# Dossier: IMPULSE TECHNOLOGY LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $249,995.00

**Award Date:** 2023-06-29

**Branch:** DHA

## AI-Generated Intelligence Summary

**Company Overview:**

Impulse Technology LLC (formerly known as Advanced Magnet Lab, Inc.) is a US-based company specializing in the development and manufacturing of advanced electromagnetic systems and high-field magnets. Their primary business revolves around providing custom-engineered magnet solutions for diverse applications, including defense, aerospace, medical imaging, high-energy physics, and research. Their core mission appears to be enabling breakthroughs in these fields by pushing the boundaries of magnet technology. They aim to solve the challenges of achieving high magnetic fields, complex field geometries, and specific performance requirements that cannot be met by off-the-shelf solutions. Their unique value proposition lies in their ability to design, prototype, and manufacture highly customized, high-performance magnets tailored to specific client needs, often involving innovative materials and advanced manufacturing techniques.

**Technology Focus:**

* Development of advanced high-field superconducting magnets, including those based on Nb3Sn and HTS (High-Temperature Superconducting) materials. This includes custom designs tailored for specific field strength, uniformity, and geometry requirements, often exceeding 20 Tesla.
* Design and manufacture of electromagnetic actuators and solenoids for applications demanding precise and rapid control, such as in defense systems, aerospace mechanisms, and scientific instrumentation. These actuators often feature high force-to-size ratios and fast response times.

**Recent Developments & Traction:**

* Contract Award (Implied):\*\* While specific publicly disclosed contract announcements are limited, the company actively participates in DoD research and development programs, suggesting ongoing government contracts related to advanced electromagnetic technologies. Public records indicate continued engagement with SBIR/STTR programs.
* Product Enhancement and Custom Solutions:\*\* Focusing on custom solutions based on specific requests. This demonstrates traction in the high-value, niche magnet market, serving specialized applications.
* Name Change:\*\* Transitioned from Advanced Magnet Lab, Inc. to Impulse Technology LLC, possibly to represent a broader focus than just magnets.

**Leadership & Team:**

* CEO:\*\* Not publicly available
* CTO/Chief Scientist:\*\* Dr. Rainer Meinke. An expert in magnet design and superconducting materials with experience at DESY (Deutsches Elektronen-Synchrotron).

**Competitive Landscape:**

* Oxford Instruments:\*\* A major player in scientific and industrial instrumentation, including superconducting magnets. Impulse Technology differentiates itself by specializing in highly customized, application-specific designs rather than offering primarily standardized products.
* Cryomagnetics:\*\* Another provider of superconducting magnet systems. Impulse technology might differentiate through a higher emphasis on complex and customized designs, potentially including novel materials and actuators beyond core magnet systems.

**Sources:**

1. [https://www.impulsetech.com/](https://www.impulsetech.com/)

2. [https://sbir.defensebusiness.org/](https://sbir.defensebusiness.org/) (Search for "Advanced Magnet Lab" or "Impulse Technology LLC" to find projects)

3. [https://www.zoominfo.com/c/impulse-technology-llc/351764379](https://www.zoominfo.com/c/impulse-technology-llc/351764379)