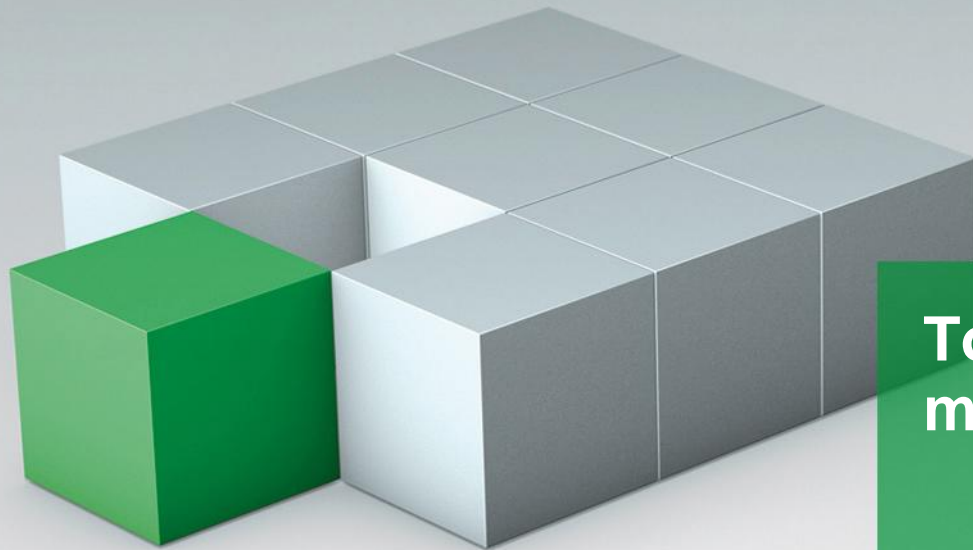


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# Top 10 Testing Metrics for a maturing organisation

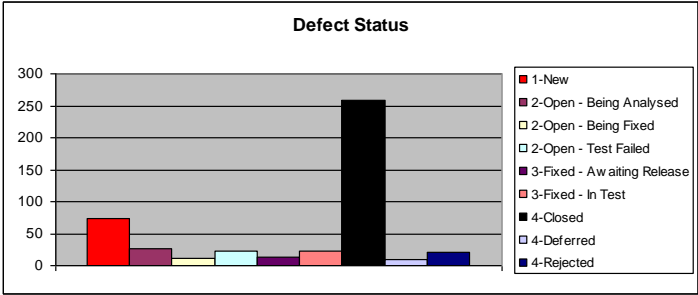
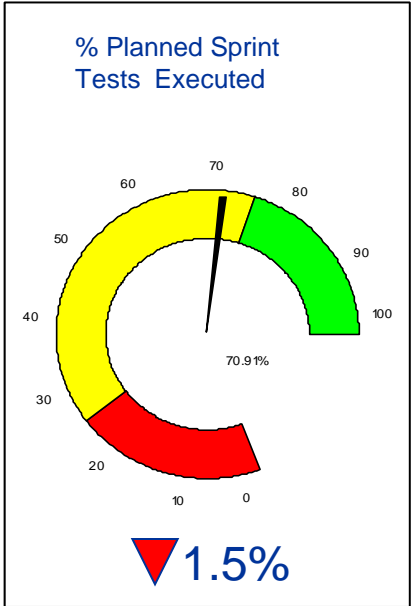
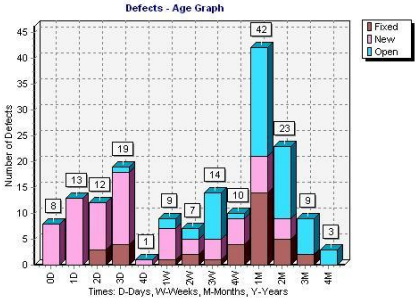
SAST  
November 19, 2009  
Ivan Ericsson

SQS Software Quality Systems Nordic AB

# Top 10 Key Metrics

How tracking key metrics can help to measure and improve the return on investment from your testing function.

- Relevant future trends for metrics
- Risks with Metrics
- The TOP 10 !



