



Quality Assurance

Ensuring that forensic work
is accurate and reliable

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What is “Quality?”

- An end state?
- A process?
- Or both?

ASCLD-LAB Defines:

- Quality Assurance
 - Those planned and systematic actions necessary to provide sufficient confidence that a laboratory's product or service will satisfy given requirements for quality.
- Quality Control
 - Internal activities or activities according to externally established standards used to monitor the quality of analytical data and to ensure that it satisfies specified criteria.
- Quality System
 - The organizational structure, responsibilities, procedures, processes, and resources for implementing quality management. Includes all activities which contribute to quality, directly or indirectly.

<http://www.ascl-d-lab.org/aslab022.html#Q>

Definitions, Cont.

- Quality Manager
 - An individual (however named) designated by top management who has the defined authority and obligation to ensure that the requirements of the quality system are implemented and maintained.
- Quality Manual
 - A document stating the quality policy and describing the various elements of the quality system and quality practices of an organization. It will also reference and note the location of additional material relating to laboratory's quality arrangement.

Definitions, Cont.

- Quality Audit
 - A management tool used to evaluate and confirm activities related to quality. Its primary purpose is to verify compliance with the operational requirements of the quality system.

Typical Quality Practices

- Quality Manual – states the organizations quality program, organization and lab-wide practices. Also sets for rules for SOP's and unit specific documentation
- Standard Operating Procedures – A directive listing the procedures to be followed in performing a particular laboratory examination or operation - the overall plan for analysis of a particular type of evidence, aka protocol. May include validation testing results.

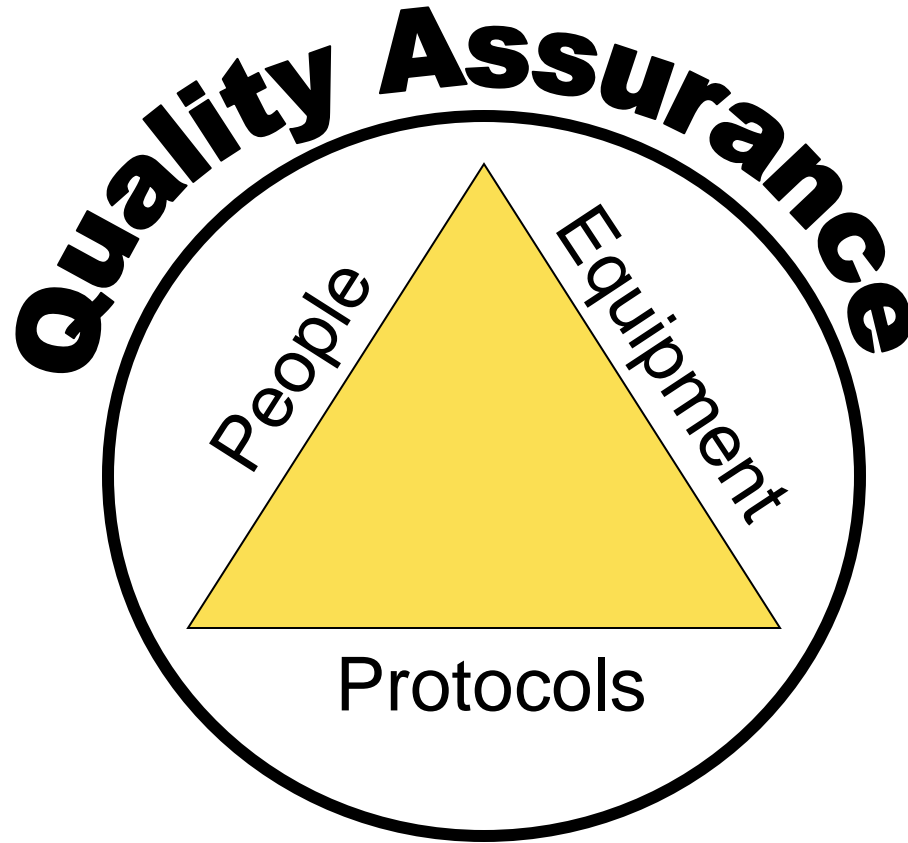
Typical Quality Practices, Cont.

- Peer Review – a review of a completed examination to determine that it meets technical standards. Test – can another examiner reproduce the result.
- Administrative Review – a review designed to ensure that policy and procedures have been followed and the report is administratively correct.

