



**EPA's Environmental Technology
Verification Program**

Perceived Benefits of Verification

- Get objective, credible performance data to buyers
- Facilitate permitting at state/local level
- Reduce risk for financial investors
- Level playing field among competitors
- Facilitate export

ETV Goals

Long Term Goal

- ✧ To make better environmental technology available to more ecosystems and people

Immediate Goal

- ✧ Provide objective performance data to purchasers and permittees of environmental technologies



Definitions

(ETV Does Evaluate and Verify

- ✧ Evaluate: To carefully examine and judge the efficacy of a technology; to submit technologies for testing under conditions of observation and analysis; *synonyms*: measure, estimate, classify, test
- ✧ Verify: To establish or prove the truth of the performance of a technology under specific, predetermined criteria or protocols and adequate data quality assurance procedures; *synonyms*: confirm, corroborate, substantiate, validate

Definitions (continued)

(ETV Does **Not** Certify

- ✧ Certify: To guarantee a technology as meeting a standard or performance criteria into the future;
synonyms: ensure, warrant, guarantee

Important Principles

-) A voluntary program for commercial-ready private sector technologies
-) High-quality data and information; not an “approval” process
-) Public-private partnerships to efficiently execute testing
-) A “market-based” program through ongoing stakeholder participation
-) Web-based publication of all products for speed and universal access
-) Credibility, credibility, credibility

Six ETV Technology Centers

-) ETV Advanced Monitoring Technology Center
-) ETV Air Pollution Control Technology Center
-) ETV Greenhouse Gas Technology Center
-) ETV Drinking Water Systems Center
-) ETV Water Protection Technology Center
-) ETV Pollution Prevention, Recycling and Waste Treatment System Center



Partners/VOs



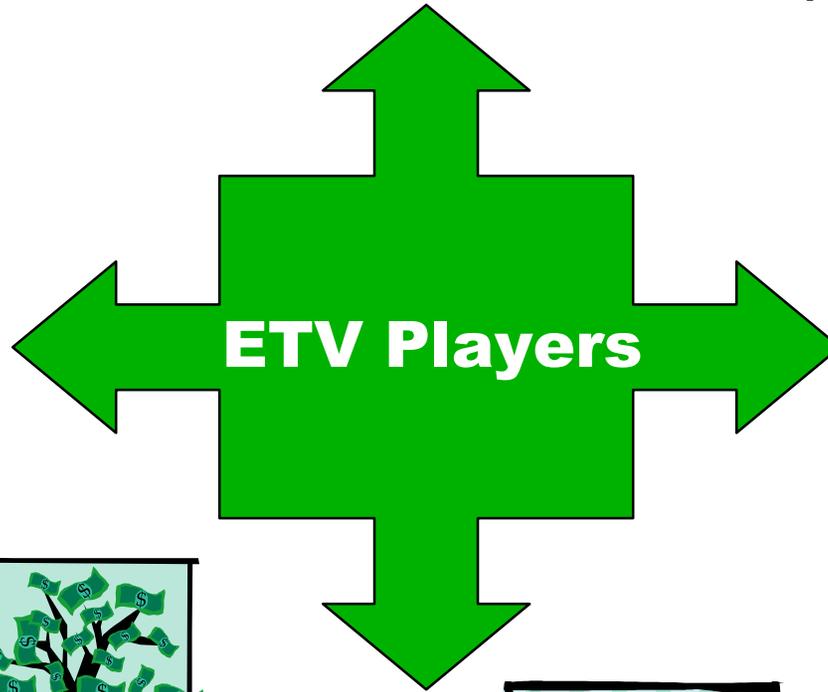
U.S. EPA



Testing Organizations



Stakeholders



International Communities



Vendors



Financial Investors



States and local governments



Customers/End Users

Stakeholder Roles

) Priority Setting

- ✧ Serious environmental challenges
- ✧ Technology available for evaluation
- ✧ Practicality