## What does the future hold for testing & metrics ?

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- **Quality will be taken for granted less** – testing will be taken more seriously – giving us the opportunity to present the metrics that we want to present rather than just what we are asked for.
  - **Bigger budget shares** and more responsibility are on their way, meaning that we have to justify the costs.
  - There is an **increasing understanding of the importance of testing** – so we are more likely to be asked for more advanced testing metrics.
  - Testing is more and more **viewed strategically** – so organisations are looking for return on investment on strategic testing initiatives.
  - Testing will have to operate in an **increasingly challenging environment** (quicker release schedules etc)
- 
- The **Top 10 metrics** are built to meet these challenges.
-

## Risks with metrics...

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- Metrics are only as Good/reliable as the data source
  - Metrics on their own are not important – the trends are important
  - Metrics can easily take all of your time
  - Metrics can confuse as easily as they can enlighten
  - Metrics can become academic and irrelevant
  - Metric origin can change over time (looks the same but isn't)
  - Metric importance can change over time
-



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# The TOP 10 !

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# Test Estimation Efficiency

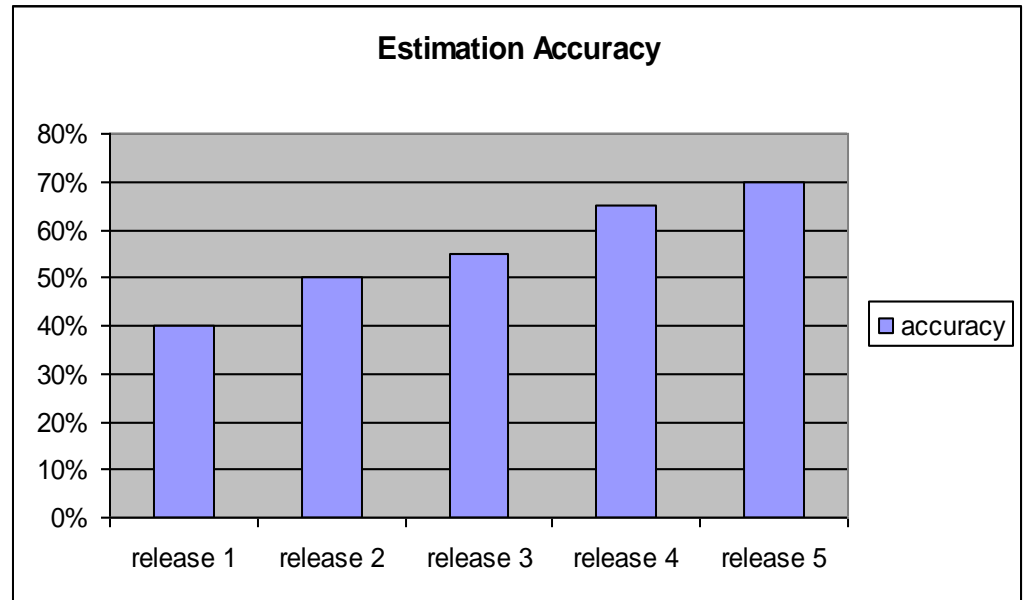
## Tracking the accuracy of your test estimation

### How to Measure....

*Compare initial plans with eventual actuals*

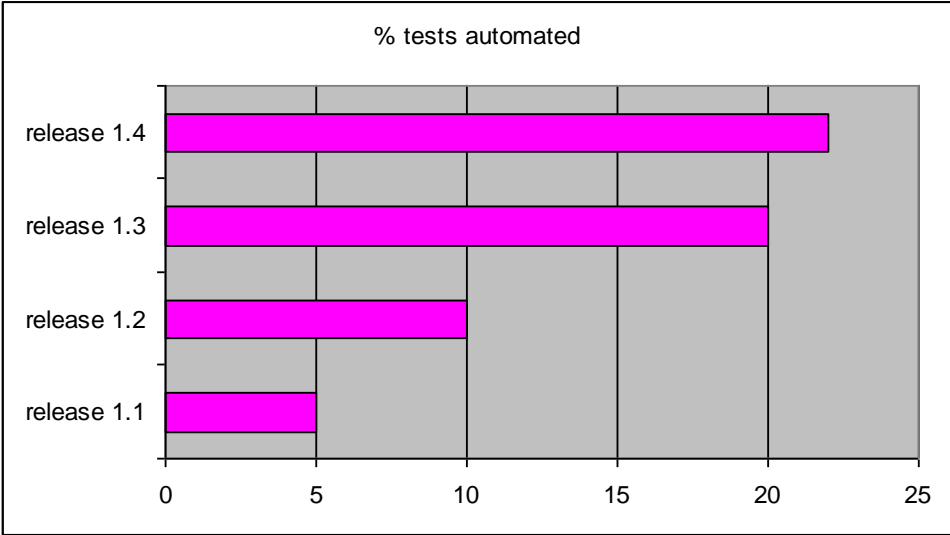
### Benefits....

