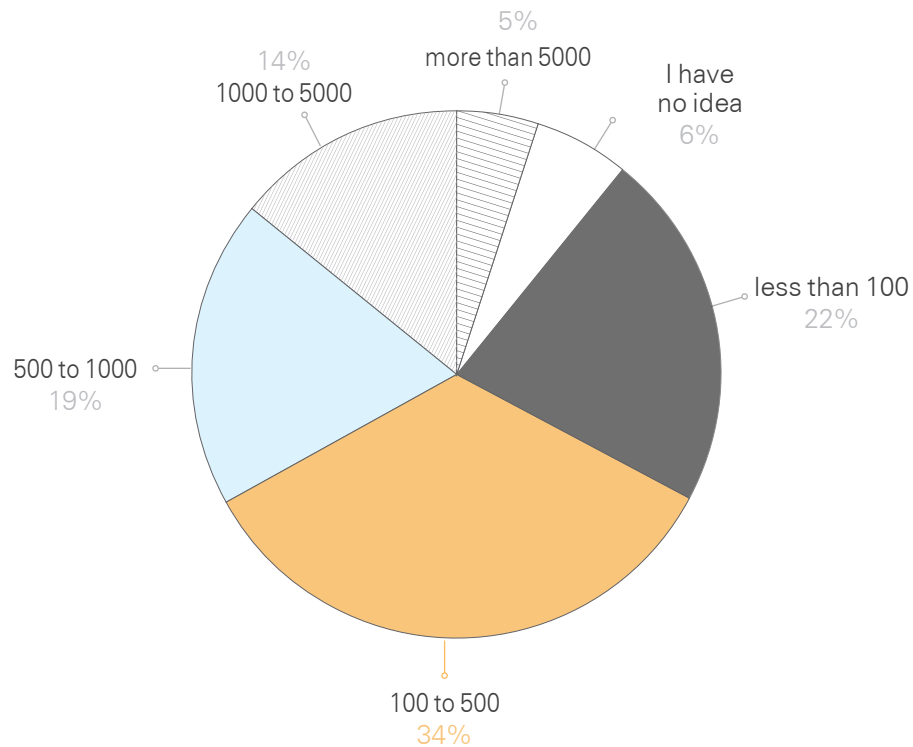
Is this surprising? Maybe not. New products grab the spotlight, but they also tend to be slower, more expensive and higher risk. Companies are finding success through smaller, more focused releases with incremental enhancements over time.

These survey results support the trend toward more and more product development teams adopting the philosophy of “release early and release often”.

What we found surprising was that only 28% answered that “reducing costs” was a goal. You read and hear a lot about efficiency being a top initiative especially during tougher economic times, but these survey responses didn’t reflect that.

“Our goal is to deliver quality software in a reduced timeframe using an iterative approach to development & systematic testing.”

Let's talk about complexity. On average, how many requirements does a typical project contain?



## No one ever said this job was easy. I hope you like requirements.

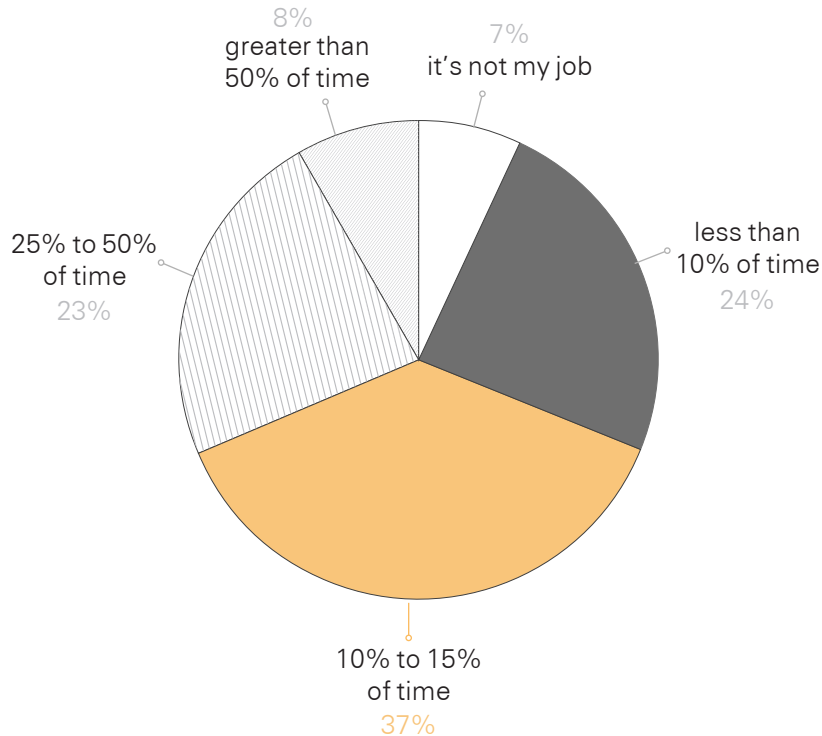
Maybe we should run a contest for the largest requirements specification document – 800 pages, a thousand pages? For the 5% whose projects on average have over 5,000 requirements each, there's a Guinness World Record just begging to be set. Yes, we checked and there isn't one yet.

