



BLUMBERG HEALTH

# Blumberg Health

## Medical Products Supply Chain Specialists

[www.blumberggrain.co](http://www.blumberggrain.co)

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# An Integrated Medical Products Supply Chain



Total end-to-end supply chain management for pharmaceuticals & other health products, including vaccines that may require freezing. We can manage product ordering, receipt through customs, warehousing, distribution to individual health clinics as well as product returns and disposal.

Leverages Blumberg Grain's world-class know-how in technology-intensive secure storage and logistics, including cold chain. Top long-term system-wide priorities are:



# Our System-Wide Priorities



## RELIABILITY

Products available 100% of the time and consistently delivered when needed down to the pharmacy level

Custom One-Stop Shop design to address each client's unique supply chain needs and priorities



## SECURITY

End-to-end product tracking and tracing with warehouse controlled access and 24/7 surveillance aimed at eliminating product diversion and counterfeit product encroachment

Our warehouses feature the same robust prefabricated construction and temperature-controlled capabilities as those used by Blumberg Grain



## EFFICIENCY

Extensive use of data mining and AI to continuously drive costs out of the network

Long-term client partnership – we will help you grow and prosper long after the initial installation



# Protecting Product Quality Across the Supply Chain



End-to-end supply chain management includes continuous product tracking and tracing from the manufacturer to the hospital or pharmacy. Strict focus on chain-of-custody down to the individual package level. We can quickly pinpoint the precise time and/or stage of distribution where products may have been diverted or counterfeit products introduced.

Product integrity is closely monitored throughout the distribution process. Real-time alerts enable prompt identification and resolution of condition changes before they escalate into major problems.

## PARAMETERS MONITORED INCLUDE



**Environmental**  
Temperature,  
humidity, light



**Product Quality**  
Eliminate tampering,  
counterfeit, diversion



**Security**  
Controlled access,  
validated identification of all  
personnel, 24/7 surveillance

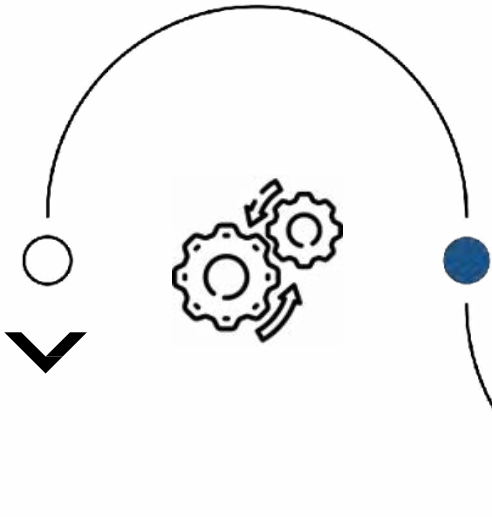
# A Flexible and Secure Supply Chain Architecture



Our supply chain management system is

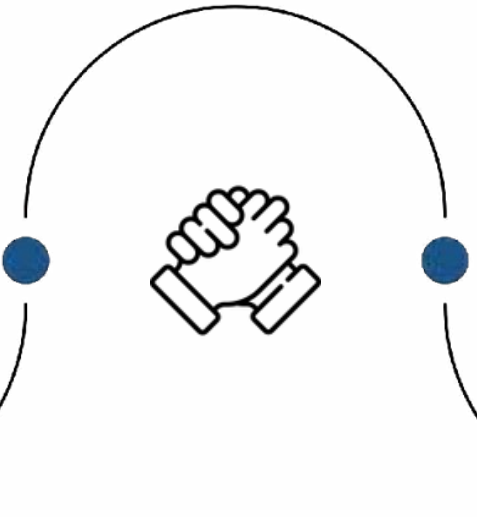
Designed to be implemented seamlessly with the flexibility to quickly adapt to changes in demand