- ✓ *Helps to protect release dates*
- ✓ *Helps to drive accurate test estimation in the future*
- ✓ *Provides confidence in test estimates*
- ✓ *Better management of dependencies*



# % Automated Tests

## Tracks the level of automation within test



### How to Measure....

*% of all tests run against a given release which are automated*

### Benefits....

- ✓ *Tracks increasing levels of test efficiency*
- ✓ *Provides confidence in test estimates*



# Environment suitability & availability

## Tracks environment availability and suitability

### How to Measure....

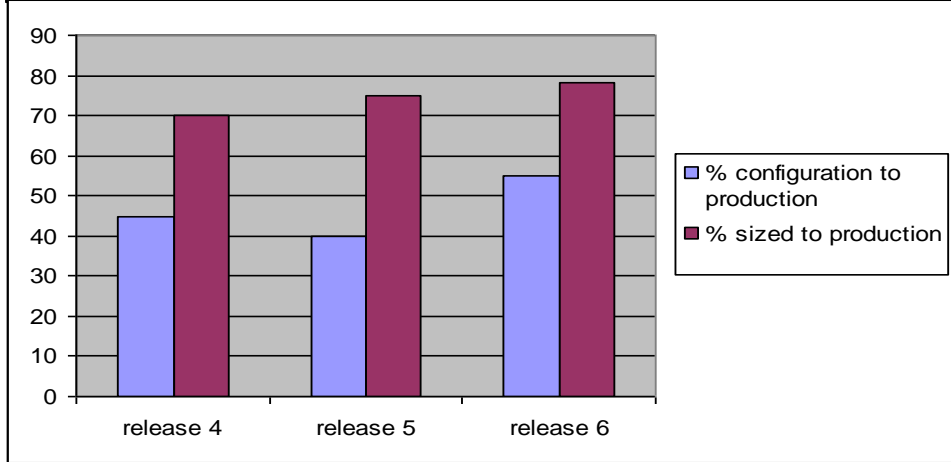
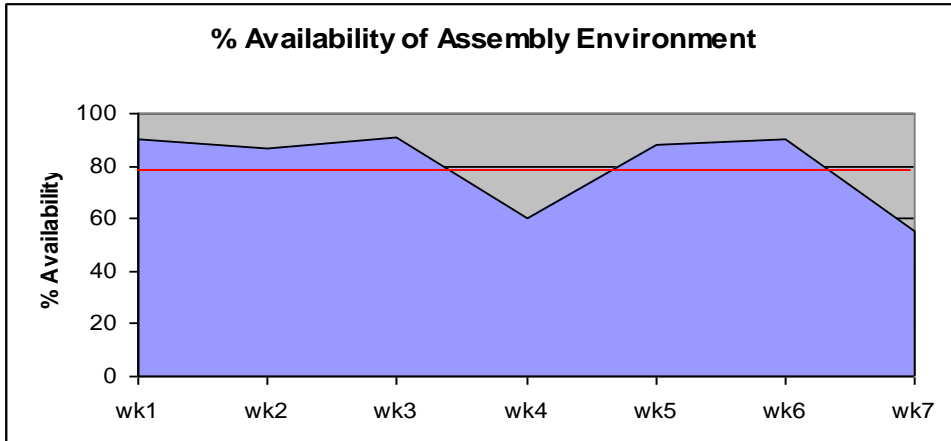
*% of project time for which environment is available*