This question provided some interesting segmentation.

As you might anticipate, the more complex the projects (meaning we filtered on those with 500 or more requirements per project), the lower the average success rates, the greater the time spent managing changes to requirements, and the greater the interest in using requirements collaboration and management software.

Does the size of the team have any correlation to the size of projects? Yes, the bigger the team, the bigger the projects. Whereas overall 72% of those surveyed averaged at least 100 requirements per project; for those teams with 25 or more people, 90% averaged 100+ requirements per project.

## What percentage of your time is spent weekly dealing with changes to requirements?



## The vast majority spend at least 10% of their week managing change.

Oh man, you've got to really feel for the 8% that spend over half of their time just managing changes to requirements. It's a reality of product development though, customer needs change. So how can you best manage the change and keep everyone in sync without killing yourself?

As Forrester Research defines it, that's where requirements management solutions help by:

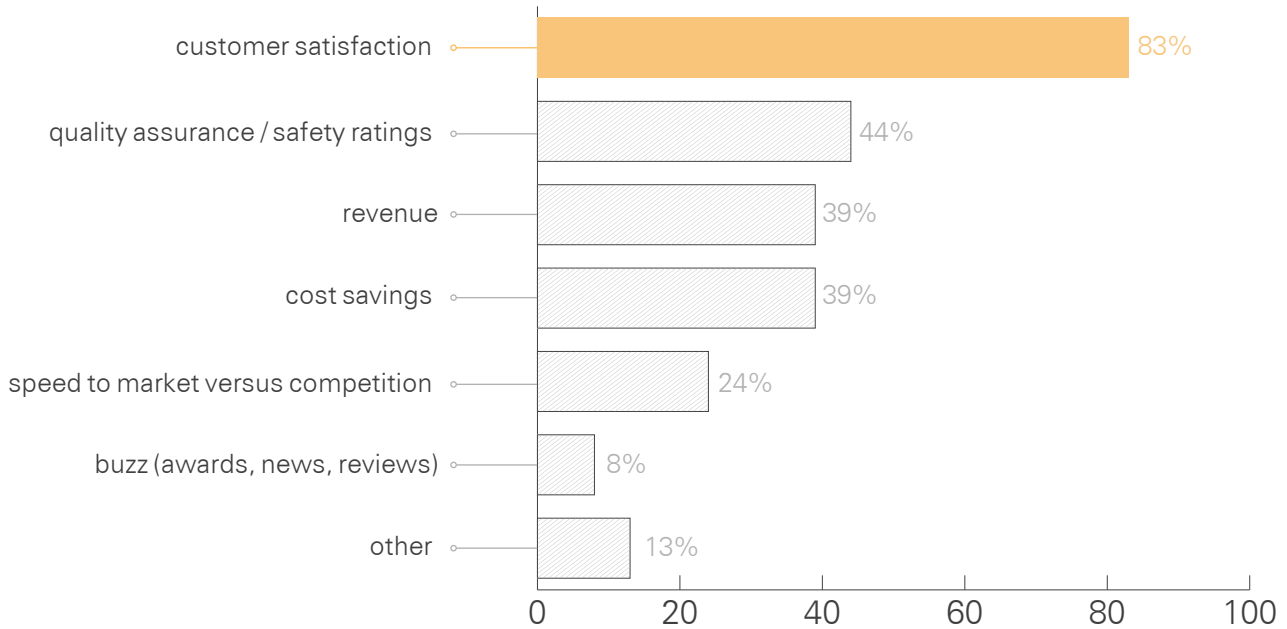
- 1) storing requirements in a central location
- 2) tracking relationships among requirements & artifacts
- 3) controlling changes to individual requirements and groups of requirements

This was an interesting question to segment results on. When we look at those that spend at least 1/4 of their time managing changes, success rates were lower, the #1 challenge shifted to ensuring what's built is what was planned, and interest in requirements collaboration & management software increased to 80%.

**"Managing the rapid change of requirements & traceability is our toughest challenge."**

– Survey participant

## How do you measure the success of your delivered projects / products? (Mark all that apply)



## Customer satisfaction outshines revenue and other success metrics.

Surprised by this answer? Why isn't revenue higher? This is a question where role plays a factor. For business analysts and project managers, which represent 59% of those surveyed, customer satisfaction reigned supreme. For product managers and executives, revenue was the top metric they cared about, with ROI being a popular write-in theme for "other."

