

QA Metrics

What Metrics to collect and why

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Definitions

- ISTQB –
- Measure – the number or category assigned to an attribute of an entity by making a measurement (ISO14598)
 - Or in English – some meaningful and useful data values
- Metric – a measurement scale and measure used for measurement (ISO14598)
 - Or in English – the summary of measures to make meaningful statistical data
- Trend – no listing in ISTQB – so an Andy definition –
 - Statistical information derived by analysis of Metrics over time
- We take some values, group them and roll them up into statistical data and establish some factual trends over time

Consideration of Dimensional Modelling

- Project Management
 - Development
 - Support
 - QA
 - Management
 - Manual testing
 - Automation
 - Onshore
 - Offshore
 - One project
 - Multiple projects
 - In this country
 - In Europe
 - Globally
 - And so on.....
- Cocomo (Constructive cost model)
 - Lines of code
 - Function Points
 -

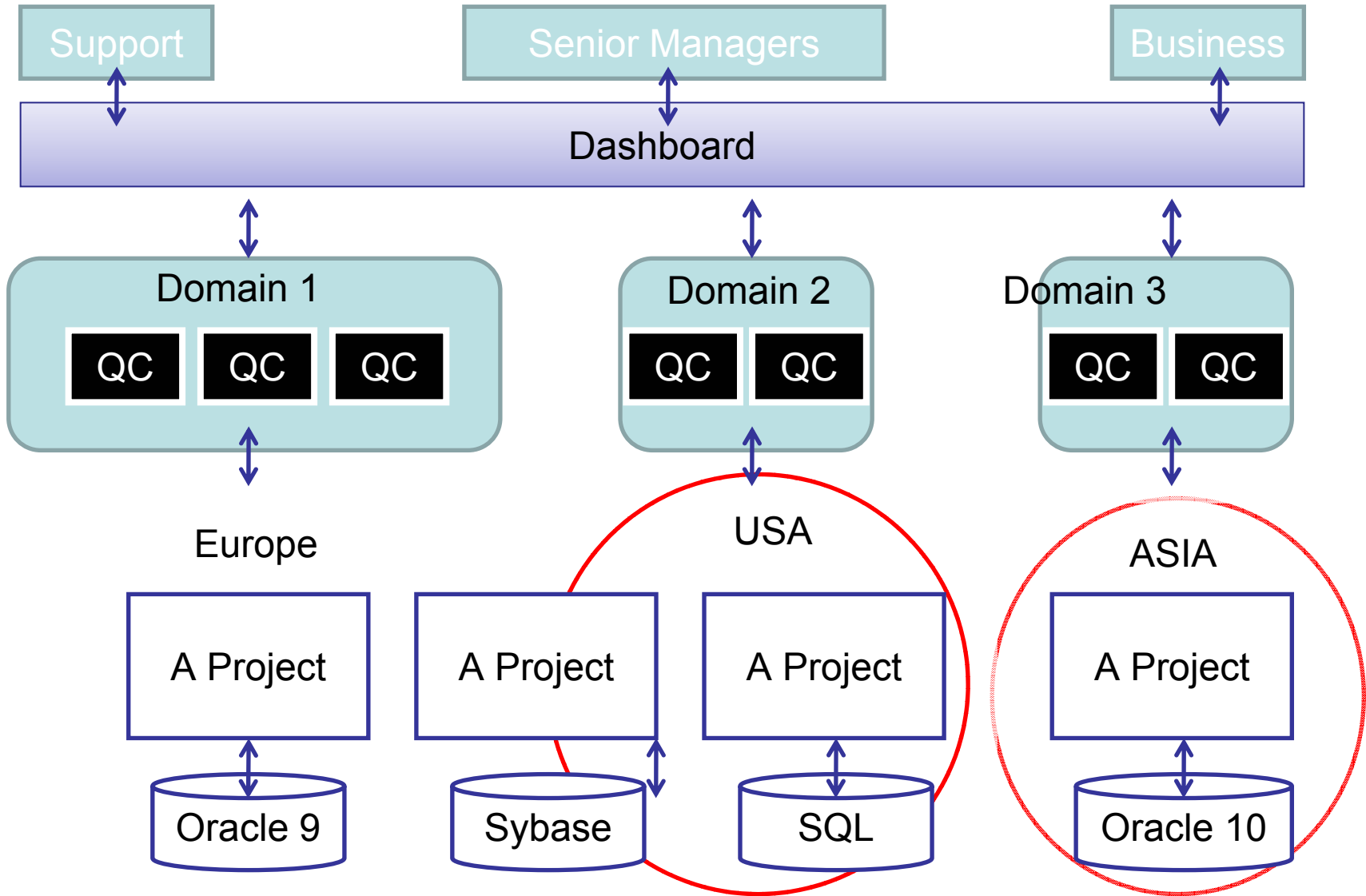
QA Reporting

- The key to effective Quality Assurance Services is managing expectations of the stakeholders.
- The key to process improvement is the ability to identify deficiencies, determine root causes, trends, develop solutions accordingly, establish action plans and follow through. The reporting of metrics is the vehicle that addresses these issues.
- There are many measures available to track and manage activities. Depending on the specific requirements of the engagement Quality, Productivity & Cost metrics can be produced.
- Metrics being captured are grouped under
 - Quality related,
 - Productivity related
 - Cost related