*% of environment suitability*

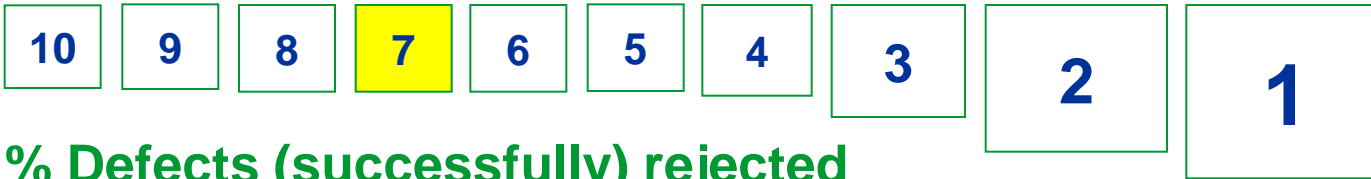
### Benefits....

✓ *Helps to track and explain delays in testing*

✓ *Helps to measure risk through environment downtime or lack of suitability*







## % Defects (successfully) rejected

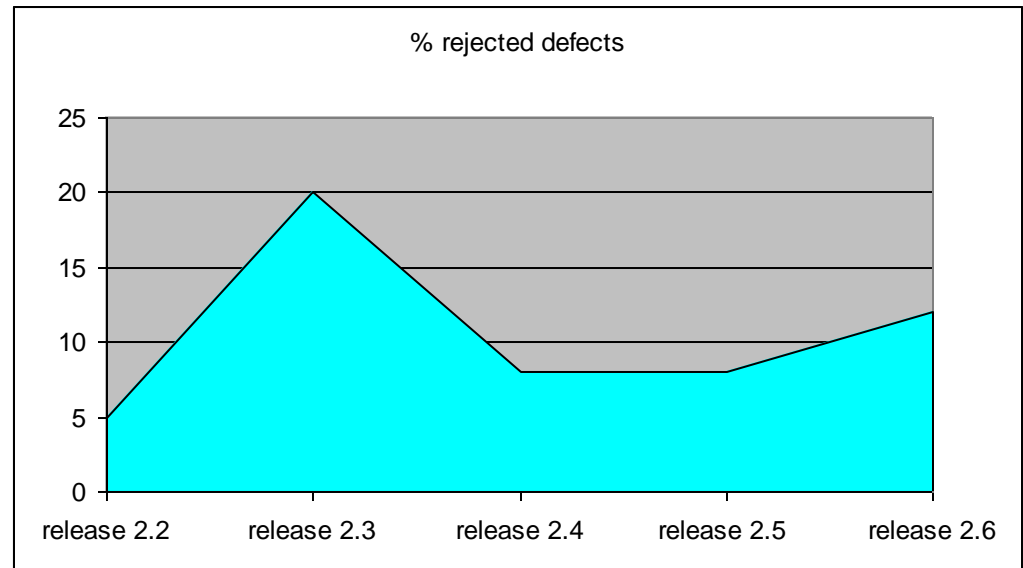
Tracks the quality of defect production & time/reputation wasted as a result

### How to Measure....

*% of all defects raised which are successfully rejected*

### Benefits....

- ✓ *Encourages good communication between developers and testers*
- ✓ *Gives developers confidence in defects raised*
- ✓ *Reduces time wasted through examining non defects*





