


Is it Time for Execs/Leaders to think differently about what QA teams do ? And produce ?

It is time for QABall...?

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Who is this Guy ?

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- ▶ VP for Shared Services at MedAssets
 - ▶ QA, QA automation
 - ▶ Performance /Load Testing
 - ▶ PMs, SCM, Tech docs, Instructional Designers etc..
- ▶ ~20 years of SW/Dev/QA experience in various positions...
- ▶ Pretty much a geek, but like to get out and talk to people once in a while..
- ▶ You can find me on LinkedIn or email me at maskono@outlook.com

Anti-view (instead of an overview)

- ▶ This will not solve all of your problems
- ▶ This is not a prescriptive solution, so this may not work for you
- ▶ This is not a how to implementation guide
- ▶ Benefits / Mileage will vary

- ▶ This is just one person's opinions / observations
- ▶ This could all be crazy talk, but seems to be working for me... ☺

Money Ball



- ▶ Bill Beane talks about "we need to replace" 112 RBI...
- ▶ Traditional scouts in the room.. Scouts - we want this guy, that guy.....
- ▶ Billy B... no we need 112 RBIs..
- ▶ Billy B... Because he gets on Base...
- ▶ HMMM... A new way of looking at things... QABall

What am I trying to present ?

- ▶ QABall – Attempt to Change / Modify the thinking of Exec/Leaders asking questions about QA activities and results (information, data, metrics...)
- ▶ The traditional questions Execs ask, are they outdated ?
 - ▶ How many test cases did you run ?
 - ▶ How many are automated ?
 - ▶ How many bugs did you find ?
 - ▶ Defect metrics / Trends ?
- ▶ Are these like asking "how many HRs" in Money Ball ?

What am I trying to present... ?

- ▶ If we need to communicate differently then..
- ▶ We need to effectively communicate what typically goes on in a QA organization
- ▶ Attempt to level set Leaders outside of QA about the difficulties faced by a typical QA organization
- ▶ Attempt to educate and have realistic expectations of a QA organization
- ▶ Then present some ideas on what alternative data points are out there..
- ▶ Hopefully some of this data helps you communicate up/down/sideways etc...

Why QABall ?

- ▶ Many of the leaders may have a Dev/Engineering based background,
- ▶ Very few have any true understanding of QA, or worse they think they understand QA
- ▶ They ask question like How many test cases are run or automated ? (why do you care.....?)
- ▶ Lets turn this around by getting leaders to focus on what is important by educating and presenting possible alternate data points.....
- ▶ Think differently ... Money Ball - "because he gets on base"
 - ▶ Not Batting Avg, or HRs
 - ▶ On base % = manufactured runs...
 - ▶ Instead ...Batting Avg with runners in scoring position

Communicating with Execs ?

- ▶ Who runs into this issue ? (when talking to execs after a release goes bad)
 - ▶ Why did "QA MISS THIS BUG" !!
 - ▶ How many test cases did you run ? How many are automated ?
 - ▶ Why wasn't there a test case for this?
 - ▶ This is so blatantly obvious how did you miss that ?
 - ▶ If we knew about this defect why did we release ?
 - ▶ I didn't understand what you meant by this defect.
 - ▶ Oh that's what you meant by that metric.
 - ▶ Why didn't you tell me not to release ?
 - ▶ Etc..... Etc....



Let us level set the
conversation...

Testing Modern Software is impossible !!

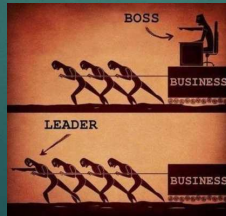


(OK maybe not impossible but hard)

- ▶ Software is getting more and more complex everyday
- ▶ As much as the PR machine for tooling companies say how easy it can be to test....
- ▶ The reality is that it is really, really hard and in some cases impossible to achieve the expected coverage
- ▶ Everyone keeps saying 100% coverage
 - ▶ “Test coverage is of little use as a numeric statement of how good your tests are” – Martin Fowler
- ▶ Why ?
 - ▶ Less and Less access to relevant production data (HIPAA, Audits)
 - ▶ More and More complex Production environments
 - ▶ Ridiculous number of paths/configurations
 - ▶ Oh and we have 2 days to regress everything...

