

COMPLETE THIS FORM TO INITIATE SUPPLIER SCOUTING

MEPNN Supplier Scouting Opportunity Synopsis

- *The submitting organization (ex. MEP Center, requesting company, federal/state agency) agrees to notify NIST MEP of the status of actions taken as a result of this scouting instance within 30 days after receiving a results report. Notification should be via email to scouting@nist.gov, indicating the following:
- Contact with matches identified in report complete and supply contract awarded, process complete
 - Contact with matches identified in report complete and no supply contract awarded, process complete
 - Contact with matches identified in report complete and supply negotiations underway, process in progress
 - Contact with matches identified in report underway; supply negotiations not yet begun; process in progress
 - Contact with matches identified in report not yet begun, process in progress
 - Contact with matches identified in report will not occur within the next 6-months, process complete

_____ days
Opportunities will be posted for 30 days unless specified

Item to be Scouted

Please describe the item application/ the end use of item.* Provide the item number if applicable: (N95 Mask vs Protective Mask).

Supplier Scouting Number (NIST MEP use)

Scouting customer/product [NAICS Code](#), if known

TECHNICAL INFORMATION:	1. Supplier Information	a. Type of supplier being sought*
		<input type="checkbox"/> Manufacturer <input type="checkbox"/> Contract Manufacturer <input type="checkbox"/> Distributor <input type="checkbox"/> Other _____
	2. Summary of Technical Specifications and Performance Requirements:	b. Reason for scouting submission*
		<input type="checkbox"/> 2 nd Supplier <input type="checkbox"/> Price <input type="checkbox"/> Re-shore <input type="checkbox"/> Past supplier no longer available <input type="checkbox"/> New Product Startup <input type="checkbox"/> Other _____
		a. Describe the manufacturing processes (elaborate to provide as much detail as possible).*
		b. Provide dimensions / size / tolerances / performance specifications for the item.*
c. List required materials needed to make the product, including materials of product components.*		

BUSINESS INFORMATION:	2. Summary of Technical Specifications and Performance Requirements cont:	d. Are there applicable certification requirements? * <input type="checkbox"/> Yes <input type="checkbox"/> No Please explain
		e. Are there applicable regulations? * <input type="checkbox"/> Yes <input type="checkbox"/> No Please explain
		f. Are there any other standards, requirements, etc.? * <input type="checkbox"/> Yes <input type="checkbox"/> No Please explain
		g. Additional Comments: Is there other information that would impact the item's performance or usefulness? Please explain.
		3a. Estimated potential business volume (i.e., # Units Per Day, Month, Year) *:
		b. Estimated target price / unit cost information (if unavailable explain) *:
		a. When is it needed by? (Immediate, 30 Days, 6 months, etc.)*
BUSINESS INFORMATION:	3. Volume and Pricing	b. Describe packaging requirements (i.e., individually/group packaging)*
		c. Where will this item be shipped? *
		4. Delivery Requirements:
BUSINESS INFORMATION:	5. Additional Comments:	Is there other information you would like to include?

Photos or diagrams of the item (helpful but not required).

SUPPLIER SCOUTING ATTACHMENT

Requirement:

NIST is seeking information from vendors capable of providing a system to perform atom probe tomography (APT). The APT system will be installed and operated in a multi-user precision imaging facility. The imaging facility supports multiple internal users by providing microscopy and microanalysis capabilities. Samples of interest include (but are not limited to) microfabricated, on-wafer devices and other solid-state electronics systems, as well as metal alloys.

The APT system will be **installed on the Boulder, CO campus**. The contractor shall furnish the necessary personnel, material, equipment, and services to fabricate, install, and test one complete atom probe tomography system. The contractor shall provide training at the time of installation and the complete system must be fully integrated, serviced, and warrantied by the single offeror.

Provide information regarding the following specifications:

Atom Probe Tomography System:

A wire-based atom probe tomography system for the high precision chemical analysis of materials.

Specific model information: CAMECA Invizo 6000 or similar

Specifications:

- 1) Vacuum system capable of maintaining ultra-high vacuum (UHV, better than 1×10^{-10}) Torr in the sample chamber. The vacuum system should also include a load lock chamber to facilitate loading specimens into the ultra-high vacuum chamber.
- 2) An ultra-stable temperature-controlled specimen stage with a temperature range between 30 K and 250 K.
 - a. *Please comment on any abilities to achieve temperatures below or above the noted range.*
- 3) Any counter electrodes within the UHV chamber should be user replaceable
- 4) A fully integrated Class I laser system (as defined by IEC 60825-1), including:
 - a. A wavelength in the deep UV range (less than 300 nm)
 - i. *Please comment on any abilities to provide a laser wavelength in excess of (but including) this range*
 - b. A tunable energy between 10 fJ and 500 pJ
 - i. *Please comment on any abilities to provide laser powers in excess of (but including) this range*
 - c. A tunable repetition rate between 25 kHz and 400 kHz
 - i. *Please comment on any abilities to provide repetition rates in excess of (but including) this range*
- 5) The capability to perform three-dimensional atom probe reconstruction, including:

- a. A time-of-flight mass spectrometer detector
 - i. *Please comment on the mass resolving power of the detector*
 - b. A position-sensitive detector capable of multihit detection
 - i. *Please comment on the field-of-view captured by the detector*
 - c. Data collection rates exceeding 100,000 ions/minute
 - i. *Please comment on any ability to exceed this rate*
- 6) A software suite capable of:
- a. Operating the fully integrated APT system, including control of the vacuum system, laser, and readout of all associated detectors
 - b. Provide full, accurate, three-dimensional reconstruction of the data collected from each APT experiment