Concentrate and Focus on 3 life-cycle areas of activity

- **Demand and Release Management** - Ensures product features are prioritized and production changes are efficiently and successfully implemented. The DRM process improves the stability of the production environment after changes are introduced.
- **Quality Assurance** - Safeguards our production environment and ensures quality in our technology solutions as perceived by our business partners. The team is fully integrated into all phases of the SDLC and provides reliable, innovative, and cost-effective testing solutions to our clients.
- **Application Production Support** - Brings the support resources together to form a seamless professional production support function providing round-the-clock global accessibility of experts to promptly address production issues, meet expectations for time and priority, and work with all parties to avoid issues from occurring in the first place.

Producing Information



Metrics – Why do we collect?

- In a nutshell, these metrics & measures being proposed will enable projects to:
 - To track incidents / test issues / defects
 - To track test status and progress
 - To enable project tracking and status reporting
 - To help manage SDLC effectively
 - To track critical application readiness by business requirement coverage, functionality coverage, nature & number of open incidents and test status
 - To identify points of failure to enable quick and effective resolution
 - To identify root causes, density & trends of incidents to enable quick & effective resolution and / or process improvements
 - To hedge and manage project risks
 - To track resource usage by location and parties responsible
 - To track and measure efficiency, to enable changes and improvements
 - To track cost of resources
 - To help track overall project health and manage schedules
 - To track all of the above over a period of time and across projects / releases / phases / engagements to enable comparison, analysis and actions

Quality Metrics – Contents

The Quality matrices are categorised into logical sub groups of 1 to 9. The tables and graphs generated for the matrices in each sub group, are in the same spread sheet (embedded).

Quality Metrics 1

- [Quality Metrics 1- View of Open Incidents by Severity for a Project](#)
- [Quality Metrics 1- View of Open Incidents over a period of time for a Project](#)

Quality Metrics 2

- [Quality Metrics 2 - View of Incidents across SDLC phases for a Project](#)
- [Quality Metrics 2 - View of Incidents across several Projects](#)

Quality Metrics 3

- [Quality Metrics 3 - Incident Trend Analysis for Projects over a period of time](#)

Quality Metrics 4

- [Quality Metrics 4 - Incident Closure Efficiency for a Project](#)
- [Quality Metrics 4 - Incident Closure Efficiency across Projects](#)

Quality Metrics 5

- [Quality Metrics 5 - Incident Arrival Rate in SDLC phases for a Project](#)
- [Quality Metrics 5 - Incident Arrival Rate by Critical Application for a Project](#)
- [Quality Metrics 5 - Incident Arrival Rate by Business Requirements for a Project](#)
- [Quality Metrics 5 - Incident Arrival Rate across Projects](#)



Quality Metrics – Contents contd.

Quality Metrics 6

- [Quality Metrics 6 - View of Incident Density \(Functionality Wise\) for a Project](#)
- [Quality Metrics 6 - View of Incident Density \(Critical Application Wise\) for a Project](#)
- [Quality Metrics 6 - View of Incident Density \(Business Requirement Wise\) across Projects](#)
- [Quality Metrics 6 - Incident Severity Trends across Projects](#)

Quality Metrics 7

- [Quality Metrics 7- Root Cause Analysis of Incidents uncovered in SDLC phases for a Project](#)
- [Quality Metrics 7- Root Cause Analysis of Incidents across projects](#)

Quality Metrics 8

- [Quality Metrics 8 - View of Tests Planned for Execution for a Project](#)
- [Quality Metrics 8 - View of Tests Executed \(Actual\) for a Project](#)
- [Quality Metrics 8 - View of Tests Planned for Execution across Projects](#)
- [Quality Metrics 8 - View of Tests Executed \(Actual\) across Projects](#)
- [Quality Metrics 8 - View of Tests Planned \(Location & Parties responsible\)](#)
- [Quality Metrics 8 - View of Tests Executed Actual \(Location & Parties responsible\)](#)
- [Quality Metrics 8 - View of Test Progress \(by Test Cases\) across Projects](#)

Quality Metrics 9

- [Quality Metrics 9 - View of Business Requirement Coverage by Functionality for a Project](#)
- [Quality Metrics 9 - View of Business Requirement Coverage by Critical Application for a Project](#)

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Productivity Metrics - Contents

The Productivity matrices are categorised into logical sub groups of 1 to 3. The tables and graphs generated for the matrices in each sub group, are in the same spread sheet (embedded).