Dynamic



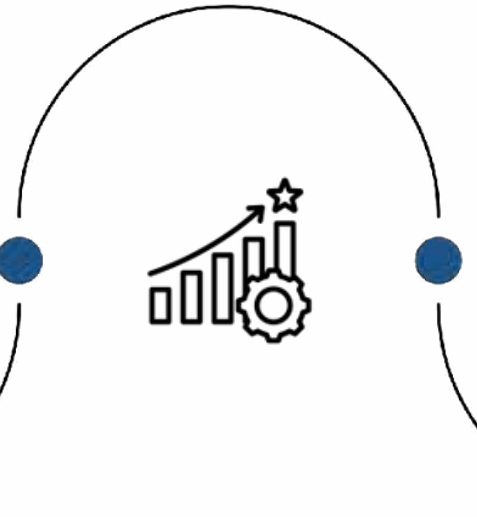
Ensures the consistent delivery of products to their destinations when needed

Reliable



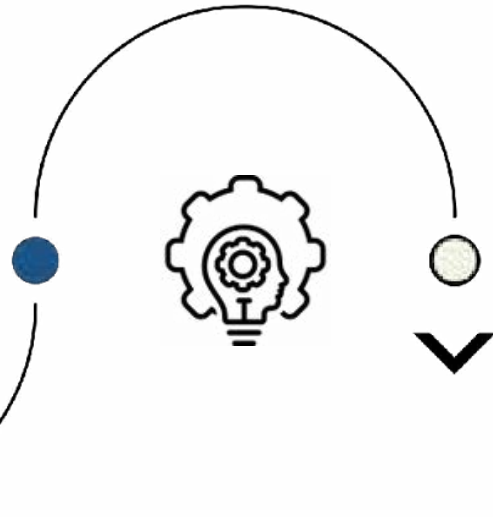
Products are cost-effectively imported, stored and distributed

Efficient



We can also manage product returns and disposal (reverse logistics)

Comprehensive



Secure

Mitigates hacking risk, virtually eliminates risk of product diversion & counterfeit

Scalable

The network can easily grow as demand increases

Adaptive

Assures the ongoing performance of the network even if one or more nodes goes offline

# Medical Products Supply Chain Management System

## Dynamic

- Agility to rapidly adjust to unexpected demand surges
- Real-time inventory management and demand forecasting
  - Key priority: eliminate stockouts and waste
- Ongoing risk analyses via digital twinning
  - Proactive implementation of risk mitigation strategies
- Technology intensive
  - Artificial intelligence-driven backbone
    - Customized solutions based on client's unique needs & goals
      - Blockchain
      - Quantum computing





# Medical Products Supply Chain Management System



## Secure

- Private encrypted end-to-end network
- Continuous access audits
  - Immediate alerts of anomalies
- Track & trace from origin to delivery down to package level
- Comprehensive chain-of-custody validation
- 24/7 surveillance of warehouses – automated alerts
- GPS-monitored delivery vehicles ensure route integrity



# Medical Products Supply Chain Management System

## Reliable

- Product integrity strictly monitored via IoT technologies
  - Temperature excursions flagged immediately
  - Multiple checkpoints for counterfeit products
  - Potential disruptions identified early and remediated promptly
  - Multiple product suppliers assessed and validated
- Distribution routes optimized daily and actively managed
  - Real-time alternative routing to ensure on-time delivery
  - Drones deployed to access rural/remote facilities

