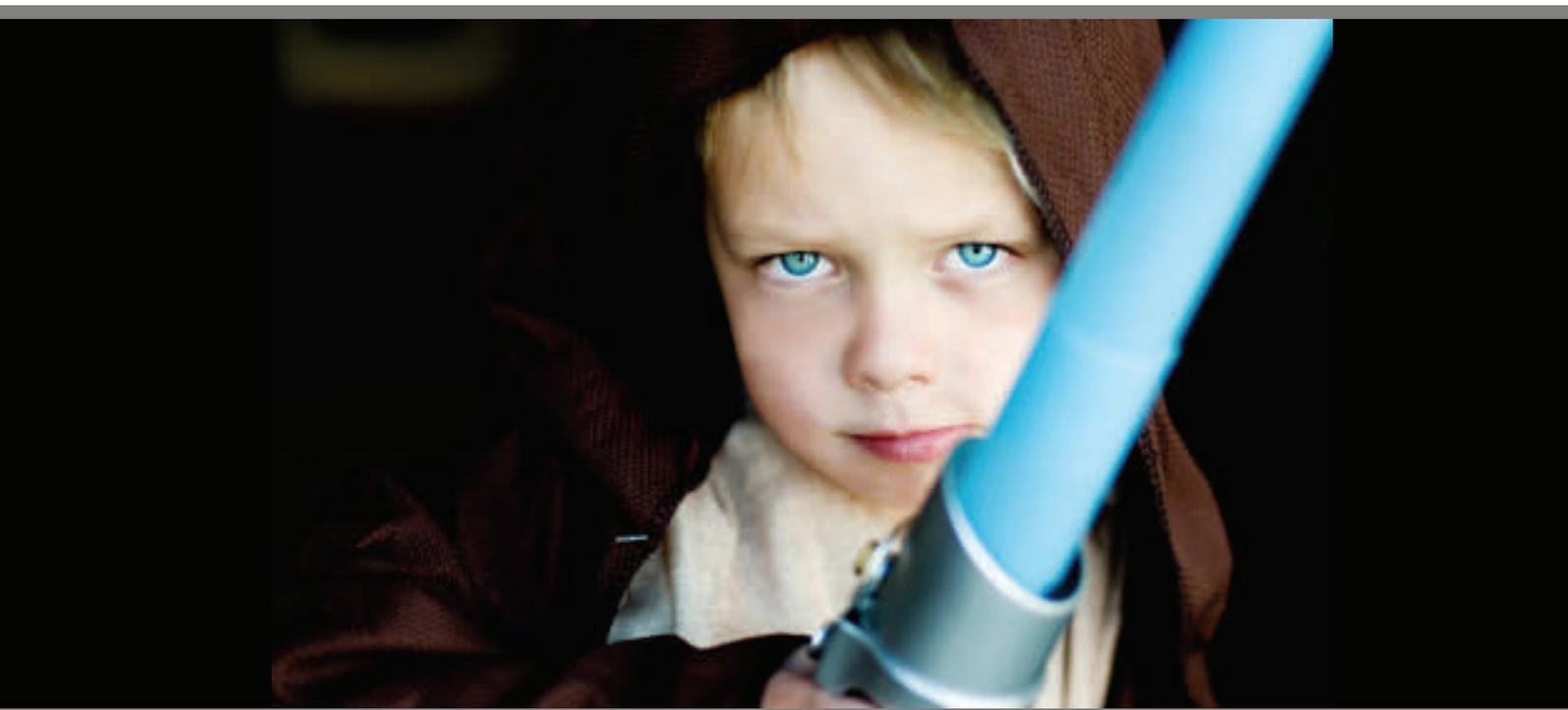# What Yoda Can Teach Us About Application Quality Management

It's no Jedi mind trick! 10 black holes to avoid for successful application delivery

