

Paradigm Shift Technologies' EPVD® Coating Gains Momentum with Three Global Engineering Partners

Paradigm Shift signs with OEMs in Spain, Poland, and Ukraine to deploy EPVD®—a patented, non-toxic alternative to chrome for internal coatings.

TORONTO, ONTARIO, CANADA, August 4, 2025 /EINPresswire.com/ -- [Paradigm Shift Technologies Inc.](#), a greentech innovator in advanced coating systems, announced today the signing of three

major strategic agreements focused on replacing toxic hexavalent Chrome in extreme-environment manufacturing. The agreements involve leading defense manufacturers across Spain, Poland, and Ukraine—marking a significant leap forward in the adoption of its revolutionary EPVD® (Enhanced Physical Vapor Deposition) technology.



This is more than international expansion—it's a shift in how global industry approaches sustainability and performance. Cleaner, tougher, greener tech is replacing chrome plating with EPVD®."

*Eugene Yumshtyk, COO,
Paradigm Shift Technologies
Inc*

safety, and sustainability.



Em&e group from Spain, HSW from Poland, and a Ukrainian OEM

The new partnerships include:

- Escribano Mechanical & Engineering (EM&E) – a premier Spanish defense integrator;
- Huta Stalowa Wola (HSW) – Poland's primary manufacturer of artillery and armored vehicles; and
- A major Ukrainian [OEM](#) supplying front-line combat systems.

These strategic agreements reflect growing international momentum behind Paradigm Shift's core mission: to eliminate toxic hexavalent chrome plating from critical defense infrastructure—while improving performance,

Redefining the Capabilities of PVD Technology

While EPVD® is based on the well-established principles of Physical Vapor Deposition (PVD), it is a

fundamentally different and proprietary innovation. Traditional PVD systems are limited to coating external or line-of-sight surfaces—they cannot effectively reach the internal geometry of barrels, tubes, or complex cylindrical components.

EPVD® overcomes this critical limitation through the use of controlled electromagnetic fields, enabling uniform, high-performance coatings on internal, non-line-of-sight surfaces. This breakthrough unlocks a new category of applications previously out of reach for standard PVD, particularly in high-pressure, high-wear environments such as artillery barrels and industrial piping.

EPVD® is a patented and proprietary technology exclusively owned by Paradigm Shift Technologies Inc., protected under multiple international patents.

A New Standard in Weapon Durability and Environmental Compliance

The defense sector has long relied on hexavalent chrome—a known carcinogen banned or restricted under EU and international regulations—for internal barrel coatings. Paradigm Shift's EPVD® technology offers a drop-in replacement that not only eliminates toxic by-products, but also doubles component life, enhances accuracy, and improves reliability under extreme operating conditions.

“This is more than international expansion—it’s a shift in how global industry approaches sustainability and performance,” said Eugene Yumshtyk, COO of Paradigm Shift Technologies Inc. “By partnering with leading OEMs in Spain, Poland, and Ukraine, we’re helping modernize critical infrastructure with cleaner, longer-lasting, and environmentally responsible solutions.”

Dual-Use Applications Attracting Oil & Gas Industry

In addition to its defense applications, EPVD® is drawing significant interest from the [oil and gas](#) sector. The technology’s ability to coat the internal surfaces of tubes, cylinders, and pressure-



bearing systems makes it ideal for use in pipeline infrastructure, hydraulic systems, and downhole tools—where durability, corrosion resistance, and environmental safety are critical.

With global environmental compliance standards tightening across heavy industry, Paradigm Shift is uniquely positioned as a dual-use technology provider that bridges the gap between mission-critical defense and energy infrastructure.

A Global Vision for Cleaner Engineering

Paradigm Shift's international agreements mark a new era in the company's expansion and signal a shift toward cross-border defense sustainability. With growing demand for environmentally responsible and performance-enhancing solutions, EPVD® is poised to become a foundational technology in modern industrial and military systems.

For more information, partnership inquiries, or media requests, please contact info@paradigmshift.com

About Paradigm Shift Technologies

Founded in Canada, Paradigm Shift Technologies is the developer and exclusive patent holder of EPVD®, a next-generation coating process engineered to replace hexavalent chrome in defense and industrial applications. With over two decades of R&D and successful trials across NATO-aligned nations, Paradigm Shift is redefining what's possible in sustainable surface engineering—delivering coatings where traditional PVD simply cannot.

Eugene Yumshtyk

Paradigm Shift Technologies Inc.

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