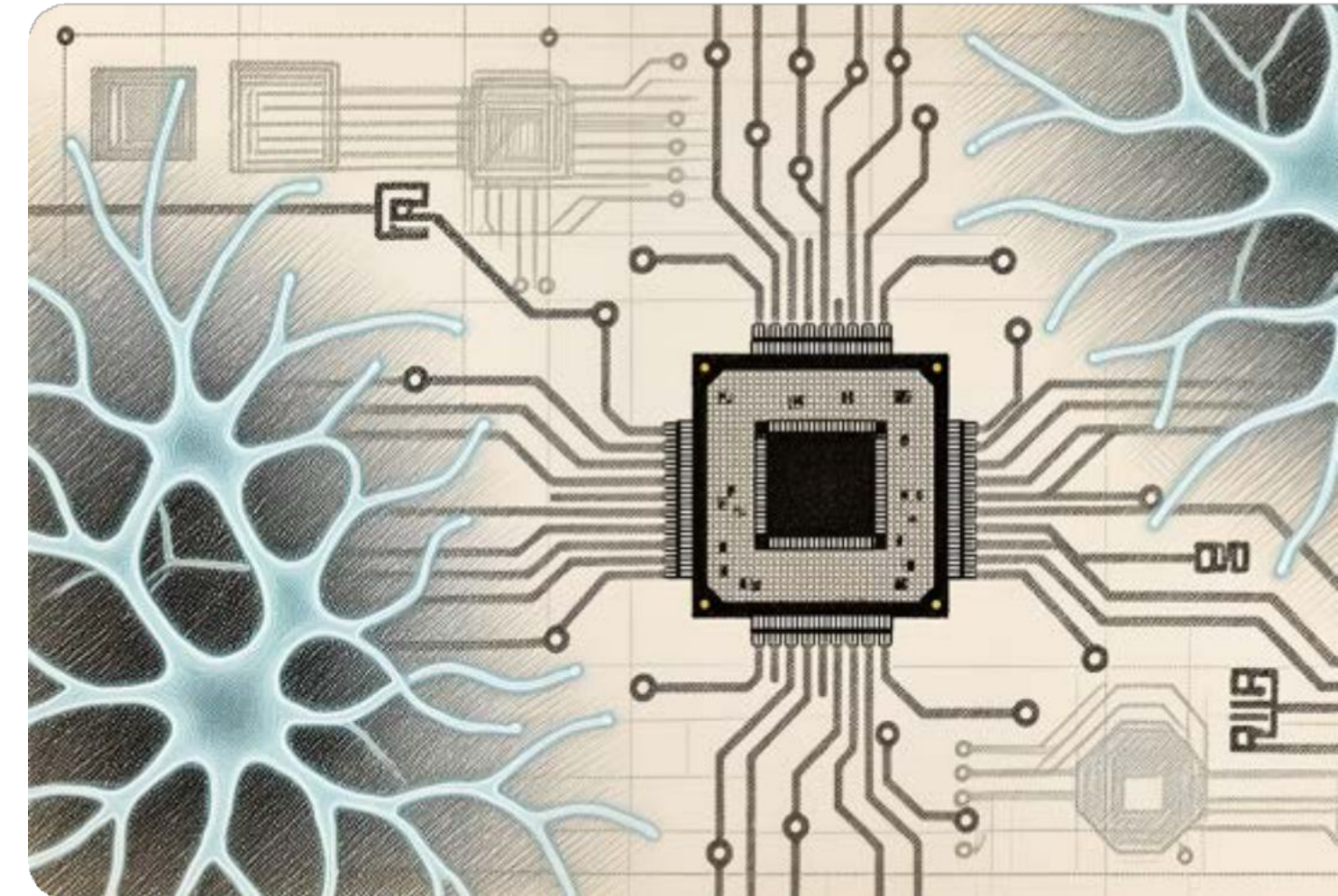




# Medical Products Supply Chain Management System

## Scalable

- Network performance maintained as demand breadth & depth grows
  - New product sourcing scheme aimed at seamless incorporation into supply chain
- Technology-driven operations to drive maximum productivity growth
  - Specific technologies deployed are dependent on each client's unique needs & priorities
  - Continuous workforce upskilling and capability expansion
  - Continuous refinement of processes and throughput



# Medical Products Supply Chain Management System

## Efficient

- Relentless focus on driving costs and waste out of the supply chain
- Performance metrics monitored and managed 24/7
  - Deliver the right product at the right time to the right location
  - Fluid communications between supply chain actors
    - Active management of performance measures
    - Extensive use of experiments aimed at continuous improvement
    - Scenario analyses via digital twinning to identify & proactively address potential risks/disruptions





