Forensic Science
Research, Development, Testing & Evaluation

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Path to RDT&E Success

• Identify and prioritize research needs
• Catalog current and future plans
• Conduct a gap analysis
• Identify costs associated with RDT&E
• Identify research facilities
Identify and Prioritize Needs

- Recommendation 3 – NAS Report
  - Establish validity of forensic methods
  - Determine estimates of uncertainty
  - Develop measures of reliability and accuracy
- Recommendation 5 – NAS Report
  - Investigate human observer bias
  - Identify sources of human error
  - Develop model protocols to minimize these errors
- Better, Cheaper, Faster (Recommendation 12 – NAS Report)
- Recommendation 10 – NAS Report
  - Support graduate education programs/fellowships
  - Emphasize multidisciplinary fields
  - Support continuing legal education programs
Recommendation 3 – NAS Report

Peer-reviewed research on the scientific basis & validity
Recommendation 3 – NAS Report

Peer-reviewed research on the scientific basis & validity
Recommendation 3 – NAS Report

Peer-reviewed research on uncertainty, accuracy and reliability
Recommendation 3 – NAS Report

Peer-reviewed research on uncertainty, accuracy and reliability
Recommendation 5 – NAS Report

“Extra-domain Information”

Peer-reviewed research on human observer bias
Recommendation 5 – NAS Report

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Peer-reviewed research on human observer bias
Recommendation 5 – NAS Report

“Extra-domain Information”

Peer-reviewed research on human observer bias
Recommendation 5 – NAS Report

Peer-reviewed research on the sources of human error
Better, Faster, Cheaper
Catalog Current and Future Plans

- Top-down
- Formally Approved
- Initial Concept
- Bottom-up
Conduct a Gap Analysis

- Establish prioritized research
- Determine ability of current/future plans to meet needs
- Recognize overlaps in planned research
- Reallocate resources to support underfunded research
- Discover real gaps – under-funded prioritized research

Desired Research - Current Research = Research Gap
Identify Costs Associated with RDT&E

- Opportunity
- Personnel
- Equipment
- Supplies
- Travel
- Consultant/Contract fees
- Other
Identify Research Facilities

- Identify existing facilities for R&D
  - Federal
  - State
  - Local
  - Academic
  - Private agencies
- Identify facilities for T&E
  - Forensic Laboratories
  - Investigative & Law Enforcement Organizations
  - Military
Path to RDT&E Success

✓ Identify and prioritize research needs
✓ Catalog current and future plans
✓ Conduct a gap analysis
✓ Identify costs associated with RDT&E
✓ Identify research facilities
Coordination

- Internal – NSTC COS Subcommittee on Forensic Science
- External – Forensic Science, Academic and S&T Communities
  - Leverage existing specialties
  - Involve graduate students from multi-disciplines
  - Collaborate with Centers of Excellence
- Capture the needs of the S&L forensic community
- Transition deliverables into practice (training, maintenance, SOP development, etc)
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Representatives from various disciplines
National Science and Technology Council
Committee on Science
Subcommittee on Forensic Science

Interagency Working Group – Research, Development, Testing & Evaluation

Jeff Salyards – IWG Team Member