

# The Role of EQA in Diagnostic Laboratories

Scoring doesn't really matter

# Who is UK NEQAS?

- \* A group of separate organisations (consortium) registered as a charity in the UK and dedicated to the provision of external quality assessment in the UK and internationally
- \* UK NEQAS for Microbiology is hosted by Public Health England, Colindale
- \* In the UK and ROI, UK NEQAS (like all EQA providers) report to NQAAP regarding performance evaluation

# What is EQA?

- \* A means of assessing the efficiency of the quality assurance procedures by the introduction of specimens of known but undisclosed contents and assessing the results benchmarked against equivalent laboratories and methodologies

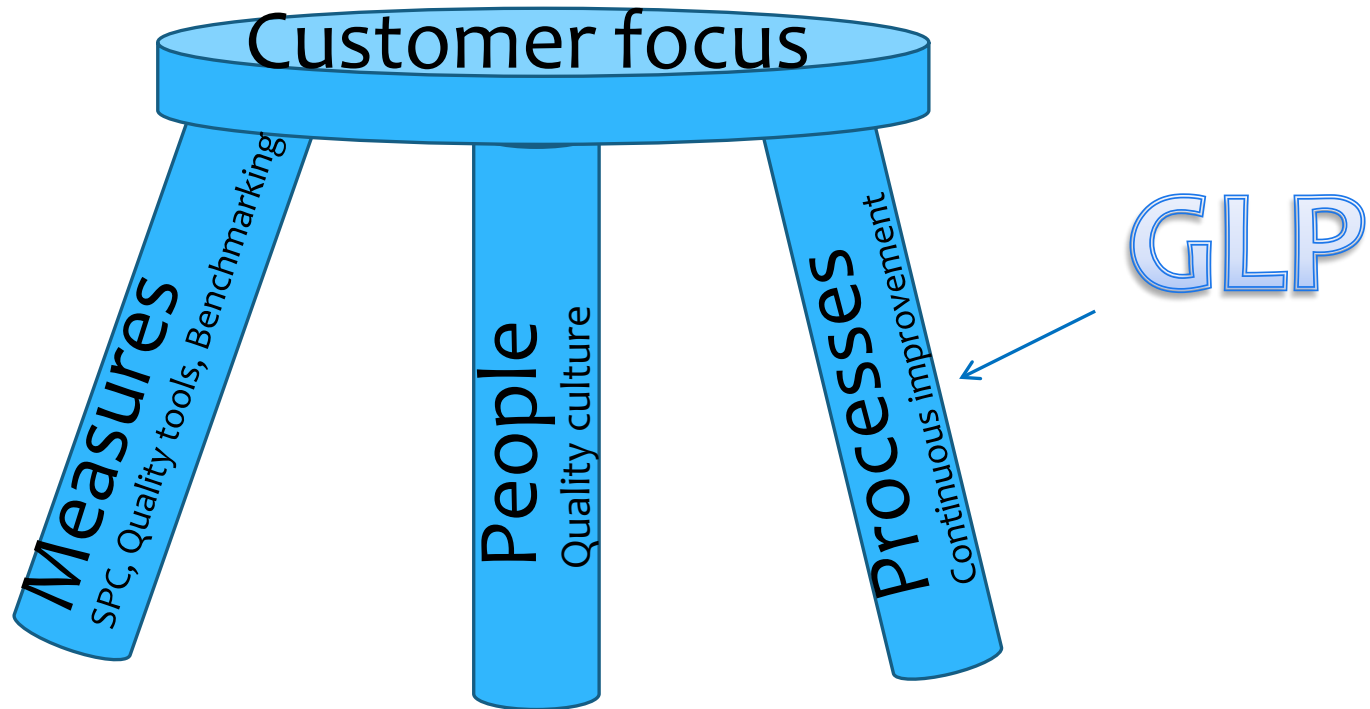
# Where does EQA fit into your quality systems?