Productivity Metrics 1

- [Productivity Metrics 1- View of Test Progress \(Daily\) for a Project](#)
- [Productivity Metrics 1- View of Test Progress \(Weekly\) for a Project](#)
- [Productivity Metrics 1- View of Test Progress across Projects](#)

Productivity Metrics 2

- [Productivity Metrics 2 - View of Schedule Slippage \(Phase wise\) for a Project](#)
- [Productivity Metrics 2 – View of Schedule Slippage \(No. of days\) for a Project](#)

Productivity & Cost Metrics 3

- [Productivity & Cost Metrics 3 – Planned Effort & Cost for a Project](#)
- [Productivity & Cost Metrics 3 - Actual Effort & Cost for a Project](#)



Productivity Metrics – Contents contd.

- [Productivity & Cost Metrics 3 - Planned Effort & Cost across Projects](#)
- [Productivity & Cost Metrics 3 - Actual Effort & Cost across Projects](#)
- [Productivity & Cost Metrics 3 - View of Project Costs \(Actual\) in different Cost Centres](#)
- [Productivity & Cost Metrics 3 - Yearly view of Actual and Planned Effort & Cost across Projects](#)
- [Productivity & Cost Metrics 3 - Planned Effort & Cost over a period of time](#)
- [Productivity & Cost Metrics 3 - Actual Effort & Cost over a period of time](#)
- [Productivity & Cost Metrics 3 - Cost \(Actual vs. Planned\) Project and Yearly Views consolidated](#)

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[Go to Cost Metrics](#)

[Go to Quality Metrics](#)

Cost Metrics - Contents

The Cost matrices are categorised into logical sub groups of 1 to 3. The tables and graphs generated for the matrices in each sub group (1, 2 & 3), are in the same spread sheets (embedded).

Cost Metrics 1

- [Cost Metrics 1 - View of Savings in Reusability of Test Cases](#)

Cost Metrics 2

- [Cost Metrics 2 - View of Cost of Resources \(Environments\)](#)

Cost Metrics 3

- [Cost Metrics 3 - View of Cost of Resources \(Man Power\) - Planned vs. Actual](#)
- [Cost Metrics 3 - View of Cost of Resources \(Man Power\) - Planned vs. Actual Contd.](#)
- [Cost Metrics 3 – View of Cost of Resources \(Man Power\) – Planned vs. Actual Contd.](#)
- [Cost Metrics 3 – View of Cost of Resources \(Man Power\) – Planned vs. Actual Contd.](#)

Confidentiality

Sincere apologies and hope you will be able to take away the key points, but all the slides between the last slide and the next, consists of confidential data and therefore cannot be provided electronically or hard copy.

Andy has provided phone numbers and an email address if you have any future questions and would be happy to provide pointers on how you can deliver your own metrics programme.



Business Statistics.

- Test management tools are great at presenting single project statistics, but not so good rolling up metrics into multi-project statistics;
- In most cases multiple tools and web apps are require to gain a rounded view
 - good views (usually) = assessed risk = informed decisions
- If we return to what we are trying to achieve
 - **Demand and Release Management** - Ensures product features are prioritized and production changes are efficiently and successfully implemented..
 - **Quality Assurance** - Safeguards our production environment and ensures quality in our technology solutions as perceived by our business partners. The team is fully integrated into all phases of the SDLC and provides reliable, innovative, and cost-effective testing solutions to our clients.
 - **Application Production Support** - Brings the support resources together to form a seamless professional production support function providing round-the-clock global accessibility of experts to promptly address production issues, meet expectations for time and priority, and work with all parties to avoid issues from occurring in the first place.



Things to think about

- Ask the boss what is important to him/her;
- Attempt to get a small number of metrics heading that you will need to publish;
- Work top down – although some of the ground level metrics are firmly established in the Testing World and these will need to be present as a standard;
- Be selective on the measures;
- Then be decisive and consistent – think about using tools to ‘encourage’ standard ways to collect the data – lock these tools (i.e. remove admin rights);
- Start small (but think big);
- Measure process rather than people;
- Sometimes better to have an ‘independent’ metrics person
- Don’t publish your data too early
- Don’t think you have to measure the same trends as other organisations – be consistent within your own and have a purpose for doing it
- Good luck..



Thank you

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