

CARFS Phase II Dynamic Research Roadmap

The ONLY Forensic Science Industry-University Cooperative Research Center

Industry and government requirements drive functional enhancements.

Technology Integration

Strength areas

- Industry Advisory Board access to novel emerging technology
- Principle Investigator access to additional funding (I-Corps, SBIR, STTR, PFI, INTERN, etc.)
- Network of major federal and national forensic labs

Areas to enhance

- Transitioning projects
- Understanding capabilities of university experts
- Startup Industry Advisory Board members
- Encourage phased projects
- Training and implementation

Barriers

- Research outcome visibility
- IT/software access
- Data compliance
- Transitioning projects
- Companies to take tech further

Greater capabilities demand technology development.

Technology Base

Technology Upscaling

Strength areas

- Talent pipeline
- Access to instrumentation and samples
- Principle Investigator / Industry Advisory Board collaboration
- Development opportunities
- Rapid response to emerging research needs

Areas to enhance

- Internship opportunities
- Security clearance attainment
- Asset sharing (instrumentation)
- Understanding error rates
- Link industry base at sites

Expanded portfolio benefits all members.

Barriers

- Sharing internship opportunities
- Integrating students into projects
- Longer project cycles
- Transfer of data, equipment, samples

Technology advances from new research.

Knowledge Base

Enabling Technologies

Strength areas

- Forensic Chemistry (trace, contraband, biosensors)
- Forensic Biology (microbial, entomology, genomics)
- Forensic Toxicology (metabolomics, biomarkers)
- Forensic Medicine (MDI, anthropology, taphonomy)

Areas to enhance

- Digital Evidence (mobile devices, authentication)
- Nuclear Forensics (source signatures)
- Environmental Forensics (trafficking, attribution)

Technology supports increased capabilities.

Barriers

- Universities / experts ease of collaborating
- Different budget cycles
- Understanding capabilities and needs

Fundamental Insights

Knowledge informs technology development.



Success Measures

- Members
- Participating sites
- Research funds
- Faculty supported
- Students supported and employed
- Publications and posters
- Disclosures and patents
- Proposals submitted
- Follow-on funding
- Networking results

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