# Test Coverage

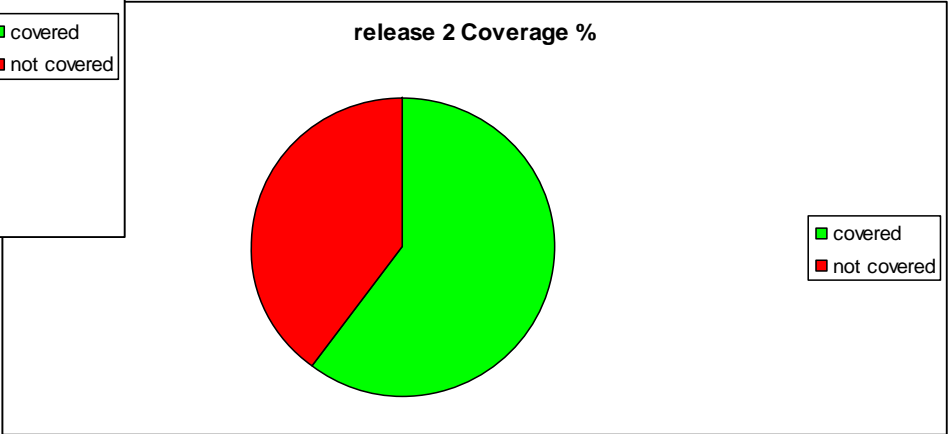
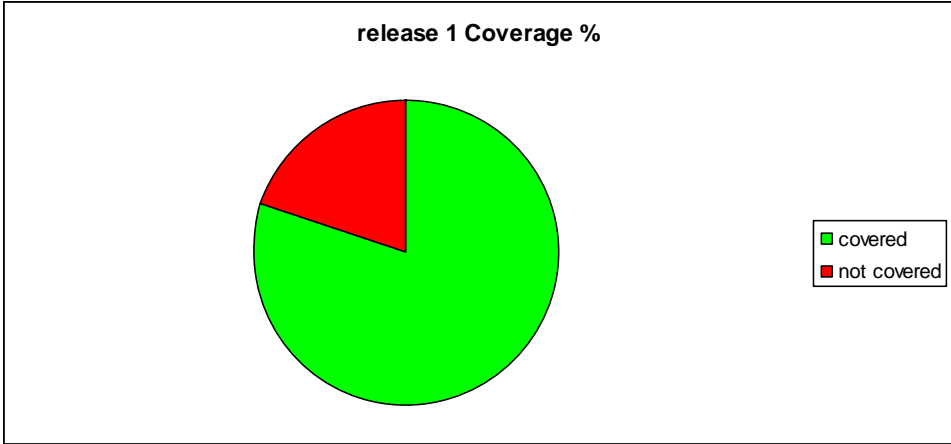
## Tracks application or test condition coverage

### How to Measure....

*% of application areas, or of identified test conditions which are due to be / have been tested*

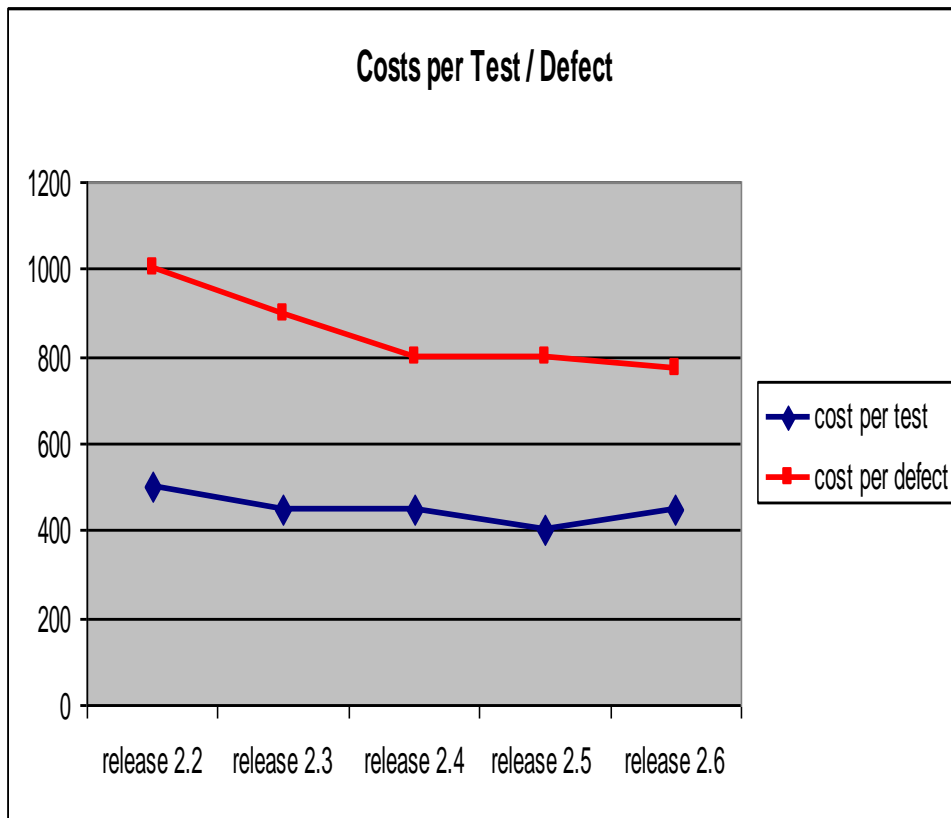
### Benefits....