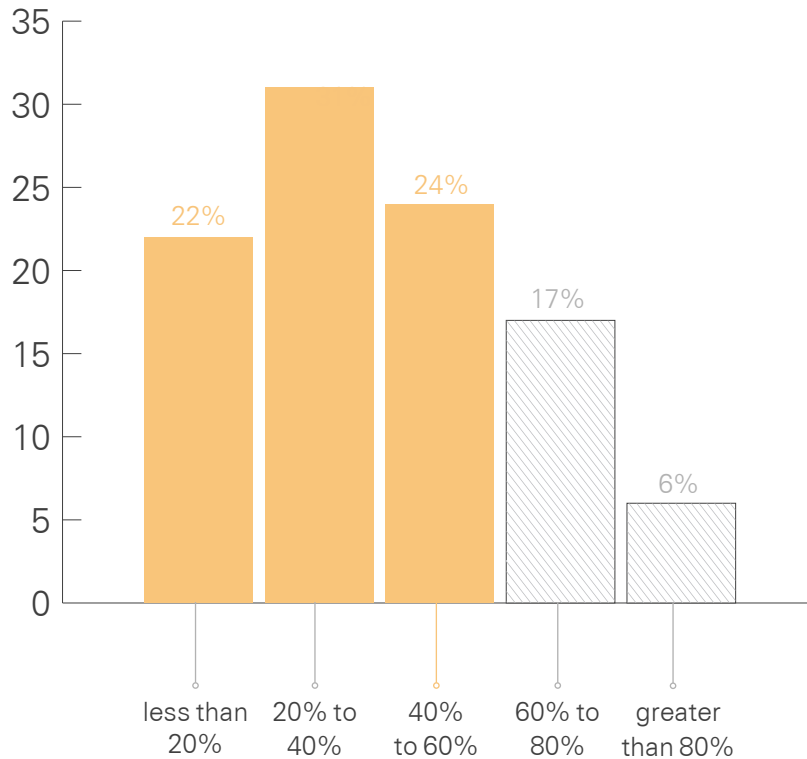
These results speak to the interesting dynamic that exists between project management & product management.

As Jeff Lash, the author of the blog, *How To Be A Good Product Manager*, writes, "To avoid conflicts between project management and product management, product managers, project managers, and project teams should agree on shared goals and metrics as much as possible."

"Success for us is measured by the return. What is the ROI back to the business?"

– Survey participant

How often are the projects or product launches that you're involved with delivered on time and on budget? Be honest...



## For the large majority, success rates are 60% or lower.

It's like Shaquille O'Neil shooting free throws – you expect better, but the reality is you're lucky if just 60% of the attempts are successful.

Why are these success rates what they are? Are we all just numb by the same old story about project failure? Billions are lost each year on bad software. Got it. Delays in product development can bankrupt companies. Yep.

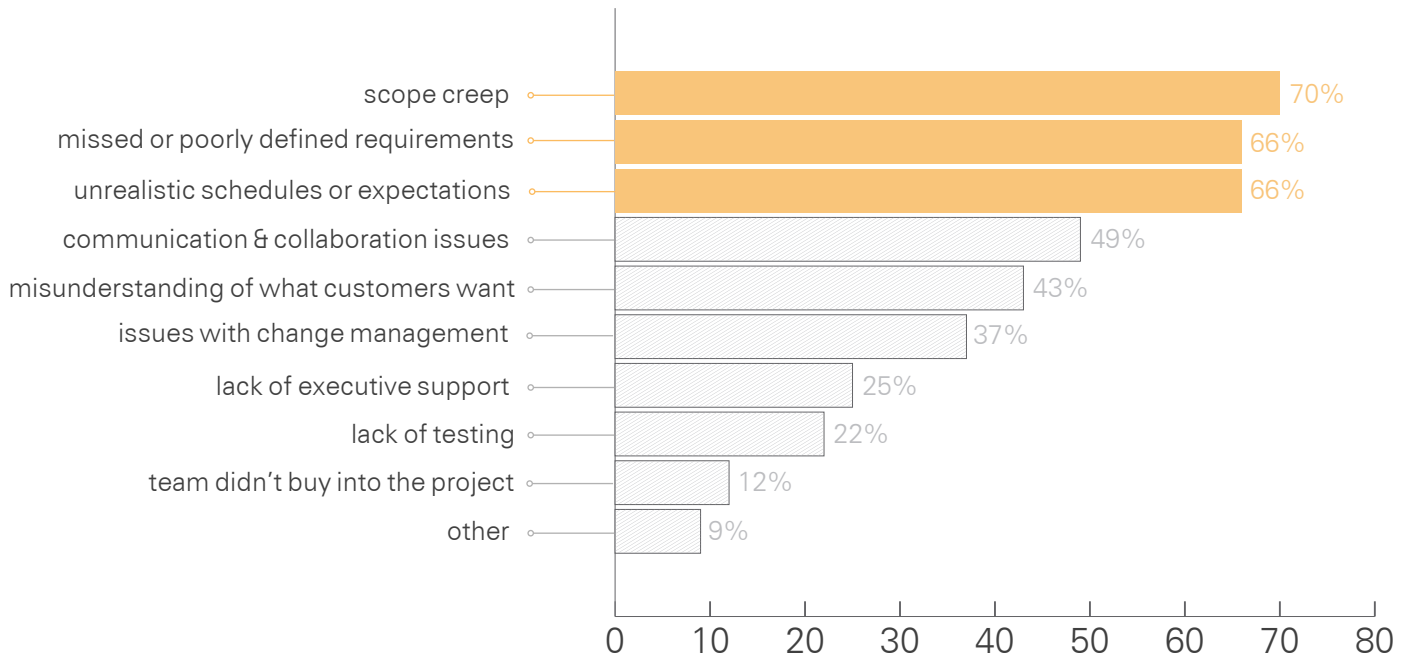
"IEEE Spectrum Report: Why Software Fails" suggests "The biggest tragedy is that software failure is for the most part predictable and avoidable. Unfortunately, most organizations don't see preventing failure as an urgent matter..."