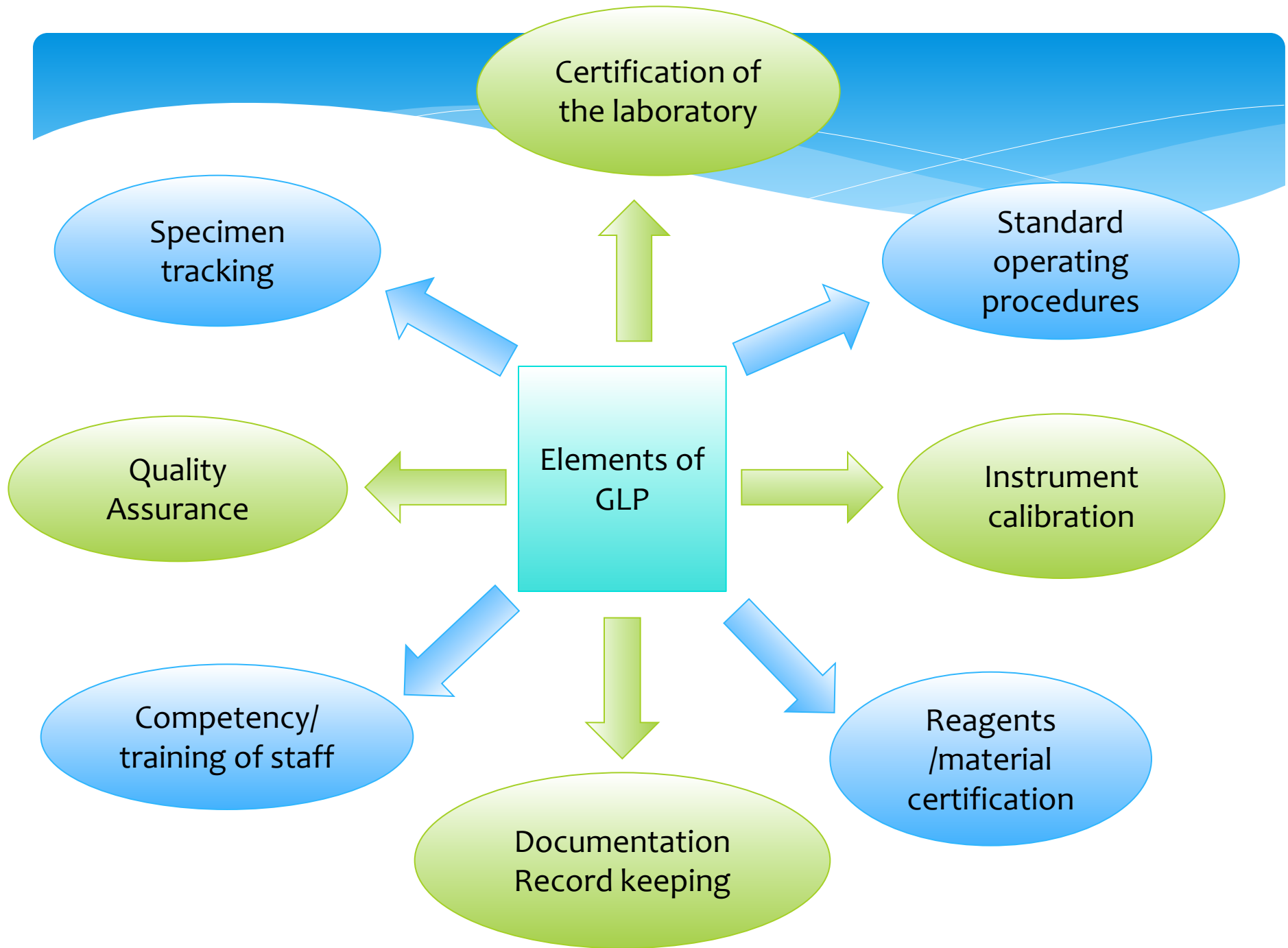
This is a very snug fit as EQA is a small element of all the activities that you undertake to achieve a quality outcome

BUT it is an efficient, external, unbiased and independent assessment of your processes at a single moment in time

