Traditional vs virtual PT/EQA

- **Convenors:**
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- **Objectives:**
  Consider the merits of the use of traditional vs virtual PT/EQA items
Questions
1. What is understood by virtual PT/EQA items:
   a. What type of virtual PT/EQA items exist?
   b. What sectors are they used in?
2. What are the strengths and weaknesses of virtual vs traditional PT/EQA items?
3. What are the challenges of developing virtual PT/EQA items?
4. What feedback has been received on the use of virtual PT/EQA items:
   a. From participants?
   b. From accreditation bodies?

1. What is understood by virtual PT/EQA items:
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   b. What sectors are they used in?

a. What type...
   - All part of analysis where images have to be evaluated
   - Interpretation of many types of results (incl. MS chromatograms a.o.)
   - An excel sheet to be judged on the result of a sampling scheme ("virtual sampling")
a. What type...(cont’d)
- Fiber analysis
- Metal residues in oil
- Fingerprints
- Where photographs (and videos) are part of the test
- Surface measurements ("soft gauge"), including acquisition and measurement
- Using Virtual schemes "in reverse" – i.e. sending back the picture of a sample

b. What sectors...
- Sectors where something visual has be evaluated
- Microbiology schemes
- Cytology
- Both pre-analytical and post-analytical
- Forensics (pictures from crime scene)
- Really no limitations…!
2. What are the strengths and weaknesses of virtual vs traditional PT/EQA items?

Strengths
- Useful for tests with rare or expensive samples
- Easier to distribute (no custom issues)
- Lower price (?? . see question 3)
- May be the only approach in some fields (fingerprints)
- Avoiding issues of poor stability of samples
- Good for educational purposes
- Better accessibility for clients

2. What are the strengths and weaknesses of virtual vs traditional PT/EQA items?

Strengths
- More clients can be served (internationally) (see though issues under 3 on regional differences)
- Same sample can be assessed by many people (no "sub-sampling needed)
- Quality of samples can be re-assessed if mistakes in preparation has occurred
- Reducing work for labs which have to participate in a number of PTs for the same diagnostic tests
2. What are the strengths and weaknesses... (cont’d)

Weaknesses

- Samples not very realistic (a virtual re-creation of reality)
- IT issues (but according to experience not seriously)
- Not covering an entire measurement process
- Not feasible for all types of samples
- Color quality can be an issue (crucial in some cases)

- Difficult to disguise as a PT sample (not to be treated special)
- Maybe powerful virtual images – but unrealistic in relation to real images seen in the labs
- Must be a complementary approach to real schemes
3. What are the challenges of developing virtual PT/EQA items?

- Need for better tools for balancing the costs (…at least initially, until tools are in place)
- Preparation time consuming
- Preparation requires special expertise
- Dealing with large image sizes
- Training of traditional PT providers to deal with VPT
- Lack of expertise for making good VPTs

3. What are the challenges ... (cont’d)

- Dealing with samples which may be treated special regionally because of differences in symptoms/pictures (e.g. various diseases)
- Possible outsourcing of parts of the preparation
- Difficult to meet special customer requirements
- Digitalizing images may be very hard in some cases (e.g. related to "slicing" 3D images)
- Regulation has no experience in the field (yet)
4. What feedback has been received on the use of virtual PT/EQA items:
   a. From participants?
   b. From accreditation bodies?

a. From participants?
   - A few complaints about poor samples
   - Participants not used to this (prefer real samples)
   - Positive feed-back
   - Good uptaken from clients who used to participate in traditional schemes (but the old ways still needed – due to technique)

b. From ABs
   - No issues from ABs (…yet)
   - Very few experiences
   - Good feed-back from other regulators and authorities
   - Opinion: Cannot replace real samples
General comments

- Participants generally happy with the new approach (based on the few schemes so far)
- Lot of opportunities still to be explored in the field
- Need for building up experience (based on the entrepreneurs in the field)
- VPTs can only be complementary to real PTs