An Original Insight

Original Software

EXECUTIVE SUMMARY

A LONG TIME AGO, IN A GALAXY NOT TOO
FAR AWAY, THE VERY FIRST CHAOS REPORT
PUBLISHED BY THE STANDISH GROUP
GENERATED WORLDWIDE ATTENTION BY ITS
CLAIM THAT 40 PERCENT OF IT PROJECTS
FAILED AND THAT THESE FAILINGS WERE
COSTING THE US ECONOMY 140 BILLION
DOLLARS EACH YEAR. TEN YEARS LATER,
MATTERS HAD IMPROVED SOMEWHAT
WITH ONLY HALF AS MANY PROJECTS
FAILING, BUT WORRYINGLY 53 PERCENT
WERE LATE, OVER-BUDGET OR NOT
MEETING THEIR OBJECTIVES. NOW,
WITHIN A MERE FIVE YEARS, THE
NUMBER OF FAILED PROJECTS
IS BACK ON THE RISE, THE 2009
STANDISH GROUP CHAOS REPORT
INDICATES THAT NEARLY
25 PERCENT OF
PROJECTS ARE
DOOMED.

THE QUALITY OF APPLICATION DELIVERY IS AT
THE HEART OF MANY OF THE CHALLENGES
FACED IN IT PROJECTS, AND THIS PAPER
REVIEWS SOME OF THE MOST COMMON
PITFALLS AND PAIN POINTS THAT OFTEN
BESET DEVELOPMENT PROJECTS. WITH
THE HELP OF YODA, OBI WAN AND
OTHERS FROM THE STAR WARS CAST,
WE WILL LEARN HOW BEST
TO AVOID THESE CHALLENGES
AND DELIVER YOUR PROJECTS
ON TIME, ON BUDGET
AND MOST IMPORTANTLY
WITH QUALITY.
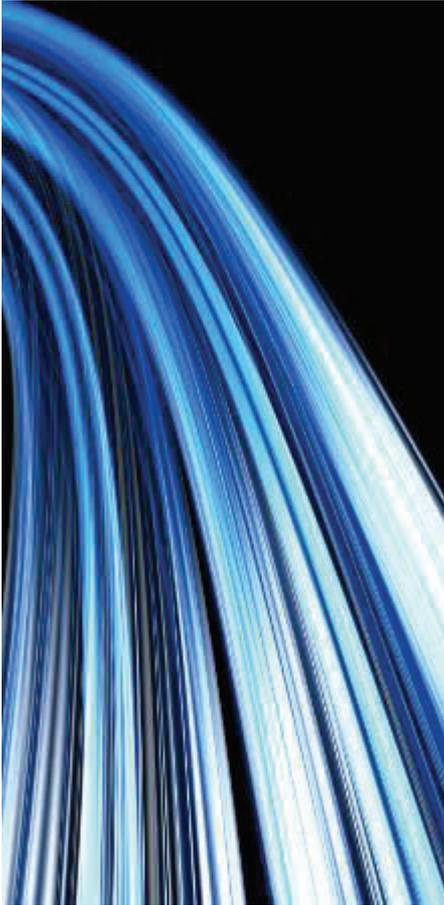
The Black Hole No. 1: Walking before you crawl

Obi-Wan: *How long will it take before you can make the jump to light speed?*

Han Solo: *Travelling through hyperspace ain't like dusting crops, boy! Without precise calculations we could fly right through a star, or bounce too close to a supernova and that'd end your trip real quick, wouldn't it?*

It is natural to focus on the eventual goal; the application that will be built and that will deliver the projected business benefits. However, it is equally important to focus on the quality of that deliverable, right from the project's inception. Fail in this and you will face abandoned projects, missed deadlines and an application that may be implemented but will forever after be associated with instability and high maintenance costs.

The first essential step is to recognise this fact and to put application quality and its management at the heart of all your development efforts. If you do not believe this or do not believe you can, then failure is much more likely than success.

The Black Hole No. 2: QA as a silo

Obi Wan: *The force is what gives a Jedi his power. It is an energy field created by all living things. It surrounds us and penetrates us. It binds the galaxy together.*

The same could be said for quality management. It should be an energy field, created and sustained by all involved in the development process, linking all living parts of the lifecycle, the requirements, code, the build, the test steps, the defects, the regression pack, everything; binding all aspects together and giving us the power of visibility and foresight throughout every stage of the development.