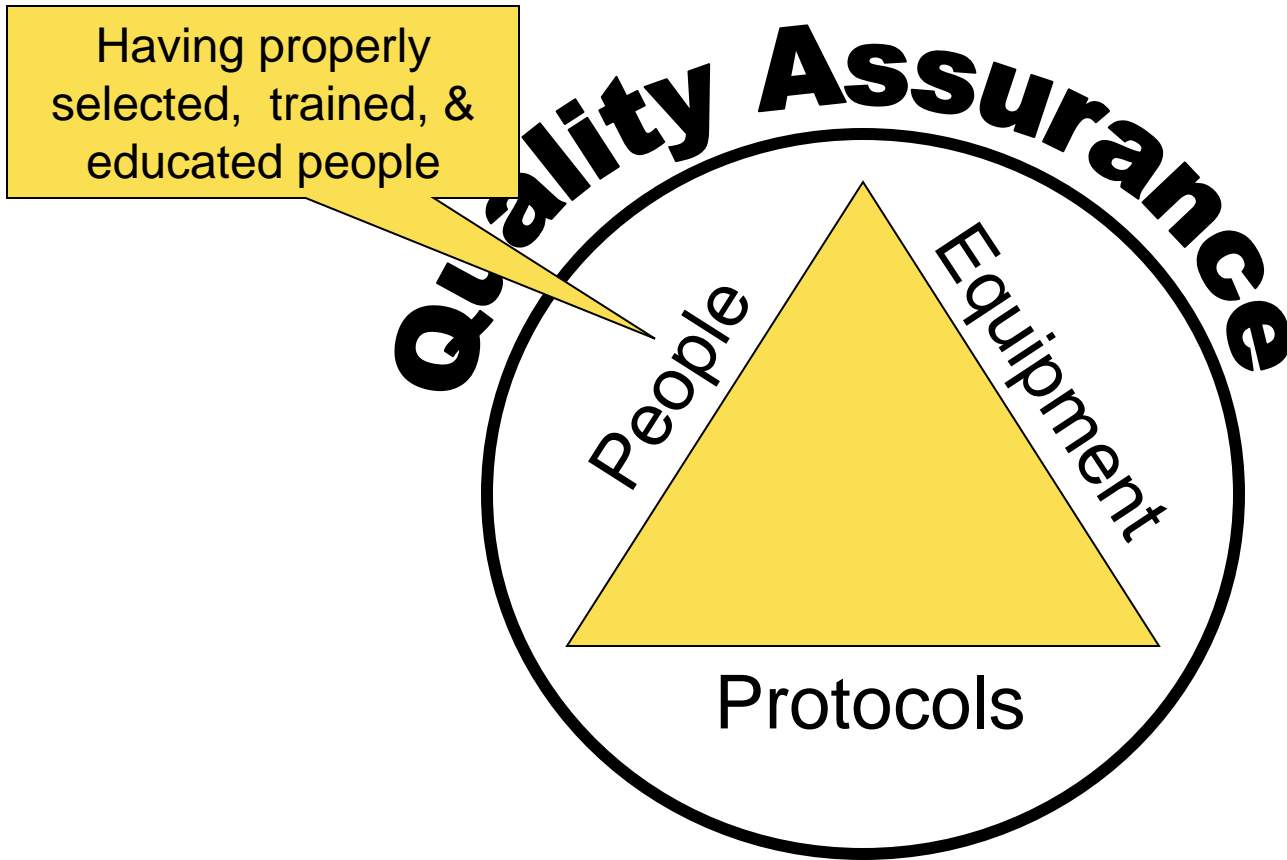
Typical Quality Practices, Cont.