Do you buy that? Something tells us it isn't just organizational complacency, but that there's much more to it than that. In the next question, we explore the leading causes for failure.

"It's all about an on-time delivery. Did we meet the target date?"

– Survey participant

## When a project / product is not viewed as successful, what are typical causes? (Mark all that apply)

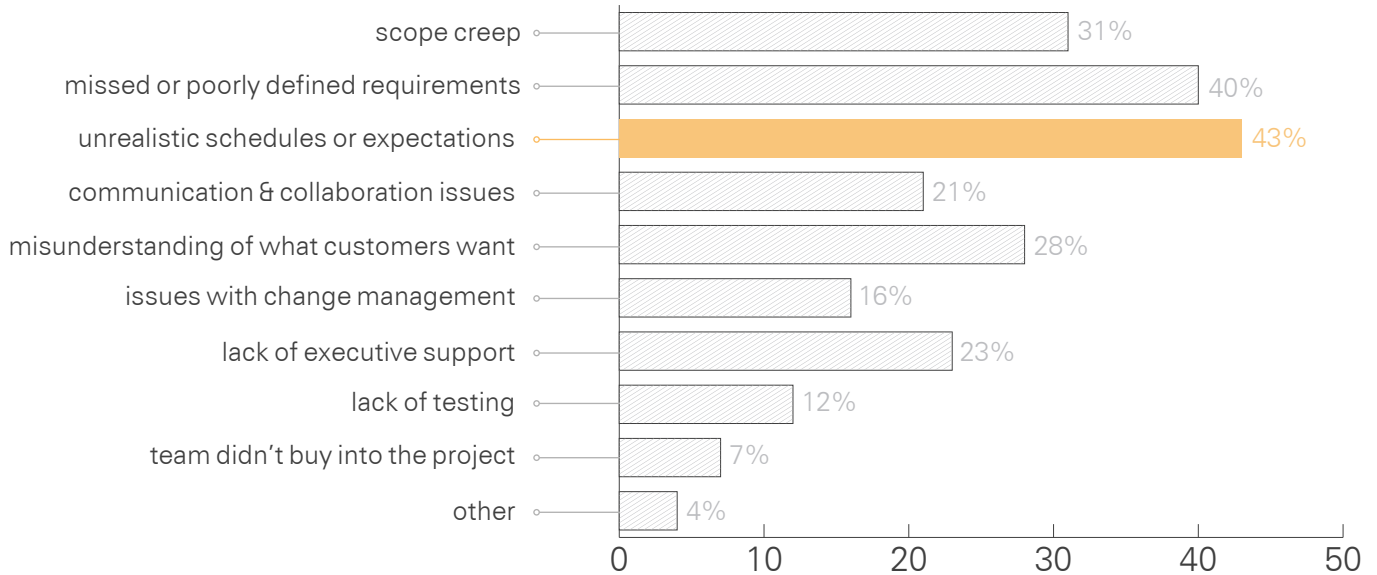


## Beware of the dreaded scope creep.

It lurks by the water cooler, on customer status calls and in team meetings – it’s the dreaded scope creep and it wreaks havoc on projects. It’s not alone though, tied for a close second are its nasty cousins “missed or poorly defined requirements” and “unrealistic schedules or expectations”.

How do you avoid these? Tools can help, process is critical, but more than anything else it takes really skilled people to keep these issues in check. Otherwise, these issues will continue to creep up (no pun intended) and create unnecessary frustration, delays and costly rework for organizations – all of which lead to failure.