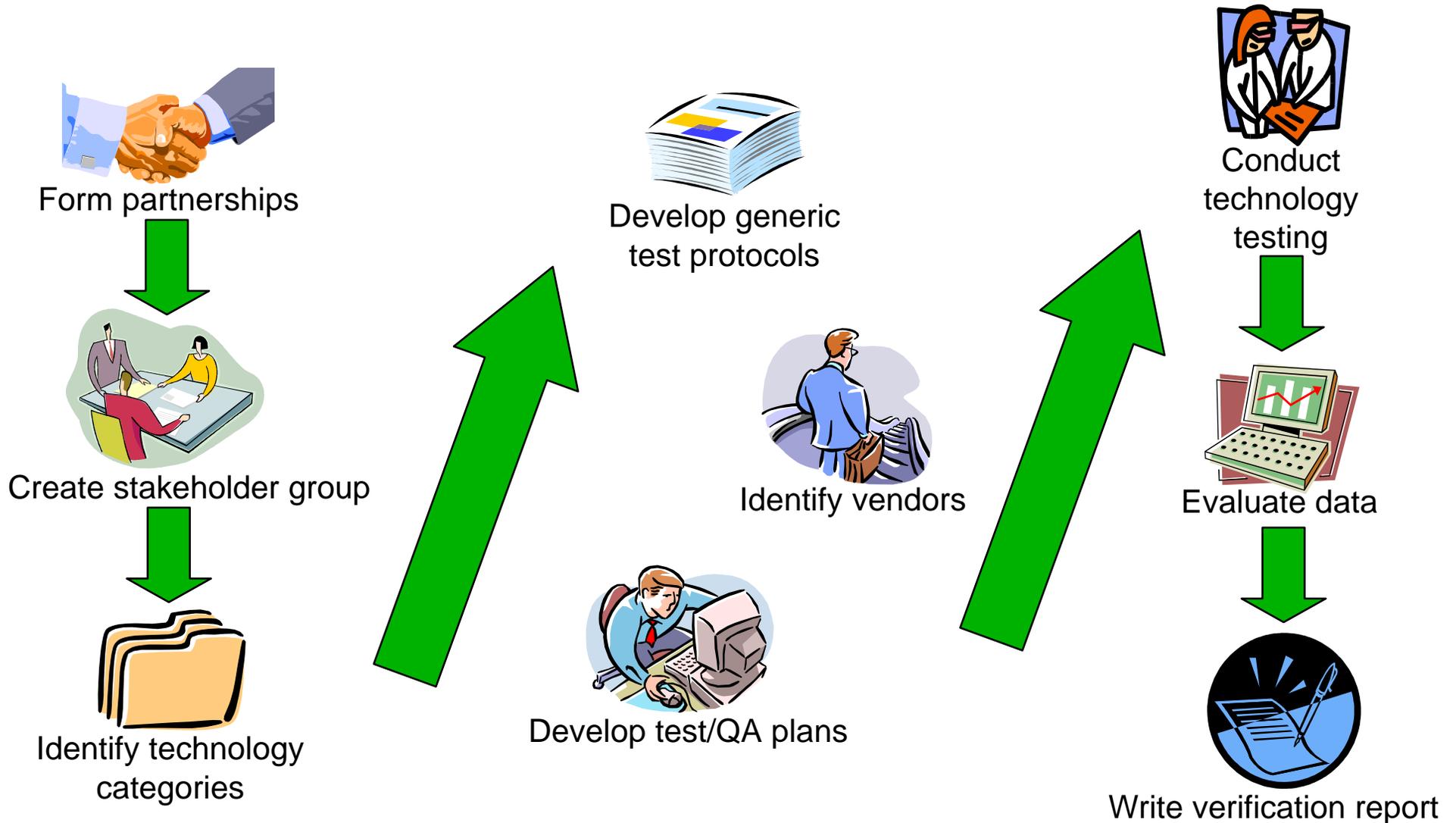
) Protocol Design

- ✧ Verification factors
 - “Asking the right questions”
- ✧ Test design
 - “Getting the right answers”

Example Verification Factors

Drinking Water Systems	Water Monitors	Marine Pollution Control Technologies
Water quality Contaminant removal Performance variability Operation and maintenance Quality control	Precision Accuracy Linearity Water temperature effects Flow rate Drift Detection limit Color Calibration concentrations Operator bias	

ETV Verification Process



ETV Outreach

www.epa.gov/etv



THE ENVIRONMENTAL TECHNOLOGY VERIFICATION PROGRAM

ETV 



ETV Joint Verification Statement

TECHNOLOGY TYPE: WIDGET

APPLICATION: ADVANCED REMOTE WIDGETING

TECHNOLOGY NAME: WIDGET - 2000 - A

COMPANY: USA Widget, Inc.