- Competency Test – a test designed to establish an individual's initial ability to correctly and accurately perform a forensic task.
- Proficiency Test – a test designed to confirm that an individual continues to perform forensic duties competently.
- May be open, blind, internal or external

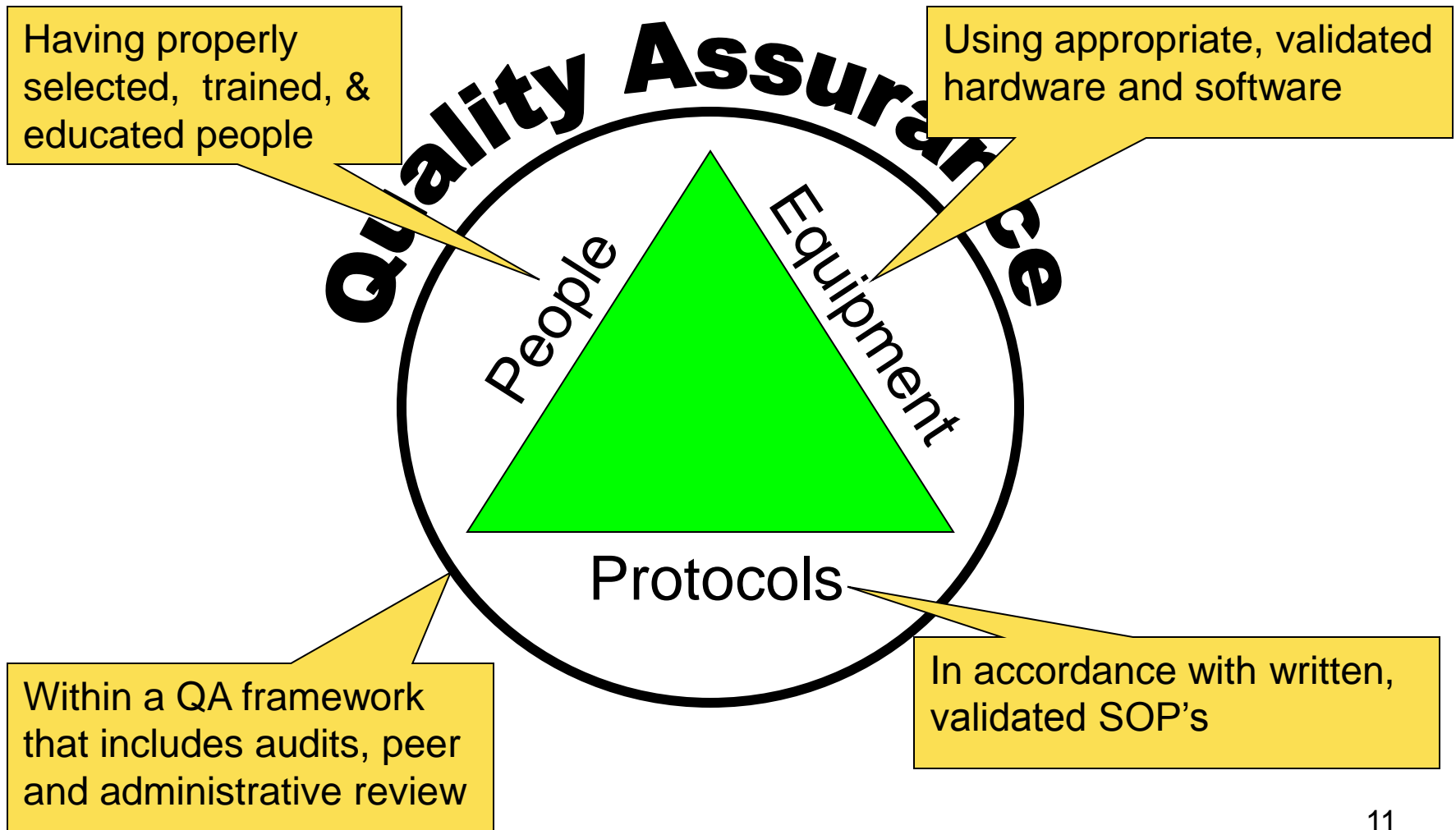
Quality Assurance Model



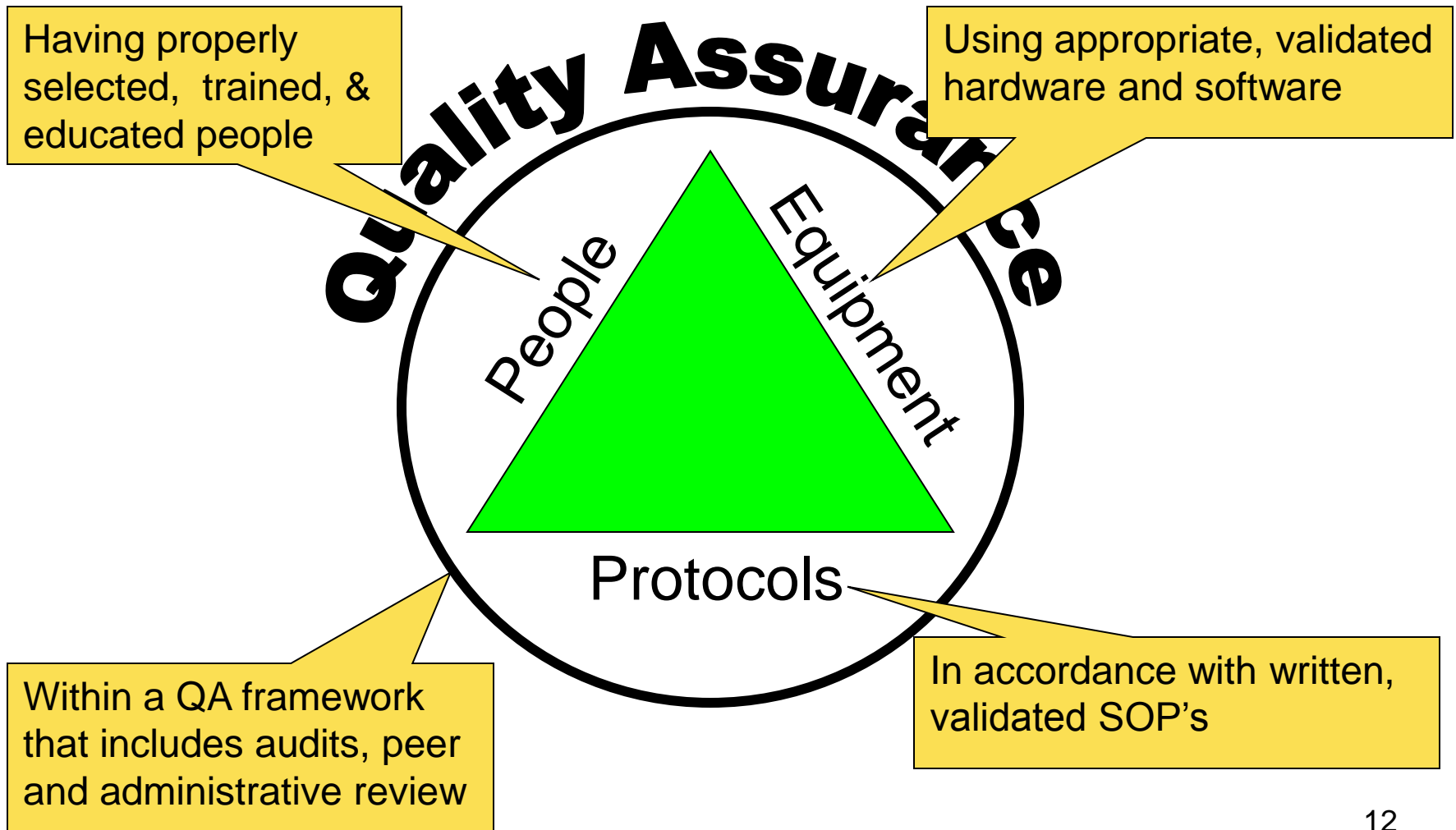
Quality Assurance Model



Quality Assurance Model



Yields a Quality Product



Protocols, aka SOP's

- Standard Operating Procedures
 - Are used to insure a quality process
 - Accepted practice
 - Repeatability
 - Train new examiners
- Are an ASCLD/ISO requirement
- Having them is common sense
- Not having them will create problems
- Every practitioner/organization should have SOP's! No exceptions!

