STATEMENT OF WORK

Professional Consulting Services:
Industrial Accelerator Technology Assessment and Product Opportunity Identification

Fermi National Accelerator Laboratory

1. Introduction and Background

Fermilab seeks professional consulting services to assess technology barriers to industrial accelerator adoption and identify product development opportunities that could enhance the deployment of accelerator-based radiation technologies for DOE/NNSA objectives. The consultant will leverage extensive commercial accelerator industry experience to conduct stakeholder interviews, evaluate technical gaps, and provide actionable recommendations for products, subsystems, and enabling technologies relevant to Fermilab's industrial accelerator programs.

2. Scope of Work

2.1 Objectives

Identify and prioritize technology-based barriers limiting adoption of industrial eBeam and X-ray accelerator systems, translating findings into actionable product development opportunities for Fermilab. Deliver analysis, interviews, opportunity mapping, and recommendations to support future R&D and commercialization.

2.2 Requirements

The consultant shall:

- Demonstrate significant (preferably 15+ years) experience in design, development, commercialization, or deployment of industrial electron beam and/or X-ray accelerator systems.
- Possess direct commercial experience with manufacturers, integrators, or industrial users.
- Exhibit expertise in industrial radiation processing applications and related systems.
- Conduct structured interviews and synthesize technical/market information.
- Deliver concise written reports, presentations, and assessments as specified.
- Comply with Fermilab procurement/confidentiality/professional standards.
- Perform as an independent consultant disclosing potential conflicts of interest.

2.3 Tasks

Phase 1 — Industry Assessment and Opportunity Identification

1. Refine technical questions/topics with Fermilab.
2. Develop an interview plan and conduct ~10–15 structured interviews.
3. Identify and assess primary technology barriers (focus: engineering/technology).
4. Translate barriers into potential product/technology opportunities for Fermilab.
5. Prepare interim report of findings, barriers, and recommended opportunities.
6. Conduct a technical review meeting with Fermilab.

Phase 2 — Product Opportunity Evaluation

7. Select 3–5 priority product opportunities with Fermilab.
8. Develop technical descriptions, preliminary requirements, and market considerations.
9. Conduct follow-up interviews to validate concepts.
10. Prepare a final report of opportunities, rationale, considerations, and recommendations.
11. Present final results to Fermilab management.

3. Deliverables

#	Deliverable	Format	Due
1	Interview Plan	PDF or Word	2 weeks from kickoff
2	Interim Technical Assessment Report	PDF	End of Phase 1
3	Technical Review Presentation	PowerPoint	End of Phase 1
4	Final Product Opportunity Assessment	PDF	End of Phase 2
5	Final Presentation	PowerPoint	End of Phase 2
6	Product Opportunity Matrix	Excel	End of Phase 2

4. Quality Assurance

- Deliverables reviewed by Fermilab Technical Point of Contact and technical staff.
- Acceptance based on task completion, technical quality, clarity, and responsiveness to review comments.
- Written reports in PDF/Word; presentations in PowerPoint.
- Phase 2 may only commence upon acceptance of Phase 1 deliverables.

5. Government-Furnished Property (GFP)

Fermilab will provide necessary background documents, technical reports, and program objectives as required. Access to facilities or staff may be arranged as needed. No specialized equipment or computing resources are to be furnished except as expressly authorized.

6. Security

No clearance or classified information is involved. Consultant must comply with all Fermilab visitor, cybersecurity, and information security policies. Non-public/proprietary information will be shared on a need-to-know basis and handled per confidentiality requirements. Any on-site access requires pre-approval and adherence to established procedures.

7. Place of Performance

The consultant shall primarily work remotely. Regular virtual meetings with Fermilab are required. In-person meetings at Fermilab may occur if mutually agreed and pre-approved.

8. Period of Performance

Duration: Six (6) to seven (7) months from contract award.

- Phase 1 (90–120 days): Kickoff, interview plan, interviews, interim report, technical review.
- Phase 2 (60–90 days): Select opportunities, follow-up interviews, final report, final presentation.
- The exact start date is set at contract award.
- Phase 2 begins only after acceptance of Phase 1 deliverables.

9. Special Requirements

- Consultant to attend regular progress meetings (videoconference).
- Deliverables provided in Microsoft Office and PDF formats.
- Maintain confidentiality—no unauthorized information disclosure.
- Invoices must reference purchase order and phase.
- Changes in scope, schedule, or deliverables require Fermilab written approval.
- Compliance with all Fermilab procurement terms and conditions is required.

End of Statement of Work