

SUPPLY CHAIN BLOCKCHAIN POWERED BY COGNITIVE INTELLIGENCE

March 15, 2019



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BUSINESS CHALLENGE

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HHS predicts that over \$1 billion dollars in savings could be realized by unlocking data silos

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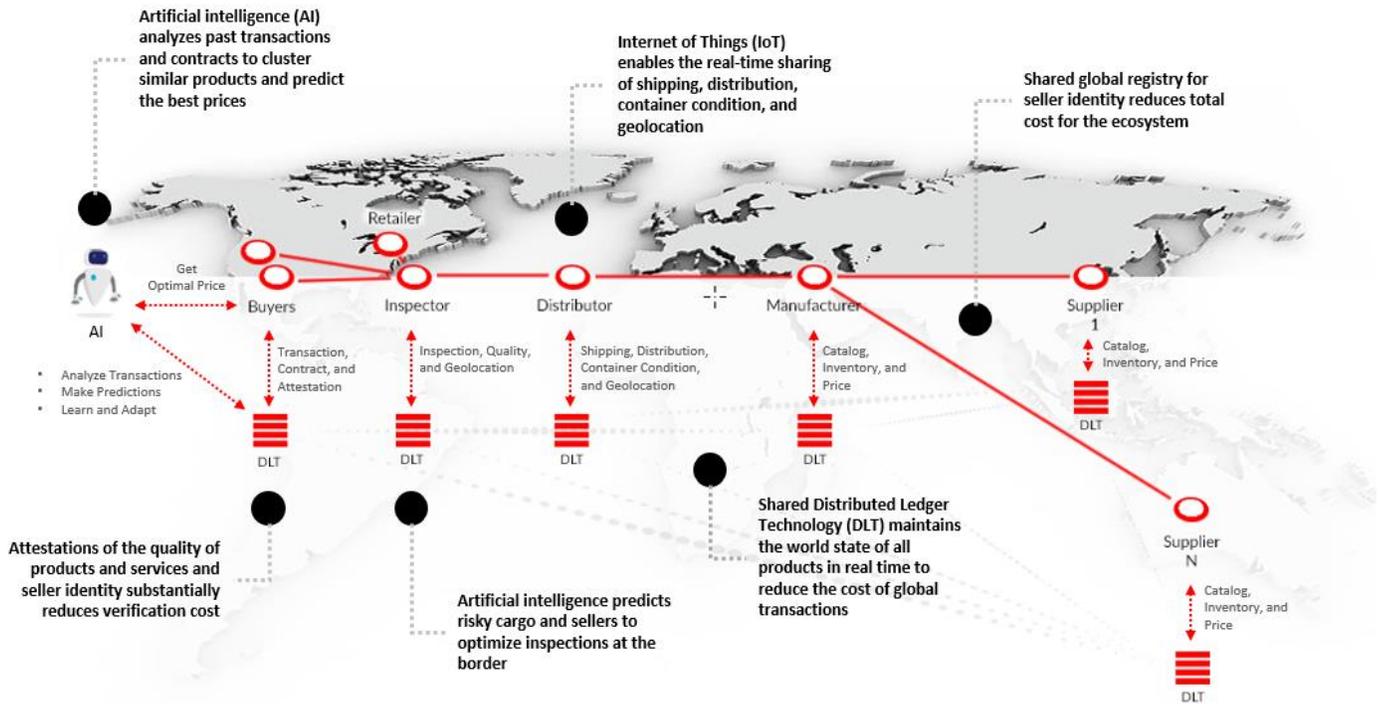
With over \$25 billion in annual spend, the Department of Health and Human Services (HHS) is one of the single largest federal buyers in the country. This translates to \$16 billion in services and \$9 billion in products. It is therefore understandable, for any titan of this size, that the left hand may get out of sync with the right. HHS' current decentralized acquisition model, where each of its operating divisions operate independently of one another, often results in identical purchases across divisions, independent of one another. The result is a loss of economies of scale and scope, duplicative buying, and huge variances in prices paid for these goods and services.

HHS predicts that over \$1 billion in savings is locked away in the data from thousands of daily transactions between HHS and its partners. If HHS were able to reduce this data silos, while increasing trust and transparency between data owners, they would be able to transform their large, complex supply chain into a technologically evolved force of purchasing power.

SUPPLY CHAIN MANAGEMENT REIMAGINED

To tackle these challenges, HHS and United Solutions embarked on a journey to invent the first federally authorized blockchain-powered platform and reimagine how HHS' operating divisions manage their acquisition data and their supply chains. Now, with unparalleled levels of interoperability, intra-organizational transparency, and supply chain analytics and visualizations, HHS is poised to accelerate its purchasing prowess. The commoditization of insight, analysis, and negotiations transforms every acquisition officer into their agency's star purchaser.

United Solutions is helping reinvent supply chain management through the application of emerging technologies like blockchain, artificial intelligence (A/I), and robotic process automation (RPA). They built the distributed cloud infrastructure to support a **supply chain blockchain** that facilitates purchasing activities across the entire agency. This very same infrastructure can be extended to connect the global supply chain for medical products, lab equipment, supplies, commodities, drugs, and even food, as illustrated on the next page.



SUSTAINABLE BENEFITS

Unlike past modernizations, blockchain, artificial intelligence, and internet of things enable a sustainable, automated business model that relies on a global ecosystem of connected intelligence. The core benefits of this solution come from the digital transformation made possible by:

Blockchain enhances trust and reduces the cost of doing business between buyers and sellers

Distributed ledger technology establishes provenance for products and thereby eliminates unlawful sellers from the supply chain

Artificial intelligence optimizes prices and inventory

BLOCKCHAIN

DISTRIBUTED LEDGER TECHNOLOGY (DLT)

A unique data platform that ensures the trust and flexibility needed to facilitate interoperability across a multitude of contract writing systems. Moreover, its shared, distributed nature also provides for the transparency needed, the trust mechanisms to garner cross-organizational buy-in, and the immutability to ensure compliance and accountability.

ARTIFICIAL INTELLIGENCE (AI)

A suite of technologies that learn from the data housed on the blockchain and provide cognitive insights into large swaths of

complex information. For example, the process of comparing prices and researching vendors can take specialists weeks, or months, to complete. However, AI can perform these same tasks, against a wider dataset, and empower the same specialist to make smarter buying decisions in near real-time.

INTERNET OF THINGS (IoT)

A computing concept where mobile and micro devices are connected to the blockchain and continuously publish real-time digital insights to the shared distributed ledger about the shipping statuses, container conditions, inspections, quality, and geolocation of products in the supply chain.

HHS received the **Authority to Operate (ATO)** on Monday, December 10, 2018, making United Solutions' infrastructure the first federally authorized blockchain solution in the federal government. **Accelerate**, the digital transformation blockchain initiative, has set the pace for the rest of the federal government to truly transform supply chain management.

Macey Smith, MBA, co-author, is a Principal at United Solutions. She is the Project Manager for the Accelerate Blockchain Project. **David T. Nguyen**, JD, MBA, co-author, is the Chief Executive Officer at United Solutions. He is the Executive Sponsor of the company's blockchain, artificial intelligence, and digital transformation projects.

United Solutions is a progressive digital transformation company that built the first federally authorized blockchain to cognitively automate emergency response, grants, procurement, and supply chain. For more information, please email sales@unitedsolutions.biz.

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