ADDRESS: 1999 Main Street
Somewhere, USA 00001
http://www.usawidget.com
widget@usawidget.com

PHONE: (000) 555-2000
FAX: (000) 555-2001

EPA has created the Environmental Technology Verification Program to promote and use of improved and cost-effective technologies through peer reviewed data on technology performance, purchase, and use of technology by groups which individual technology plans

ETV Statistics

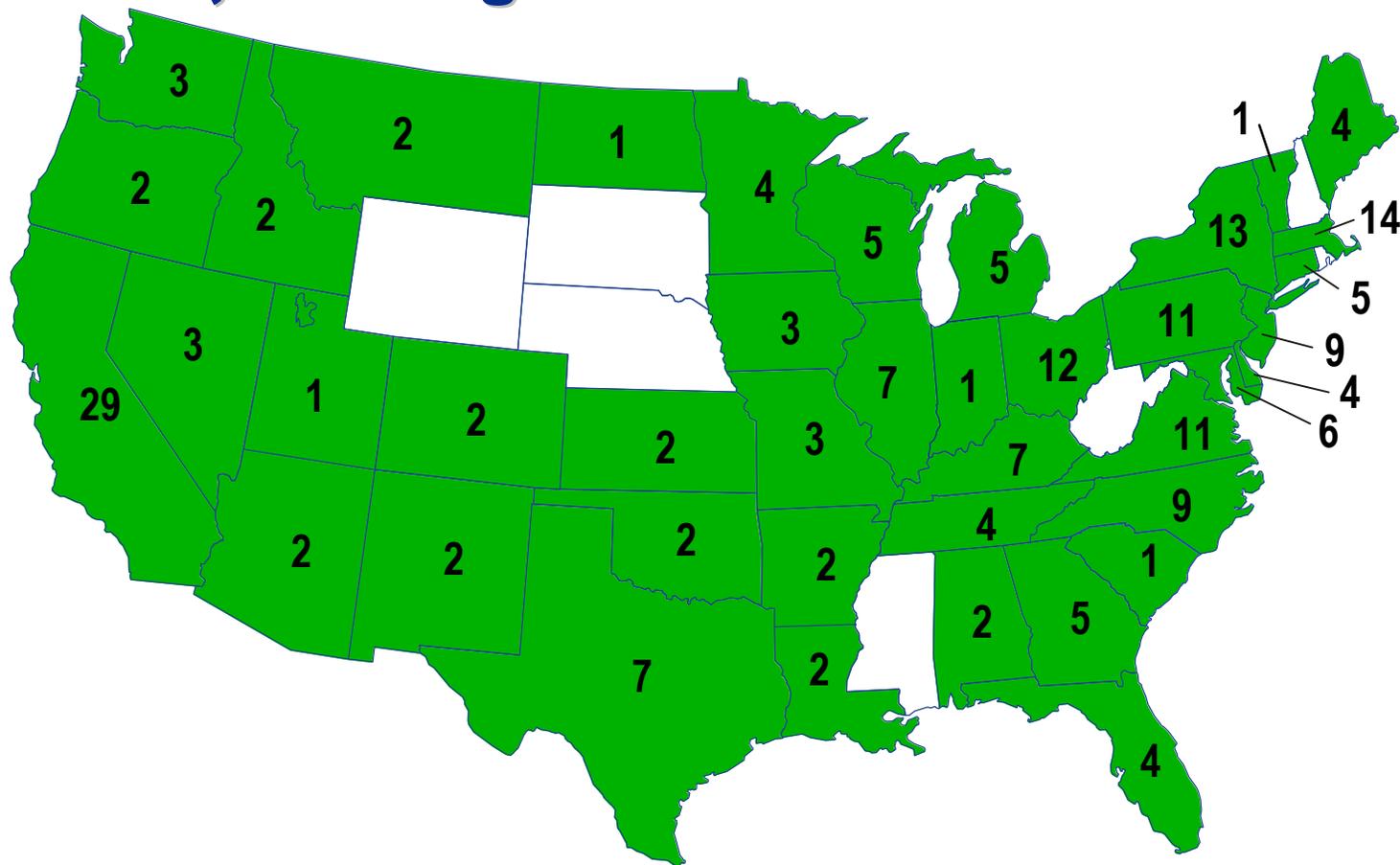
June 2001

- ◆ 1,062 Stakeholders in 18 Groups; 89 Meetings held
- ◆ 60 Generic protocols; 84 Technology-specific test plans
- ◆ 138 Applications pending
- ◆ 111 Technologies in testing/evaluation process
- ◆ 118 Technologies verified