- ✓ *Helps provide accurate progress data*
- ✓ *Advises on risk*
- ✓ *Clearly identifies what is not being tested*



# Cost per Test / Defect

## Cost per test / cost per defect



### How to Measure....

*Divide total number of tests executed by cost of test effort*

*Divide total number of defects found by cost of test effort*

### Benefits....

- ✓ Shows increasing / reducing cost effectiveness of testing
- ✓ Encourages testers to focus on tests which will find defects
- ✓ Discourages testing for testings sake

## Phase Leakage / Phase effectiveness

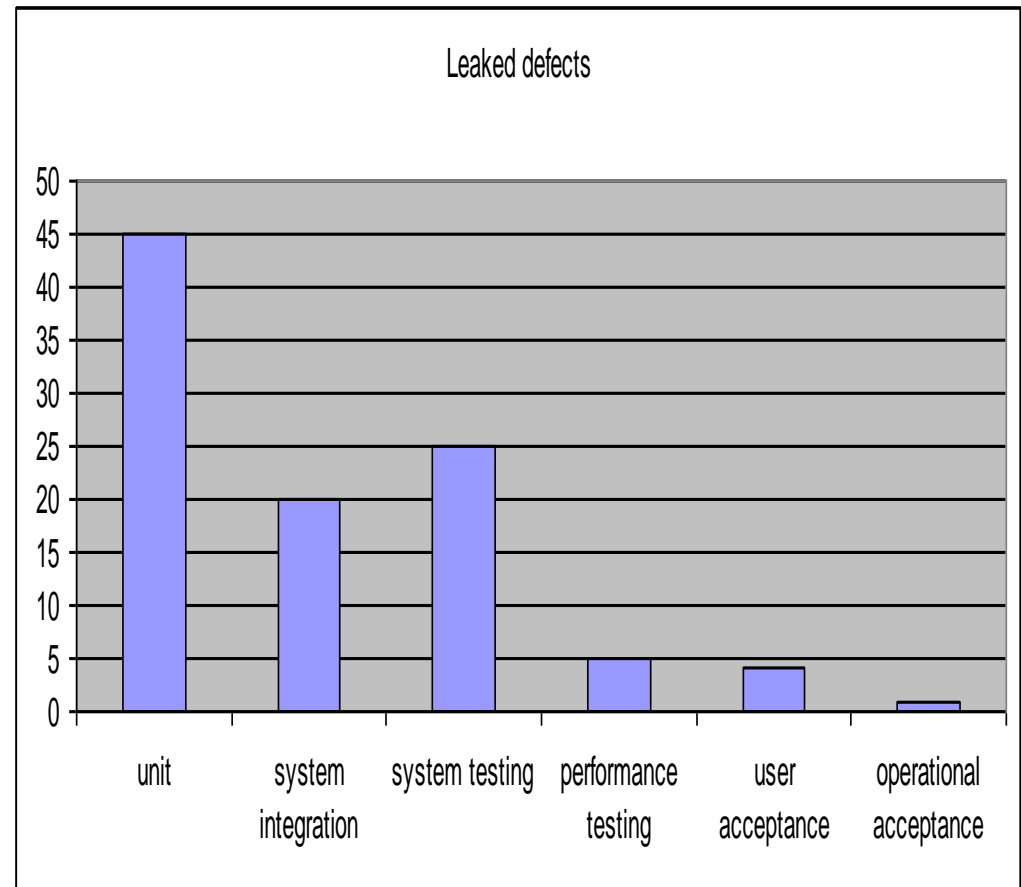
Tracks the number of defects 'leaking' from each phase of testing

### How to Measure....

*Number of defects which should have been found during an earlier phase of testing*

### Benefits....

- ✓ *Helps to increase application quality*
- ✓ *Creates a widespread sense of quality ownership*
- ✓ *Keeps regression suites very up to date and effective*