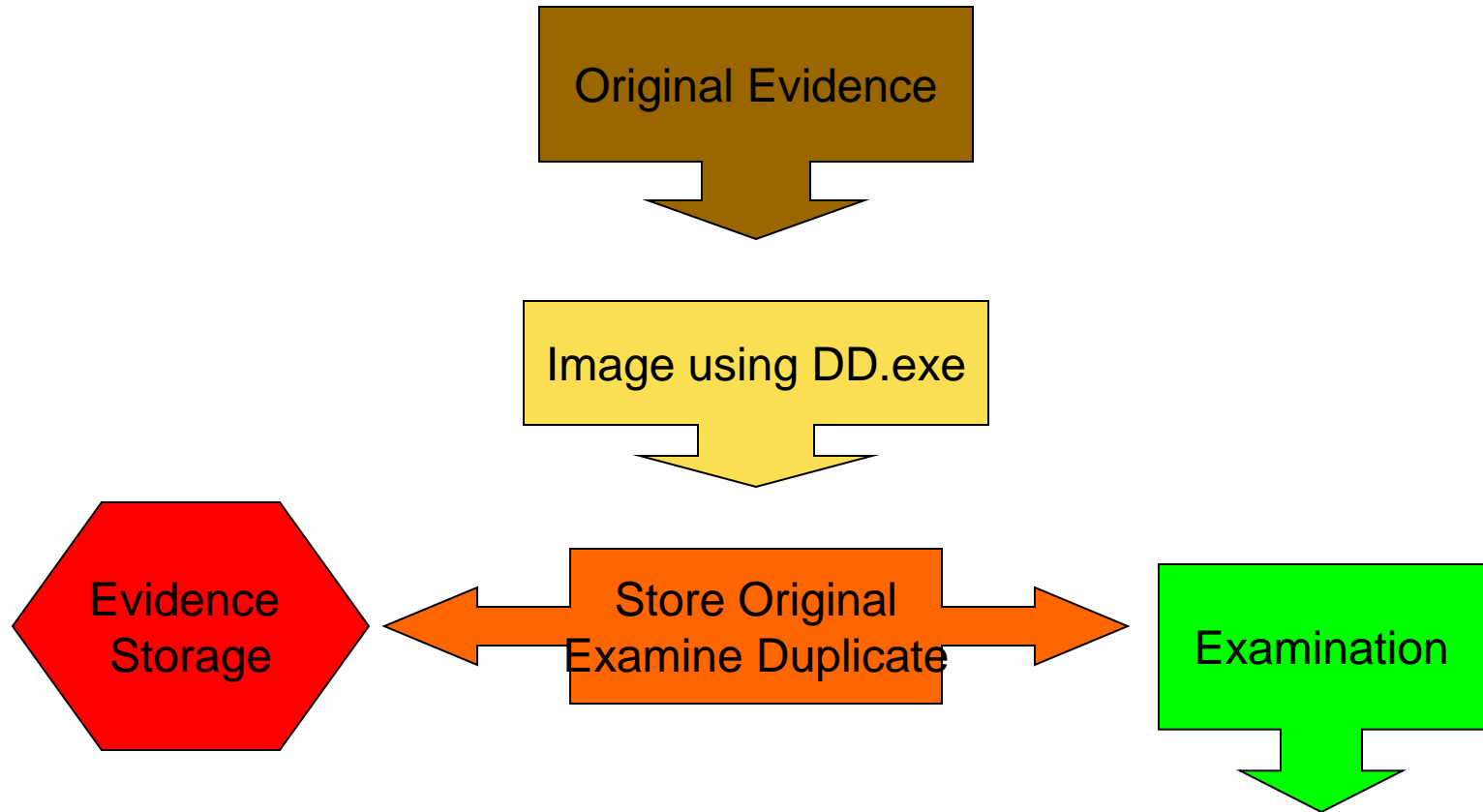
Drafting SOP's

- Standardized format
- Can be done in a variety of ways:
 - “Cookbook”
 - Flow Chart
 - Layered
- Must stand on their own
- Must allow some leeway

Cookbook Format

1. Take 2 mg. of suspect material, suspend in 10 ml. of saline.
2. Agitate for 5 minutes
3. Add 1 ml. of Duquenois Reagent
4. Assess the color of the suspension against the NIK Standard Color Chart

Flowchart



Layered Approach

- Principles
 - Those things which are universally acknowledged as determinate in the field
- Practices
 - Those things which are acknowledged as a desirable way to conduct activity
- Procedures
 - The specific application of Principles and Practices to the task at hand

See: <http://www.digitalevidencepro.com/Resources/Principles.pdf>

SWGDE Format

- Standardized format
- ASCLD/ISO validated
- See <http://www.swgde.org>
- A copy of their SOP recommendations is linked to this module



Scientific Working Group on Digital Evidence

Questions?