More commonly though, test teams seem to exist in serene isolation: isolated not only from other parts of the development and delivery effort, but also from each other. Frequent status meetings are normal, with the focus on the gathering of historical data rather than forward planning. Similarly, communication with other key teams is often dysfunctional. Defects are reported with a 'fire and forget' mentality. This is fine if you are trying to shoot down an enemy star ship but not so clever when building an IT application, as development is a key partner in application delivery.

The effective involvement of users in a project is crucial to its success and was identified by the Standish Group as the primary driver behind successful projects in their 2010 CHAOS update. Yet left to their own devices, given their natural tendency towards their

> " Travelling through hyper-space ain't like dusting crops, boy! Without precise calculations we could fly right through a star, or bounce too close to a supernova and that'd end your trip real quick, wouldn't it? "

normal roles, user testing can become a burden of limited and poorly tracked value. IT and user management have a vested interest in the integrated progress of all their teams. An approach where each team reports individually in different formats and on different timelines is obviously outdated and grossly inefficient.

To date, test management products have reinforced rather than broken down the potential dangerous isolation of QA teams. They have taken a narrow view of QA with a focus on requirements, tasks and defects when what is needed is a solution that can embrace QA across the project disciplines and integrate into essential infrastructure tools such as change management.

The Black Hole No. 3: Lack of organisation

Obi Wan: *You are going to find that many of the truths we cling to depend greatly on our own point of view.*

The rebel heroes in Star Wars seemed disorganised compared to the highly structured juggernaut-like Empire, surviving on agility and instincts. But most IT organisations do not possess the same powers, and telepathy is beyond our grasp. Some people are organised, while others are not.

For instance some children just can't manage a tidy bedroom and some parents can't abide a messy one. But what's the issue? The child can still find the things they want. Is it that the parent cannot, or just the ascetics and a fixation with neatness? But if you are not aware of where things are 'supposed to live'; they are just as difficult to find as anything in a child's bedroom! It just depends on your point of view. The benefits of tidiness are clear, but to get true value, things need to be organised. To be truly organised, things need to be communicated and controlled according to agreed standards. But what is it about being organised that is so beneficial and what lessons can be applied to application quality?

If the child is analogous to a very small, one or two person QA team then the similarities are strong. Such teams can operate using their own knowledge of their systems and the target applications. Their supporting infrastructure will typically include partial test documentation held in numerous non-standard spreadsheets and communication will be by email containing varying depths of information. Agile developments similarly rely on informal knowledge transfer and Post-It Notes. Is this the untidy room syndrome? So where's the problem?

Take this into a larger organisation and the idea of trying to run a significant QA team in such a way becomes patently ludicrous. But as we have already established there are many other teams in addition to QA who should be accessing the information locked away within QA.

> **"** But you cannot control it. This is a dangerous time for you, when you will be tempted by the Dark Side of the Force. **"**

What if one member of the team is unavoidably taken ill or unfortunately cryogenically frozen in carbonite? How do development know what test coverage has been achieved to date? How do operations know when the additional system capacity will be needed? How do key users know whether the testing is representative of their current practices? How does the team management know whether the target date will still be met?

The Black Hole No. 4: Lack of control
Obi Wan: *But you cannot control it. This is a dangerous time for you, when you will be tempted by the Dark Side of the Force.*

Delivering high quality applications on time and on budget is not easy. The challenge has been exacerbated by the legacy quality management and automation tools that were limited in their capabilities and had a high maintenance burden.

In an attempt to reduce costs and to avoid the complexities of quality delivery, many companies have embraced off-shore, near-shore or on-shore outsourcing. The attractions of exporting the complexity and the reduced cost basis are clear, but the savvy organisations know that they must address the triple challenges of knowledge transfer, proof of work and relationship management.

You must find a way to consistently and thoroughly document all use cases and put a mechanism in place where the quality and quantity of the outsourcer's can be judged, forming the basis for managing the relationship through key agreed metrics.

