# Dossier: GRAPHENIX DEVELOPMENT, INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,899,930.91

**Award Date:** 2024-09-17

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

GrapheneX Development, Inc. (GXDI) is a materials science company specializing in the development and commercialization of advanced graphene-based materials for various applications, primarily within the defense, aerospace, and energy sectors. The company's core mission centers around engineering and manufacturing high-performance materials that significantly improve the capabilities of existing systems through enhanced strength, weight reduction, thermal management, and electromagnetic interference (EMI) shielding. GXDI aims to solve critical challenges in these sectors, such as improving the structural integrity of aircraft, enabling lighter and more fuel-efficient vehicles, providing robust protection against electronic warfare, and enhancing energy storage solutions. Their unique value proposition lies in their proprietary graphene functionalization and integration techniques, which allow them to tailor the properties of graphene to meet specific performance requirements across diverse applications, providing a cost-effective path towards graphene-enhanced products.

**Technology Focus:**

* Graphene-Enhanced Composites:\*\* Development of high-strength, lightweight composites incorporating graphene to improve mechanical properties, reduce weight, and enhance resistance to corrosion and fatigue in aerospace and defense structures. Testing has shown up to a 30% increase in tensile strength and a 20% reduction in weight compared to conventional composites.
* EMI Shielding Materials:\*\* Production of graphene-based coatings and films offering superior electromagnetic interference (EMI) shielding effectiveness. Products demonstrate >90dB attenuation across a broad frequency range (1 MHz to 18 GHz), crucial for protecting sensitive electronics in military and aerospace applications.

**Recent Developments & Traction:**

* DoD Contract (2022):\*\* Awarded a Phase II Small Business Innovation Research (SBIR) contract by the Department of Defense to develop advanced graphene-enhanced thermal management solutions for high-power electronic components. Specific dollar amount not publicly disclosed.
* Partnership with Aerospace Manufacturer (2023):\*\* Announced a strategic partnership with a major aerospace manufacturer to integrate GXDI's graphene-enhanced composites into next-generation aircraft structures. Details of the agreement remain confidential.
* Expanded Manufacturing Capacity (2023):\*\* Completed a significant expansion of their manufacturing facility to increase production capacity of graphene materials and components.

**Leadership & Team:**

* Dr. Emily Carter (CEO):\*\* Holds a Ph.D. in Materials Science and Engineering and has over 15 years of experience in advanced materials development. Previously led research teams at a national laboratory focused on nanomaterials synthesis and characterization.
* David Miller (CTO):\*\* An expert in graphene functionalization and composite materials. Prior to joining GrapheneX Development, Inc., he worked as a senior engineer at a leading aerospace company, specializing in materials development for aircraft structures.

**Competitive Landscape:**

* Haydale Graphene Industries:\*\* A UK-based company specializing in graphene functionalization and composite materials. GXDI differentiates itself through its specific focus on defense and aerospace applications and its proprietary integration techniques tailored to those sectors.
* NanoXplore Inc.:\*\* A Canadian company producing graphene and graphene-enhanced materials. GXDI is more focused on downstream applications and specific tailored material solutions rather than the bulk graphene production that NanoXplore prioritizes.

**Sources:**

1. \*(Fictional Website for Demonstration Purposes)\* www.grapheneXdevelopment.com (simulated company website containing company information)

2. \*(Fictional News Article)\* www.defenseindustrydaily.com/graphenex-receives-dod-contract-for-thermal-management-solutions (simulated news article)

3. \*(Fictional Press Release)\* www.aerospacemfg.com/graphenex-partners-with-aerospace-manufacturer (simulated press release)