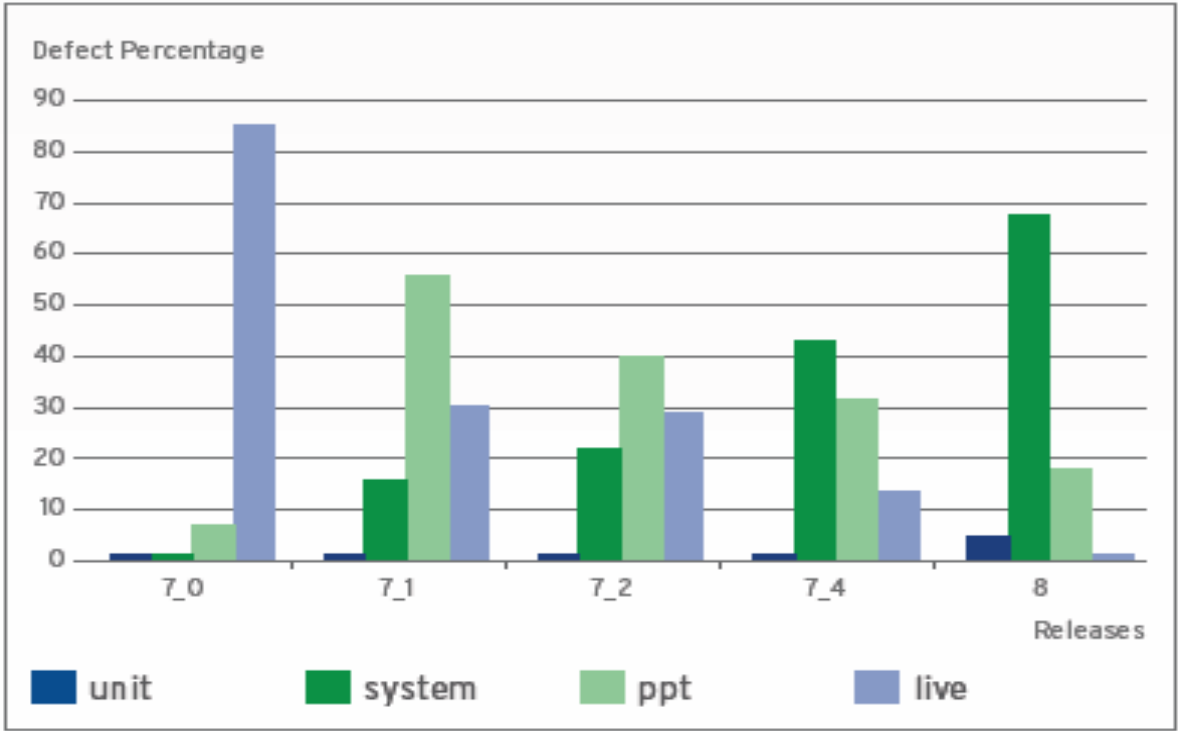


# Phase Identification

Tracks the phase in which defects are found

## How to Measure....

*Identify defects by the phase in which they are found*



## Benefits....

- ✓ *Helps to drive earlier defect discovery*
- ✓ *Reduces the cost of testing*
- ✓ *Justifies further investment in testing*
- ✓ *Provides confidence in the test function*

