



Reinventy Advances XHT® Materials and Phantom Core® Architectures

Descrizione

COMUNICATO STAMPA - CONTENUTO PROMOZIONALE

Extreme-Temperature Materials and Low-Signature Electric Systems for Next-Generation Platforms

VANCOUVER, British Columbia, Jan. 20, 2026 (GLOBE NEWSWIRE) - Reinventy Solutions Corp. announced an advance in its materials-driven technology roadmap, highlighting XHT® (eXtended High-Temperature) material architectures and Phantom Core® electric system designs to enable next-generation industrial and autonomous platforms operating under severe thermal constraints.

In many high-performance systems, deployment limits are set by materials physics and heat-flow management, not by software. Reinventy's approach treats materials and thermal pathways as first-order design variables within platform architecture, targeting predictable behavior under sustained thermal load, thermal cycling, and coupled electromechanical stress.

Reinventy's XHT® material architectures are engineered for direct integration into system designs where conventional alloys, ceramics, or composites rapidly lose performance. XHT® is designed to maintain structural integrity and functional stability above 2,800 Å°C, with development targets toward the 3,000 Å°C range under controlled conditions, depending on formulation and system integration. The program emphasizes thermal stability, low degradation, and controlled electromagnetic behavior to support integration with motors, power electronics, and thermal management in tightly coupled assemblies.

In parallel, Reinventy is advancing Phantom Core® motor and actuation architectures addressing a critical challenge in high-performance electric systems: thermal signature control. Conventional electric drives generate concentrated heat sources that can produce distinct thermal traces. Phantom Core® combines advanced materials, structural design, and integrated thermal pathways to enable thermal-signature suppression up to near-zero observable levels at the system level, depending on operating mode and environmental conditions.

Rather than relying on external shielding, Phantom Core[®] is designed to intrinsically redistribute and attenuate heat concentration, supporting electric propulsion and actuation requiring reduced thermal visibility, stable operation, and long-cycle reliability.

These technologies align with Reinventy's next-generation platform strategy and complement the previously announced Shield Brain (Codename "The Tin Man") platform, which provides local cognitive control for autonomous systems. While Shield Brain governs perception and decision orchestration, XHT[®] and Phantom Core[®] support the physical execution layer under extreme operating conditions. Further details are available at

[Next-Generation Platforms](#)

and

[XHT[®]](#)

, with an overview of related intellectual property at

[Patents](#)

"Extreme-temperature materials and controlled thermal behavior are decisive engineering constraints for real-world autonomy," said Antonio Sedino, Ph.D., Technology & R&D Officer (CTRO) of Reinventy Solutions Corp. "XHT[®] and Phantom Core[®] reflect our strategy to move beyond component-level optimization toward system architectures engineered for predictability under severe thermal regimes."

Biographical Information Reinventy Solutions Corp. is led by an engineering-driven technical leadership with over three decades of experience across advanced industrial technologies and system architecture, spanning advanced materials, electric systems, energy management, edge AI, and system-level integration.

Boilerplate Reinventy Solutions Corp. is a Canadian industrial technology company developing industrial-grade edge AI platforms, advanced materials, energy solutions, and high-performance motor and electrification technologies. Learn more at

[Home](#)

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