The Black Hole No. 5: Lack of visibility and out of date information
The Emperor: *You've paid the price for your lack of Vision: If you will not be turned you will be destroyed.*

Understanding the current project status, the trends in the progress and the implications for resources, target dates and costs are vital to making the correct decisions. The information also needs to be available instantly. If gathering status information across all the project disciplines takes a week, the number of hours potentially burnt in the wrong activities becomes alarming. This could destroy your chances of keeping the project on-track, making your doomed project just another statistic on next year's CHAOS report!

To help you to keep your finger on the pulse of your development lifecycle, you need instant access to key information by the most appropriate and powerful device. Printed reports should be at the bottom of the pile given that they are out of date the moment they are created, PCs and web access are better, and personal devices such as smart phones or Apple iPads at the top of the heap.
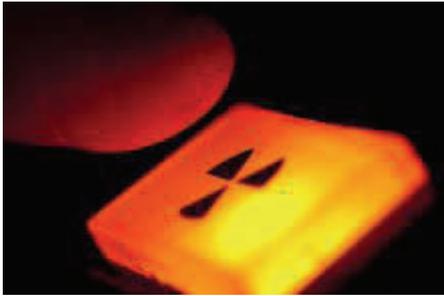
The Black Hole No. 6: Unnecessary re-work

General Madine: *Is your strike team assembled?*

It might be the same team that has been used on previous projects, but with many application quality management solutions, users have to be set up over and over again for each project. All too often, although you have your team assembled and ready to go, there is still a frustrating amount of work to do in setting up users, permissions and calendars etc. When evaluating AQM solutions take into account simple time-saving factors and where possible choose an option where users need only be set up the once and can then be assigned to multiple projects.

The Black Hole No. 7: Don't hinder collaboration with overly technical tools

C-3PO: *Don't blame me. I am an interpreter. I'm not supposed to know a power socket from a computer terminal.*

We've already discussed how quality needs to be centrally organised by everyone in the project team. More often than not this could be made up of non-technical business users. Overly complex systems that require coding and technical expertise are at odds with this principle and could be the catalyst that causes the 'final destruction of the Alliance!
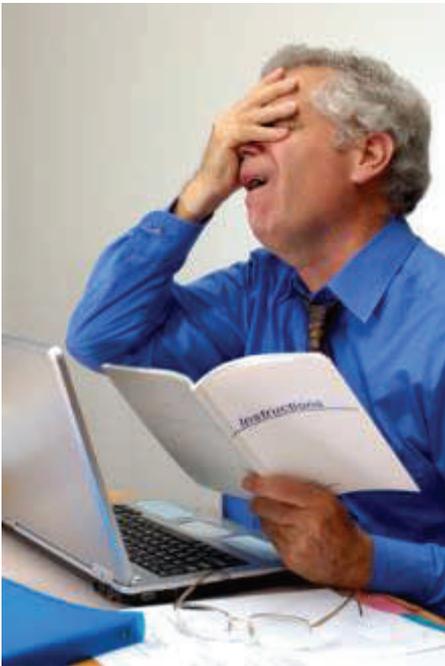
The Black Hole No. 8: Not supporting all types of working practice

Yoda: *Decide you must, how to serve them best.*

Enterprise Agile versus waterfall and the challenges of heterogeneous environments are increasingly becoming hot talking points and many organisations are working with a variety of platforms and methodologies. So how do you successfully bring together teams that work in different ways and on multiple projects?

With more complexity in IT projects and a need to respond faster to changing markets, development teams have had to adapt the way they work, often utilising different methodologies on different projects in order to support the dynamic nature of their businesses. If the quality management solution does not support the way that they work, you will encourage maverick teams working outside of the 'Alliance'. Make sure that your AQM solution empowers your teams and allows the flexibility to aid and not impede them.

> "If gathering status information across all the project disciplines takes a week, the number of hours potentially burnt in the wrong activities becomes alarming. This could destroy your chances of keeping the project on-track, making your doomed project just another statistic."

