Building a Credible Testing Program

Overview of Testing Issues in Water Technology Commercialization

Cluster Leaders Meeting
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Why Technology Testing?

Technology **purchasers** need credible information on technology performance to make decisions to buy.

Regulators need credible info to help them write regulations and to permit new technology.

Vendors need speedy, credible info to help them sell their technologies, to help attract funding and collaborators, and to help them identify ways to improve their technology

Other decision makers: **financiers** of start-ups

What Makes Credible Testing?

- Objective third-party testing organization
  - Accreditation
  - Lab certification
  - Quality assurance/quality control
- Stakeholder involvement
- Fairness and transparency
- Peer review

Which technologies to test?

Selection	Development Stage
May be driven by: • Users' challenges • Vendors and innovation • Organization's expertise	• Does it have to be commercial-ready? • Are you willing to test a prototype? • Pilot scale or full scale?
Fairness	**Transparency**
• Will all vendors be treated the same? • If not, will screening criteria be published?	• Call for technologies to test • Rationale for testing in a category

Questions for Testing Organizations

Outcome

- What does vendor get after testing?
  - Approval
  - Pass/fail
  - Certification
  - Verification of performance data
- Will failing results be published?

Branding

- Will results be branded?
- Will testing organization be branded?

Financing

- Who pays for tests?
- Who funds testing organization?

Test Plan Development

- Who to involve?
  - ETV used stakeholders as basis, including tech specific experts, regulators and purchasers
  - If use vendors, use competitors too; trade organizations may be fairer, maybe not
- Scoping – balancing speed and cost vs. completeness and certainty
  - What parameters to test for
  - How long to test

Quick Case Study on Scoping and Costs

- Arsenic removal technology verifications
  - 11 technologies tested for 3 mo – 1 yr each at cost of about average $250-300k each.
- Arsenic demo program
  - 50 technologies tested for 1-4 years each at a cost of about average $1M each.

Range of Current Testing Programs

- Voluntary testing (WaterSense)
- Mandatory testing (ATPs)
- Industry standards compliance (NSF 60/61)
- State only (TAPE)
- Industry led (LIFT)

Network of Testing Organizations?

- A network of test organizations and reciprocity among them?
- Connection to international systems, other networks – NSF International, WEF, ETV International, ETV ISO?