Of these barriers to success, which do you personally find most frustrating? (Mark all that apply)



## “Unrealistic schedules or expectations” drive people crazy.

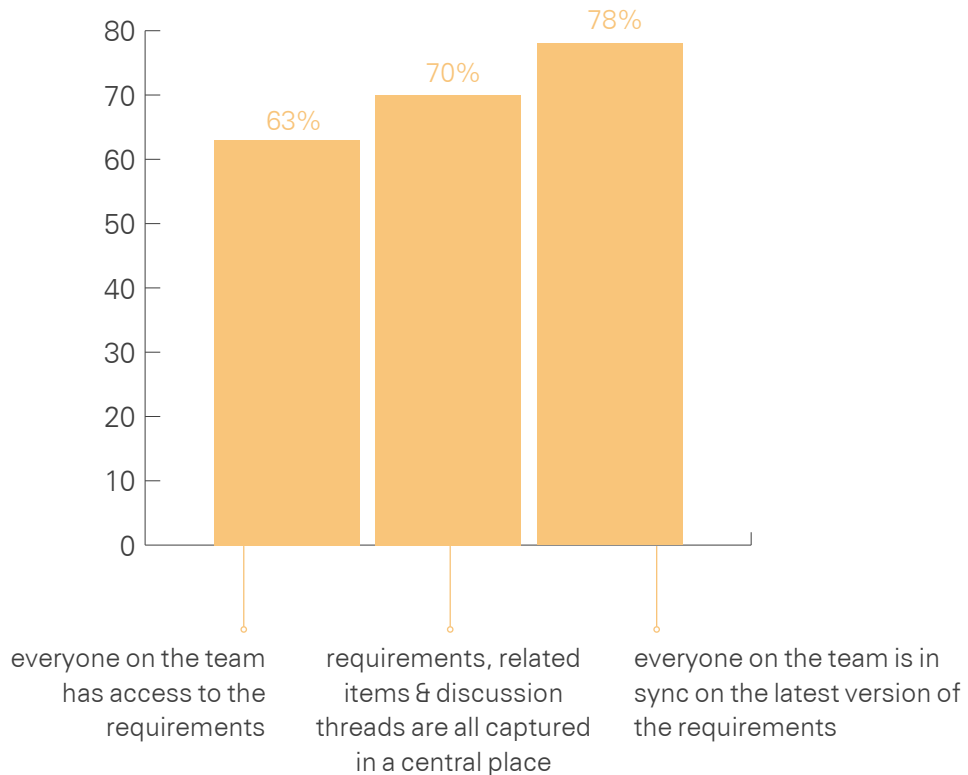
Even though scope creep was the top cause for failure, “unrealistic schedules or expectations” takes the top prize in what professionals personally find most frustrating.

Some barriers you can overcome mid-project, but when unrealistic expectations or schedules get set and approved, it’s difficult later to hit the reset button with stakeholders and customers. It’s a lesson even the most experienced product development teams have experienced.

“Some of the biggest overall problems come from pursuing what the customer says he wants without determining what they really need.”

– Survey participant

‘Collaboration’ is a word being talked about a lot. In your opinion, how does collaboration apply to requirements management? (Mark all that apply)



## Well, actually, collaboration applies to all of the above.

Next to innovation, “collaboration” might be the biggest buzzword in business today. So, what does collaboration really mean as it applies to requirements management?

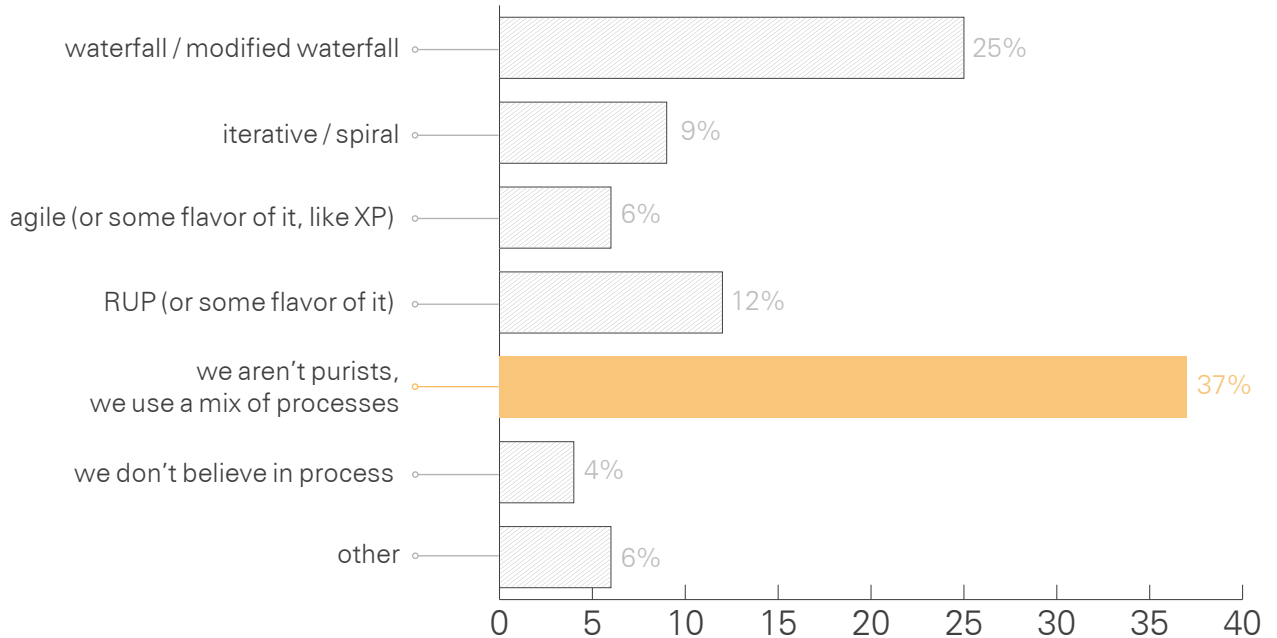
As the survey results show, no one clear answer stands out. Essentially, collaboration embodies all three – team-wide access, centralized place of all assets, and continuous alignment to the latest version of requirements.