No one wants to hear whining but ...

- ▶ Lets educate !!
- ▶ Execs don't want to hear about how hard something is to do...
- ▶ But what if they have 0% understanding to what QA really does on a daily basis...
- ▶ How effective can they be as leaders ?
- ▶ Maybe just maybe they could understand the challenges better and ask the "right" questions and even facilitate the changes needed...OMG what a concept ☺



Lets point out an obvious one...


- ▶ Simple Web site.. Multi select + Submit Button

- ▶ Easy right ? How long would you like to test that ? 10 min ?
- ▶ Maybe not.. that is a lot of combinations for coverage...

	Menu item 1	Menu Item 2	Menu Item 3	Menu Item 4	Combinations
Single	5	10	10	10	5000
Multi Select	25	100	100	100	25,000,000



CIO Magazine said you
guys need to Automate
that...



Automation can help...

- ▶ Yes, It can help... but it is NOT the solution to everything..
- ▶ Mathematical /Time impossibilities are going become apparent
- ▶ Example: 3 million possible tests to run.. On a simple page
 - ▶ On a Web page (slow to load)
 - ▶ On 10 different browser configs , so 30 million cases
 - ▶ At 5 seconds a test (very optimistic)
 - ▶ $30M \times 5 \text{ Seconds} = 4166 \text{ Hours of testing.. (173 days)}$
- ▶ Sort of like asking a travelling sales man to hit a quota that asks him to drive 2000 miles a day. (you can't without breaking the law)

Let me force you to test small...

- ▶ Example: DB performance issue example
 - ▶ Test report generation in a QA environment , works fine
 - ▶ But the QA env only has a small subset of production level data
 - ▶ No performance issue but production blows up since it has 30TB of data...
- ▶ How come QA "missed" this one...
 - ▶ This has more to do with environmental restrictions and limitations
 - ▶ Does the audience/decision makers "really" know what QA's effective limitations are ?
 - ▶ Has this been communicated ? Risk / Rewards calculated ?

We tested it on
a mini bike



Sure will work
Fine on a Moto GP
Right ?



Late to the party.... (aka why did QA find this so late)

- ▶ In the previous example...
 - ▶ Lets agree you came up with 100 "tests" to get reasonable coverage
 - ▶ Each one takes you say 6 min to test = 600 min or 10 hours
 - ▶ Which to a Project manager means we are releasing tomorrow
 - ▶ But the build didn't get to you until 6pm time to suck it up
- ▶ You are 8 hours into the testing and boom.... You find a killer one
- ▶ Crap...
 - ▶ Should we stop the release ? No this isn't so bad is it ?
 - ▶ Wait why did it take you 8 hours to find this obvious bug ? You stink..
 - ▶ Only happens on QA not on Dev boxes, wait what...
 - ▶ Screw it release it, it doesn't look bad...
 - ▶ Next day ... Why didn't QA find this...???

OK I got it... So this stuff is
hard...

But someone told me...

Isn't Testing like Polling ?

- ▶ Well sort of....
 - ▶ US election pollster...
 - ▶ 313 million Americans (2012)
 - ▶ 220 million eligible to vote
 - ▶ And yet, pollsters can poll 1000 people and get pretty accurate right ?
- ▶ QA/Testing work we are dealing routinely with
 - ▶ Possibilities in the Trillions if not more..
 - ▶ And Everyone is able to "cause a disaster"
 - ▶ The data to influence who to "poll" is a lot less firm than it is polling...
 - ▶ Techniques are valid but....