# Test Effectiveness

## The ultimate measure of testing value

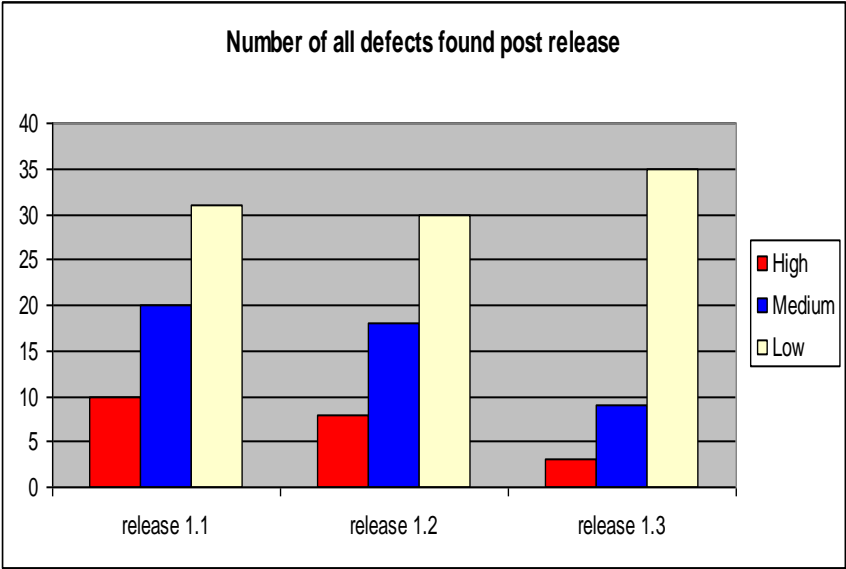
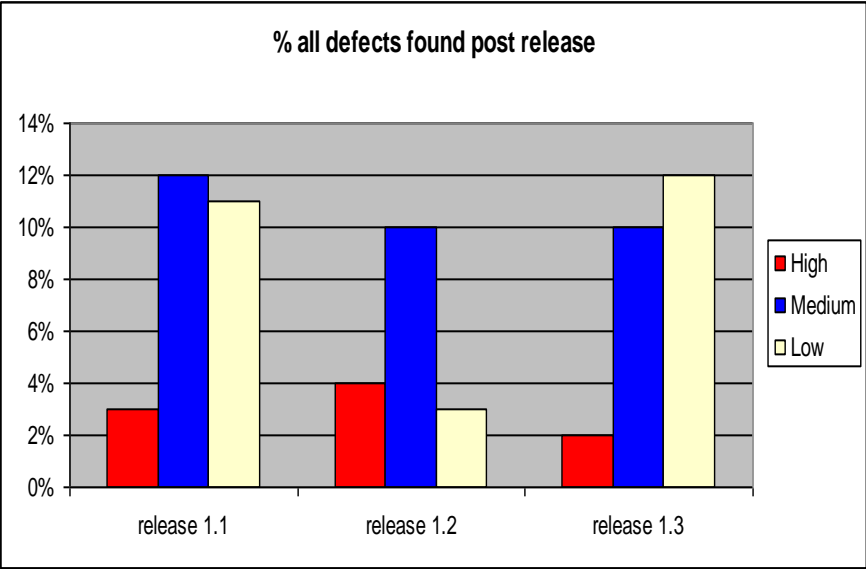
### How to Measure....

*% of all defects found against a release which are found in production*

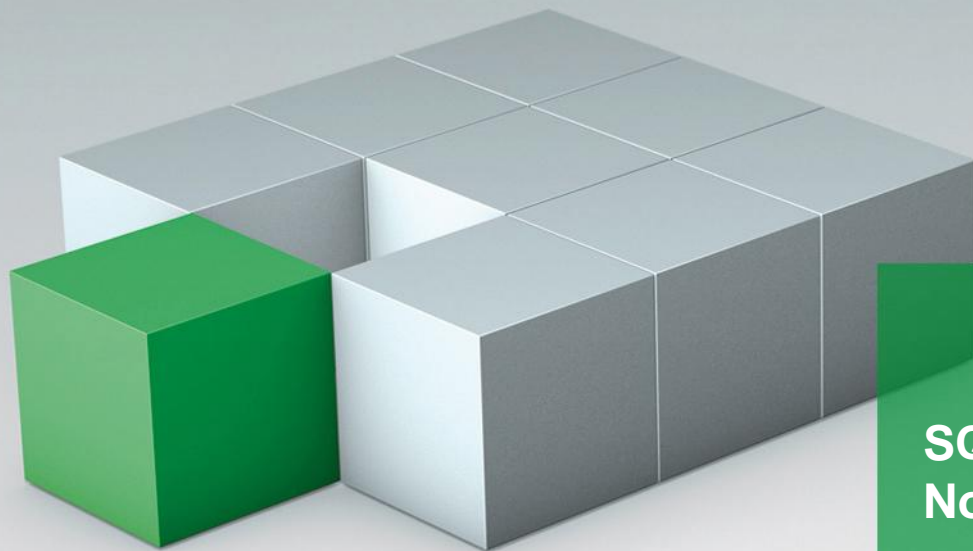
*Number of all defects found against a release in production*

### Benefits....

- ✓ *Demonstrates improving application quality*
- ✓ *Demonstrates more effective testing and quality management*
- ✓ *Can demonstrate return on investment*
- ✓ *Can link to improved reputation*
- ✓ *Can link to reduced support costs*



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Thank you for your attention