Some experts view collaboration as one of the key ingredients to successful requirements management. Based on our own personal experience, we agree. A collaborative approach is a faster, more successful way to stay in sync throughout planning and development cycles – both internally (with your team) and externally (with your customers and partners).

“Requirements management is a communication process. Collaboration happens when everyone has the same understanding of the requirements.”

– Survey participant

## Which process does your team use?



## Surprised? Only 6% are pure agile shops. Many use a mix.

There's no denying the momentum that Agile has in the product development world, but is it overhyped? At Jama, we use a modified Agile process ourselves and have used various processes before, so we were curious to learn what other teams are really doing.

As the data illustrates, the largest segment is using a mix of processes. A quarter of survey respondents are using a traditional or modified Waterfall method exclusively, but few beyond that are purists of any one process.

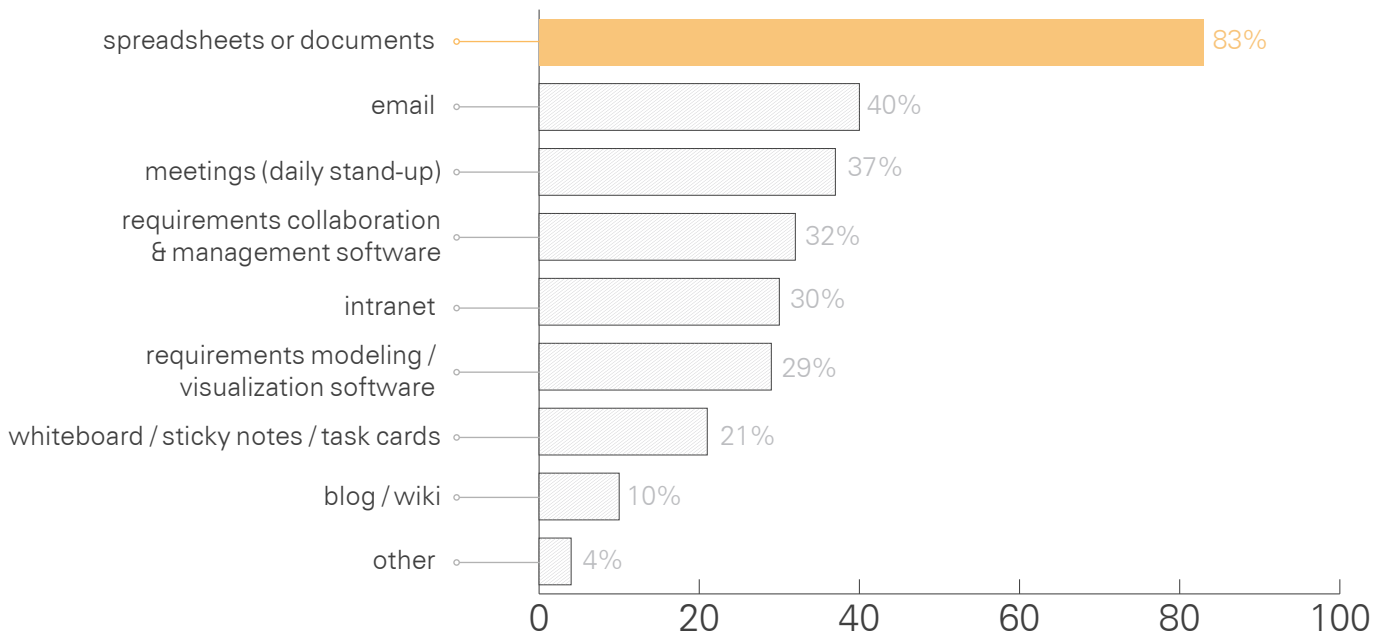
So, as one survey participant pointed out, "It's important for the tools to be flexible to adapt to whatever processes your team or company uses, because inevitably they will change."

These survey results and our own experiences confirm that no single process is a silver bullet. Different projects, different products, different teams – they require different processes. Adapt and survive.