Toy Rocket
Does not translate into Saturn V



Fine....
So what am I supposed to
Ask ?

What Execs probably want is...



You want
to know % WIN!!

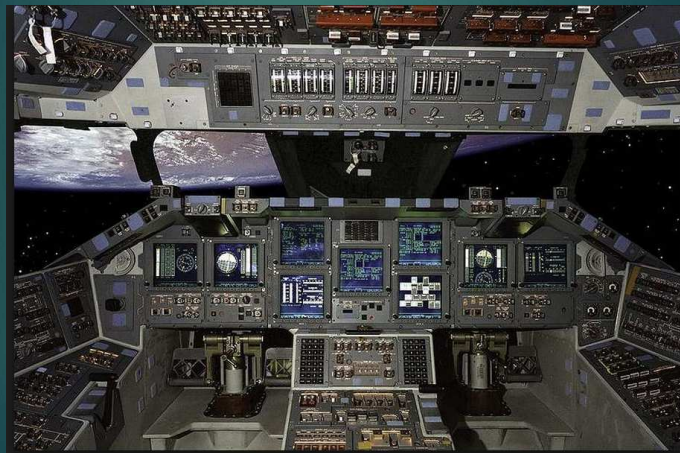
Unfortunately
Not that simple


But that is sort of like
driving with just this...




I would recommend a bit
more information...

I think we actually
sometimes provide this ?





OK got it....
What should I ask.. ?



Well, what do you want to know ?

- ▶ Do you want to know on base % how many runs ?
- ▶ Do you want to know batting avg with runners in scoring position ?
- ▶ Do you want to know how many RBIs on cold / warm days what ?
- ▶ \$ per hit ? P/E ratio, what ??

- ▶ You learned that QA probably can't cover everything...
 - ▶ What is important for you ?
 - ▶ Performance ? Core functions ?
 - ▶ What didn't QA test ?
 - ▶ What are the limitations ?
 - ▶ What are you afraid of ? (don't need data give me a gut feel)
 - ▶ Would more time help or not ?
 - ▶ Appropriate Trends/Metrics (if you are up for it...)

Typical things asked of me...

- ▶ % win indicator...
- ▶ % likely to fail in production...
- ▶ If I gave you 2 more days how many more critical defects will be found..
- ▶ The winning numbers for tomorrow's Mega Millions
- ▶ Numbers that I can't easily predict.. At least reliably
- ▶ This is not a card game..

- ▶ So essentially mostly impossible data points..
- ▶ I had to turn it around and present other things..

What has worked for me...

- ▶ Simple Data points followed up by complex appendix...

- ▶ Start with a simple Yes or NO (on a release vote)
- ▶ Gut check, what am I worried about...
- ▶ Go a bit deeper with feature level data (Check, Check + etc..)
- ▶ Schedule compression number
 - ▶ QA typically never gets the X days requested to test
 - ▶ Publish a compression number to indicate risk
 - ▶ We only had 10/15 days so 0.67 compression (risk is high)
 - ▶ If you had calculated you need a full tank of gas to make it to Houston, would you go with 2/3 ?
- ▶ Go a bit deeper with regression coverage maps
- ▶ NO Test cases run, or defect metrics etc...

So what does this look like..

- ▶ Yes , Go Release
- ▶ Areas for concern XYZ
 - ▶ Because we got it late and configuration nightmare to test
- ▶ Schedule Compression = 0.67 (we got crunched badly)
- ▶ Test Case point total = 892/1000 (we got close but not all the way)
- ▶ New feature Coverage Map 2 areas yellow rest 6 Green

- ▶ Appendix:
 - ▶ Test Cases run, defects trends, LOKI, Intermittent defect list etc etc...
 - ▶ Mitigations for all of the above when possible
 - ▶ Looks like a 1 page go/no go/ with a large appendix
 - ▶ Think ESPN Box score, but with full stats later down in the article

Questions....??