Vendors, Vendors, Everywhere

June 2001

41 States, 8 Foreign Countries

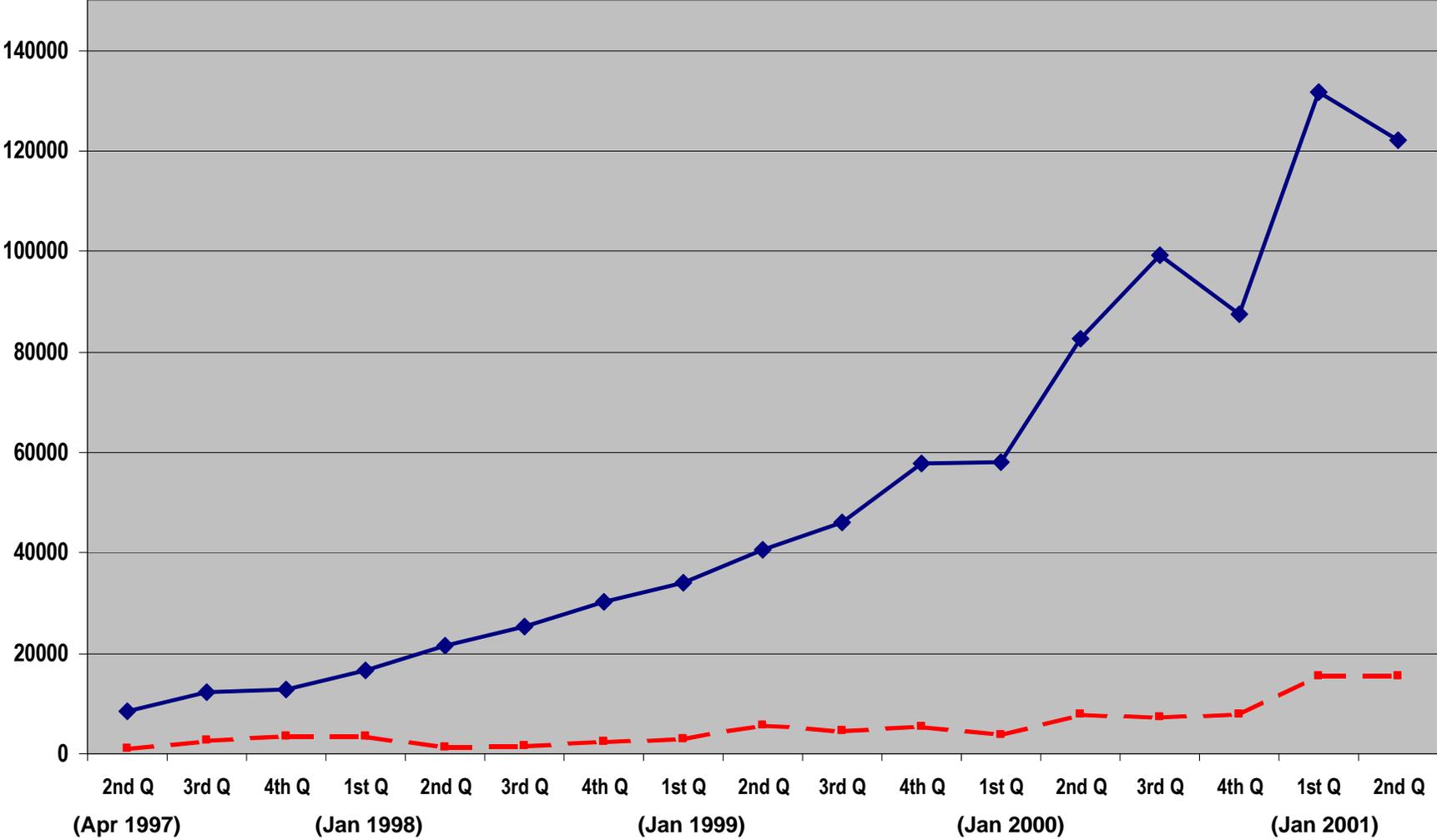


(Does not include 12 technologies from Canada, one each from Denmark, England, Finland, Germany, Korea, and Sweden, and two from Japan.)





www.epa.gov/etv



— Total Hits - - - International Hits



ETV Values and Quality Criteria

◆ Fairness

1. Testing available to all vendors of commercial-ready technologies within defined categories

◆ Credibility

2. Objective third-party tester
3. Preexisting protocols/test plans, publicly available and capable of reproduction

◆ Transparency

4. Public availability of methods and results

◆ Quality

5. Quality management and data of acceptable level for verification