"It depends highly on the project characteristics, so it varies from Waterfall to Agile."

– Survey participant

## How does your team currently document & communicate requirements? (Mark all that apply)



## Help! We're stuck in the land of documents & spreadsheets.

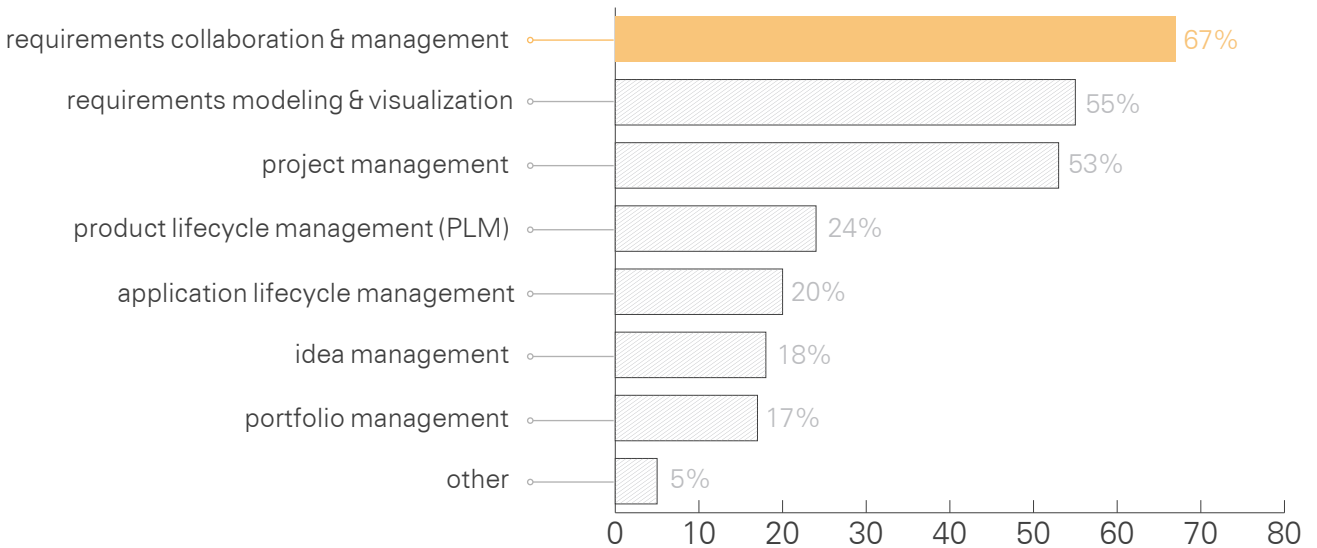
It's pretty amazing when you think about it – the tools (e.g. Excel spreadsheets and Word documents) that your kids might use to do their next homework assignment are the same ones professionals use to manage massive software development projects.

These tools are ubiquitous and we all know how to use them, but are they really the best way to capture & communicate thousands of requirements for complex projects with distributed teams?

As this survey data supports, more often than not, business analysts and project managers rely on manual effort and Microsoft Office to accomplish the documentation and communication of requirements.

But, as Forrester points out in their recent Wave Report for application development professionals, "Purpose-built requirements management tools dramatically increase the efficiency of proper requirements management practices."

## What's on the list of software tools your team will use or would like to use in 2008? (Mark all that apply)



## “Requirements collaboration & management” tops the wish list of tools.

Why do you need specialized tools – can't you just manage everything in documents? It's a common question, and one often asked by senior management when presented with a budget request to buy a specialized tool.

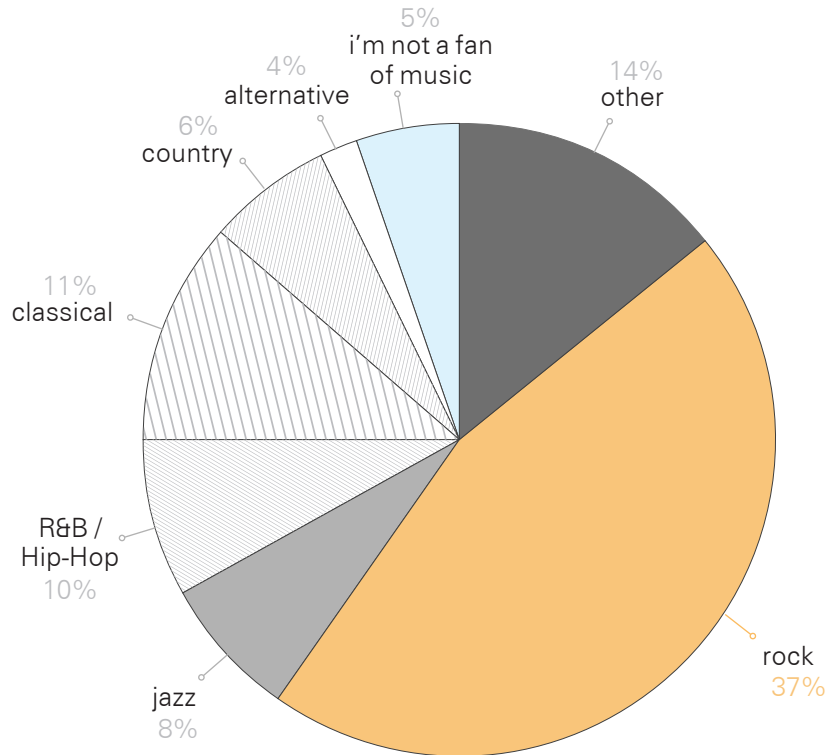
As Forrester Research defines it, “The purpose of requirements management tools is to maximize the likelihood that a development initiative will deliver applications that function as desired.”