The Black Hole No. 9: Lack of cross-project visibility

Gold Leader: *It's no good, I can't manoeuvre!*
Gold Five: *Stay on target.*
Gold Leader: *We're too close!*
Gold Five: *Stay on target!*

Staying on target is the ultimate goal, but don't be too focused on the task at hand and forget the wider picture. You need complete visibility into every aspect of the project at any given time but don't just look at this one project, managers should be able to look at staff resources across multiple projects, if team members are swamped, tasks can be re-assigned elsewhere.

A single point of reference is needed for informed decision making when sending your troops in to battle. You need complete visibility of the individual skirmishes that are going on, so that you can re-assign your forces where they are needed most. Milestones should be created to mark checkpoints and ensure that projects are running to schedule.

The Black Hole No. 10: Wasting knowledge and time on unnecessary re-work

Yoda: *Do not underestimate the powers of the Emperor or suffer your father's fate you will… Pass on what you have learnt, Luke.*

We've already established the importance of organisation and communication. But without centrally storing all the information pertaining to a project, the exposure to staff departures becomes significant. Your AQM system needs to be able to capture the individual's knowledge and project assets, so that bringing new people into the team is a smooth process. Without such an AQM system, no-one will know whether the spreadsheets are up to date. Emails become the only way to track interaction with development and no-one outside the team knows where to find anything - time is wasted re-learning all of this.

By centrally storing everything, you will also benefit from the re-usability of many aspects of the test plans or requirements that are similar from project to project. For example one user at a customer of ours manages the whole requirements process for their handheld mobile devices.

There are numerous requirements and test processes that are the same or similar in each and every product. For example, the requirements for the exact decibel levels of a beeper - mundane stuff that is repeated each time, from project to project, components the company has built a million times already. Re-using these assets, rather than re-visiting them again, means that he can re-invest his time focussing on innovation; creating requirements for new ground-breaking features that will differentiate the company from its competition and allow them to bring-to-market products that can make a real difference to their customers and their employees.

> **"** Application Quality Management is not some mysterious Jedi art – most of this is just common sense. You already know what is required in application delivery, you just need to 'use the Force' and remember these black holes when selecting technology to assist you in achieving your destiny. **"**

Conclusion

Yoda: *No More Training do you require. Already know you, that which you need.*

In this paper, we have looked at ten galactic black holes that projects can get sucked into, turning them off-course. Application Quality Management is not some mysterious Jedi art – most of this is just common sense. You already know what is required in application delivery, you just need to 'use the Force' and remember these black holes when selecting technology to assist you in achieving your destiny.

'Size matters not' says Yoda, but what's important is effective project planning and organisation, addressing complexity and empowering different working practices, ensuring good collaboration and communication and maintaining control and visibility throughout. Quality cannot be simply bolted on at the end of a development. It must be embraced from the start and be part of the entire development ethos and infrastructure.

Unfortunately current market-dominating products do not meet these fundamental requirements and only support and reinforce the approach of test management in a silo. Don't become one of the negative statistics in the CHAOS report. In order to deliver a successful solution that meets all the demands of the business, we need to a take a holistic view of quality in the application delivery process.

<div align="center">

In the words of Yoda:

'Mind what you have learnt.

Save you it can'.

</div>

About Original Software

With a world class record of innovation, Original Software offers a solution focused completely on the goal of effective quality management. By embracing the full spectrum of Application Quality Management across a wide range of applications and environments, the company partners with customers and helps to make quality a business imperative. The solution encompasses a quality management platform, manual testing, full test automation and test data management, all delivered with the control of business risk, cost, time and resources in mind.

More than 400 organisations operating in over 30 countries use Original Software solutions. Current users range from major multi-nationals to small software development shops, encompassing a wide range of industries, sectors and sizes. We are proud of our partnerships with the likes of Coca-Cola, HSBC, Unilever, FedEx, Pfizer, DHL and many others.

Original Software

European Headquarters
Basingstoke, UK
solutions.uk@origsoft.com
www.origsoft.com

North American Headquarters
Chicago, USA
solutions.na@origsoft.com
www.origsoft.com