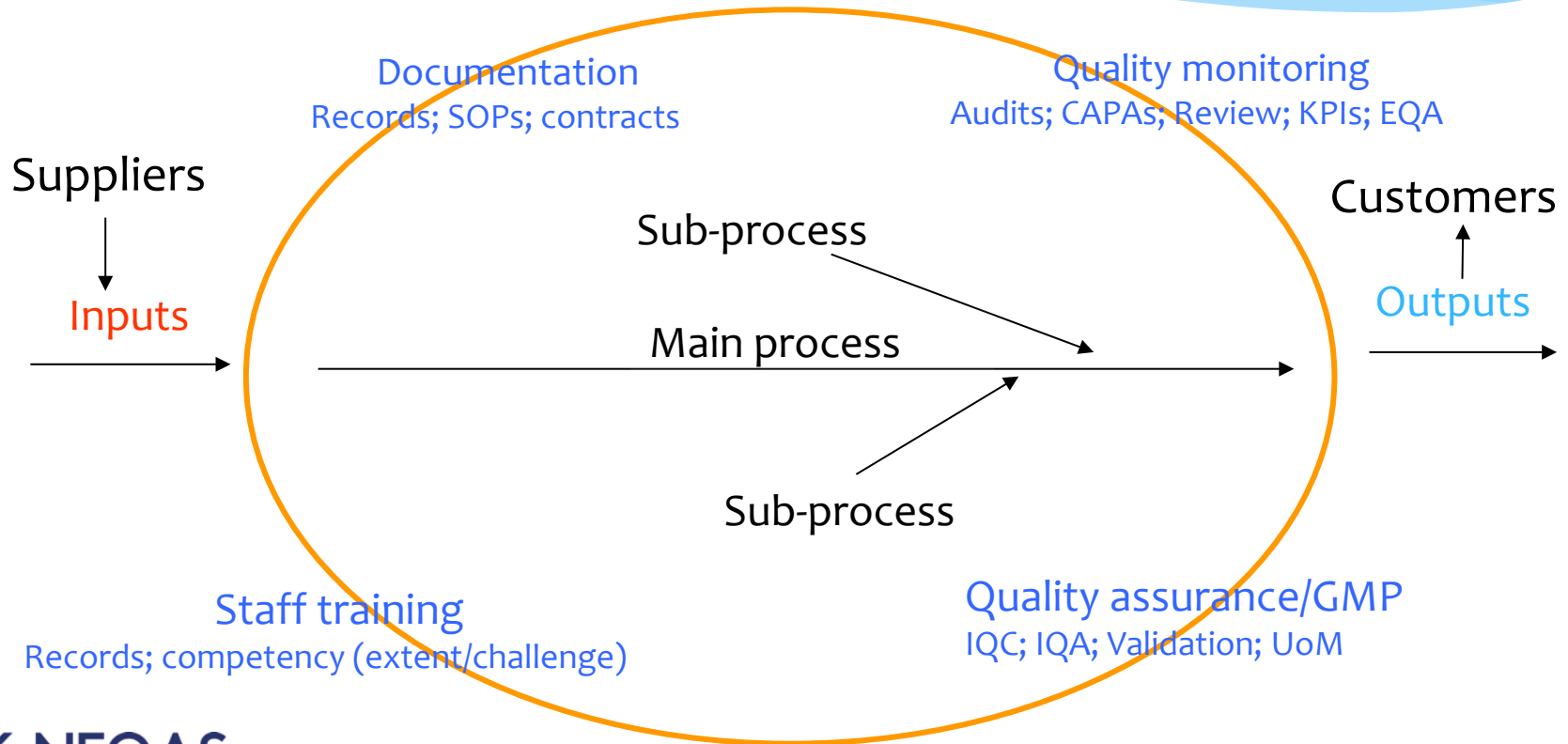
# TQM - overview

TQM puts customers at the centre of the requirements

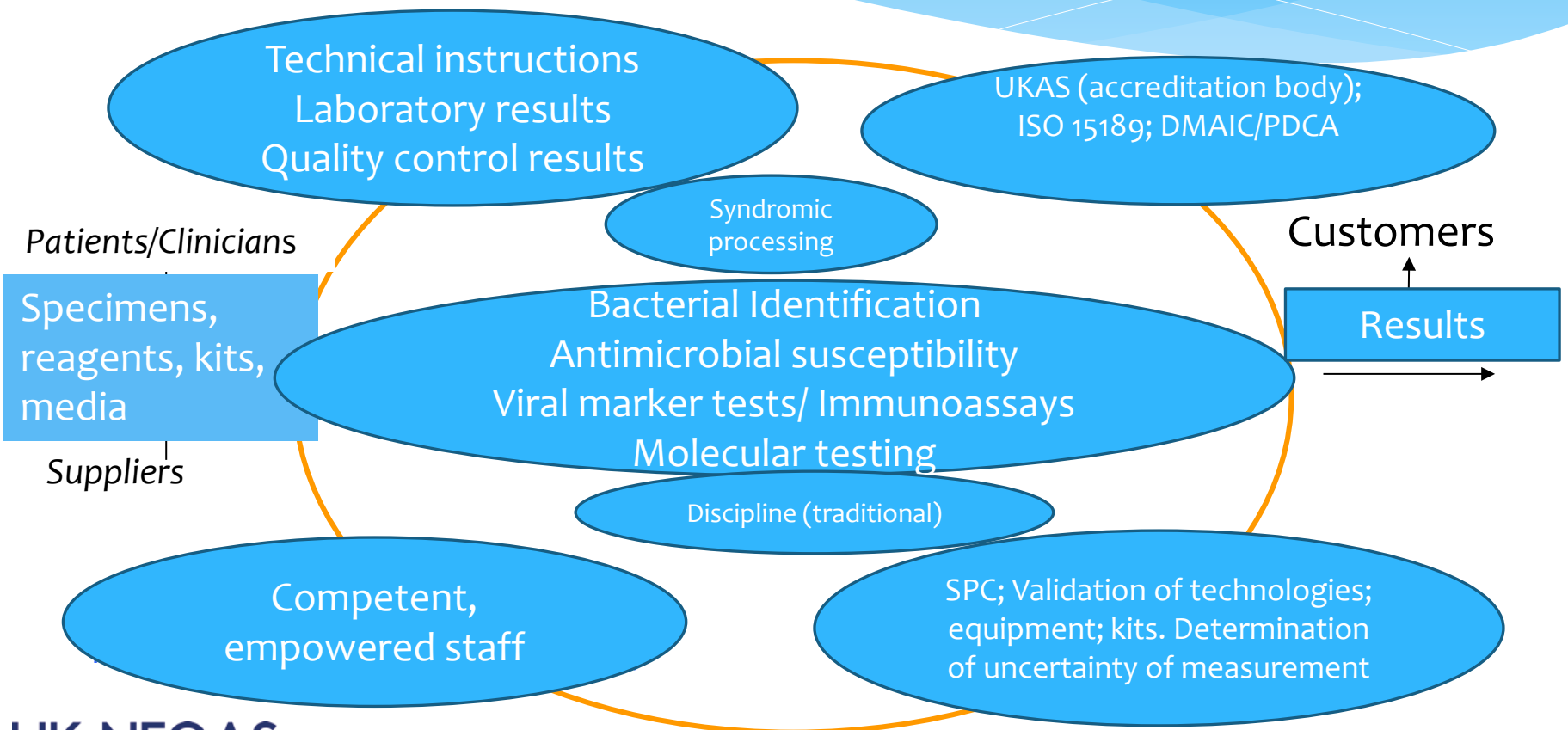




# Process based (general)



# Process based (Micro laboratory)



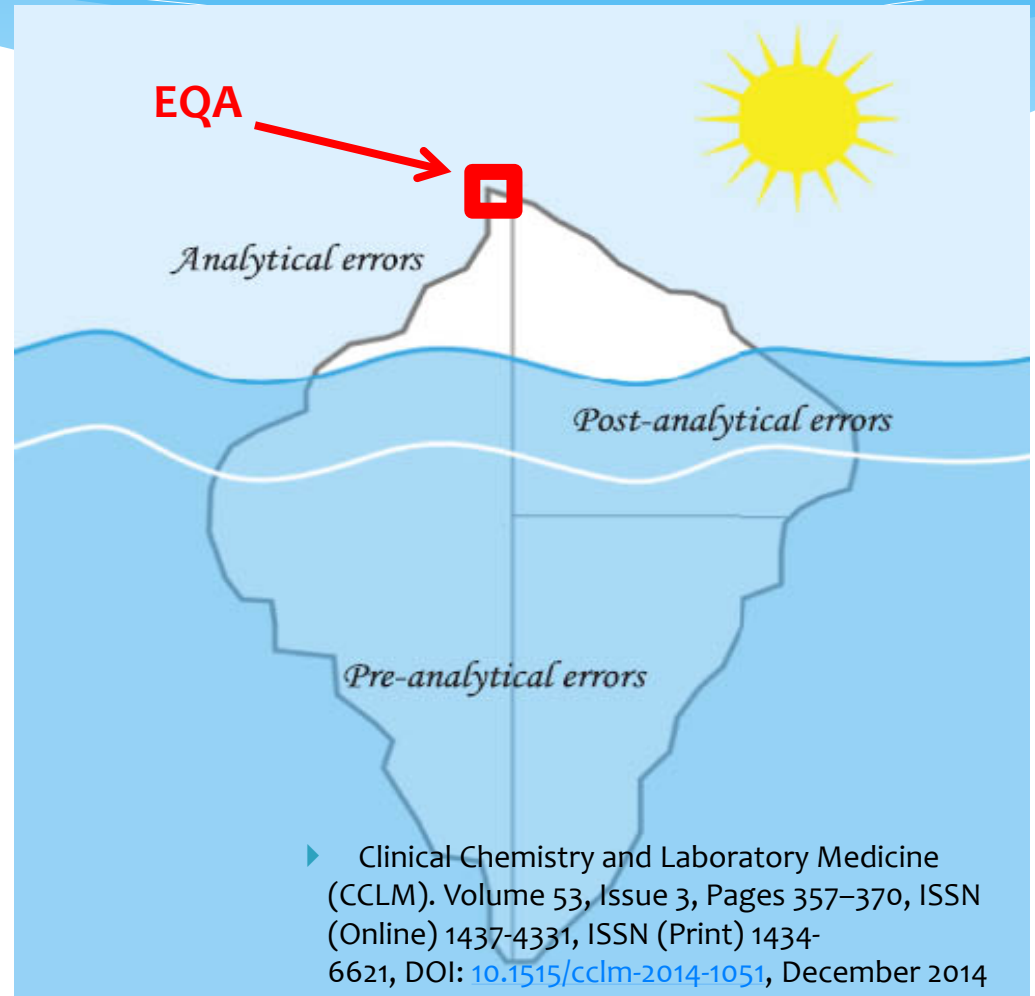




Process based (Final outcome)

Good clinical  
outcome  
Satisfied patient

# EQA is the tip of the iceberg



# What do EQA schemes do? (1)

- \* Detect analytical errors
  - \* Sample mix-up
  - \* Inappropriate testing done
  - \* Tests performed incorrectly
  - \* Equipment/automation failure
  - \* Misidentification of organisms
  - \* Reporting artefacts/contaminants
  - \* Poor laboratory technique
  - \* Reagent/kit issues
  - \* Processes that are not robust

# What do EQA schemes do? (2)

- \* Detect post-analytical errors
  - \* Transcription errors
  - \* Issues with turn-around times
  - \* Misinterpretation of results
  - \* Failure of results reaching the clinician

# What do EQA schemes do? (3)

- \* Promote education and encourage debate
  - \* Rubella IgG – who is immune/who is not - why is 10 the magic number?
  - \* Force updates for automated equipment, e.g. Vitek, MaldiToF – only as good as the database
  - \* Manufacturer intervention
  - \* Provide information to evaluate issues that are of national, regional and global importance - antimicrobial susceptibility (in support of antibiotic stewardship)
  - \* Provide evidence of a commitment to quality
  - \* Provide evidence of processes to identify and implement corrective actions when things go wrong



# What prevents EQA schemes from fulfilling their role

- \* Having a dedicated bench for carrying out EQA/QC samples – these should be part of the routine work
- \* Having dedicated staff carrying out EQA samples and not just random chance as to who would test on any one day
- \* Treating the sample differently from the equivalent clinical sample, e.g. several tests, different algorithms, extra/confirmatory testing
- \* Not reading your report carefully (even if you have a full score) and following up on EQA failures as you would any other non-conformance