This survey shows that two thirds of organizations are interested in using requirements collaboration and management software in 2008. What's on your list?

“Tools improve the efficiency of mature requirements management practices.”

– Survey participant

## What's your favorite genre of music?



## Work hard. Play music. A shared mantra for product development.

You know what they say, “All work and no play, makes product development a dull job”, or something like that.

We admit, there's no real business value to this question, other than to remind us that despite the challenges and never-ending demands of product development, this profession still rocks. Would you rather be a lawyer? Forget about it.

There are definitely times when managing requirements can feel like a thankless and unglamorous gig. But, as this report illustrates requirements management plays an important role in the bigger picture of being able to successfully develop products on time, on budget and within scope. And, a little music to keep us sane during the process never hurts, right?

“Tools improve the efficiency of mature requirements management practices.”

– Survey participant

# This is the year of requirements collaboration & management.

The goal of this survey was to identify what product development teams are really doing this year to be more successful, and to hopefully cut through some of the hype and buzz that's out there.

So, what have we learned from this survey? Here's a summary of the findings:

- 1. There's no substitute for fundamentals.** The goal of this survey was to identify what product development teams are really doing this year to be more successful, and to hopefully cut through some of the hype and buzz that's out there.
- 2. Customer-driven product development.** R&D studies and visionary executives are helpful, but your customers hold the keys to your next product ideas and requirements. The Web has ushered in faster and more efficient ways to elicit feedback from customers to help you build the products they really want.
- 3. Customer satisfaction rules.** Revenue? Buzz? Speed? Which success metric is most important to product development teams? Customer satisfaction is #1.
- 4. Beware of scope creep.** Scope creep tops the list for the number one cause to projects that fail. Followed closely by missed or poorly defined requirements and unrealistic schedules and expectations.
- 5. Demystifying "collaboration."** A popular buzzword, collaboration means different things to different people. As it applies to requirements management, it embodies three things: everyone on the team has access to the requirements, everyone is in sync on the latest version and all requirements, related artifacts and discussion threads are captured in a secure and centralized place.
- 6. When it comes to process, we're not purists.** There's a lot of media attention around Agile processes, but few organizations have shifted to being a pure Agile shop – in fact, only 6% of those surveyed. Most organizations are using a mix of processes, so tools must be flexible and adapt to your processes.
- 7. Documents still dominate, but RM tools top the wish list.** Not surprisingly, over 80% of professionals manually use MS Office to capture and communicate requirements using documents and spreadsheets. However, when asked which tools they plan to use or would like to use this year, requirements collaboration and management tools top the list.

**Let us know your thoughts.** Did this report confirm what you already knew? Did some of the findings surprise you? What other things would you like to see in future surveys? Let us know, we're interested in your feedback. Send your thoughts to: John Simpson, Jama Software, [jsimpson@jamasoftware.com](mailto:jsimpson@jamasoftware.com).

## About the Author



### **John Simpson, Director of Customer Outreach & Marketing**

John represents the voice of the customer in Jama's product strategy and communications. He has over 14 years experience working at software and Web technology companies including Microsoft, WebTrends, Omniture and ZAAZ. He has contributed to several books, whitepapers and presentations on marketing and technology.

## About Ravenflow

Ravenflow is a partner to Jama and co-sponsored this report. Ravenflow is a leading provider of rapid requirements definition software. Ravenflow accelerates application project time-to-market by reducing the time required for all stakeholders to approve requirements, reducing developer rework due to requirements errors, and by generating test cases automatically. Business analysts and stakeholders across all industries depend on Ravenflow's award-winning RAVEN application to quickly visualize and validate software requirements. Visit [www.ravenflow.com](http://www.ravenflow.com).

## About Jama Software

Thousands of users worldwide. Billions in R&D projects managed within Contour.

At Jama, our mission is to help companies build great products. We're collaborating with companies across industries, from top government agencies to several of the world's largest, most innovative organizations such as Intel, Merck, Emerson, Amgen, Wells Fargo, Bio-Rad, SMART Technologies and many others to design new ways to smash information silos, speed innovation and build high-quality products.

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