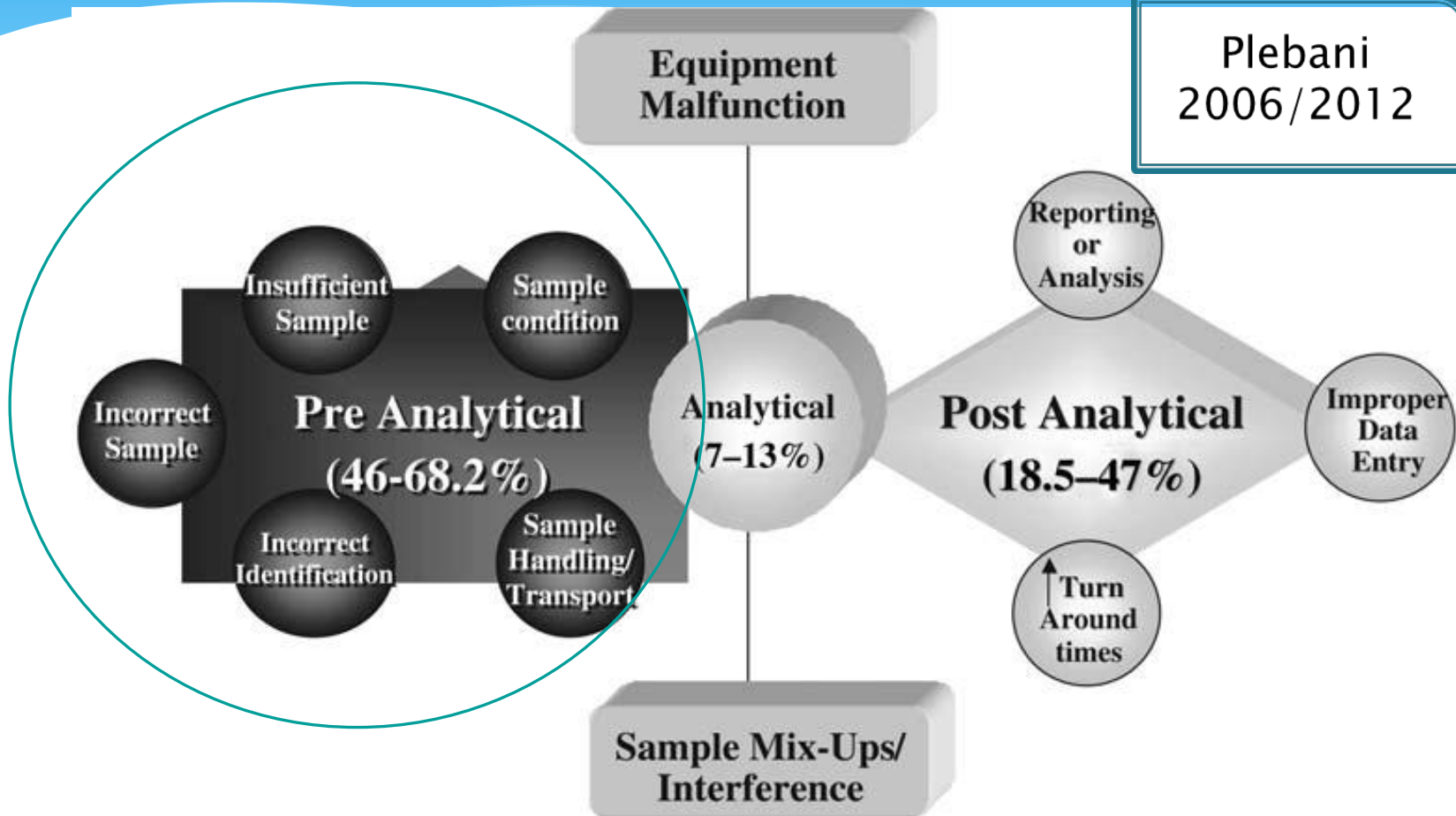
# What do EQA schemes not do?

- \* Validate a new kit or methodology
- \* Provide samples for calculation of uncertainty of measurement
- \* Prove your laboratory is perfect
- \* Provide the most important mechanism for quality assurance - tip of the iceberg
- \* Act as in-house QC samples



# In what area does traditional EQA not help? YET

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2006/2012





# The future

- \* Virtual EQA – this will help cover the whole iceberg but not for all disciplines and not for all processes

- \* UK NEQAS PREPQ

E.g. one of the most important skills for a haematologist or a parasitologist is to achieve a perfect stain of a blood film – virtual eqa will not assess this

# SUMMARY

- \* EQA services provide an independent assessment at one moment in time of your analytical and post analytical processes
- \* EQA provides an education stimulus and promotes debate on difficult issues
- \* EQA provides evidence of a commitment to quality