# Medical Products Supply Chain Management System

## Adaptive

- Redundancy built into supply chain to establish multiple paths to source & deliver products
  - Eliminate stock outs
  - Achieve on-time delivery despite supply chain disruptions
  - Effectively respond to surges in demand
  - Seamless onboarding of new products
  - New facilities added without interrupting logistics network
  - Dynamic resource reallocation during crises



# Medical Products Supply Chain Management System

## Comprehensive

- Proactive dynamic end-to-end management of entire medical products supply chain – single-point accountability
  - Product suppliers routinely assessed for quality, on-time delivery and price
  - In-transit quality monitored 24/7 via IoT technologies
  - Highly secure warehouses monitored 24/7
    - Routine access audits
    - Compartmentalized for different temperature storage requirements
      - Ambient, refrigerate, freeze, deep freeze
      - Humidity and light monitored and controlled
    - Dynamic technology-intensive inventory management
      - Strong focus on “first-expired, first-out”
        - Relentless focus on eliminating product waste due to expiry
  - In-country logistics optimized for maximum efficiency and reliability
  - Regulatory compliance and best practices emphasized throughout





# Senior Managing Executives



**DOUGLAS HOUSE**

President, Blumberg Health

 (949) 533-7669

 [dhouse@blumbergpartners.com](mailto:dhouse@blumbergpartners.com)

- Douglas W. House serves as President of Blumberg Health responsible for global operations, staffing and project management for sovereign clients across the globe. His role includes formulating and overseeing the implementation of client-specific strategies aimed at transforming their medical product supply chains into dynamic highly secure efficient systems that enable the reliable delivery of high-quality medicines and medical products to all points in their country and/or region in a regulatory-compliant cost- effective manner.
- Mr. House is the principal architect behind the development and articulation of bespoke solutions to complex issues impeding the performance of a country's health product supply chains, including product sourcing/importation, in-country logistics including last-mile delivery, regulatory adherence, quality control/assurance, encroachment of counterfeit medicines, product waste and environmentally respectful disposal. These comprehensive plans, each based on a fundamental concept of continuous systemic improvement, address the unique needs and goals of each client.
- As a corporate executive and investor, he has over 40 years' experience in the medical sector, including pharmaceuticals, biotech, medical devices, diagnostics (tests and equipment), services and computer systems. His executive responsibilities have included strategy formulation and implementation, project management, international product distribution and supply chain management, profit/loss, mergers & acquisitions and building/leading high-performance teams.
- Mr. House spent almost nine years in the Diagnostics Division of Abbott Laboratories where he earned two national performance awards and was a founding member of the team that launched the first HIV blood test in the US.
- He also had tenures at drug maker Organon, Inc., Cambridge Biotech and medical device firm Cochlear Corporation where his responsibilities included product commercialization, business development and strategy formulation and execution.

## Education


- BA, University of North Carolina - Chapel Hill
- MBA - Marketing/Finance, University of Southern California


# Senior Managing Executives



**TOBIAS LEDERBERG**

Director, Research and  
Development & Special  
Projects

 (917) 445-3229

 [tlederberg@blumbergpartners.com](mailto:tlederberg@blumbergpartners.com)

Mr. Lederberg serves as Director, Research and Development & Special Projects.

- He has served as the organization's General Counsel since 2019 and has served as the Director of R&D and Special Projects since 2025. In that capacity, he has overseen a wide range of legal and regulatory issues. He has worked on a number of cross-border transactions while working on a variety of food security projects in Africa, the Middle East, and Europe, including storage facilities and basic processing operations for grain and perishables, manufacturing facilities, and port projects as well as Food Security Agreements between Blumberg Grain and other countries. Mr. Lederberg has also traveled to Africa to meet with heads of State and ministers on Blumberg Grain projects and also works with Ambassadors, embassy staff, and government officials in the US and overseas.
- Prior to Blumberg Grain, Mr. Lederberg served as General Counsel to an organic farming training program, which trained farmers on the techniques required to raise sufficient organic produce and to a University-based incubation center, focusing on the intersection of food and medicine, which developed several innovative plantbased food products that were carried in retail food markets throughout the U.S.

## Civic Affiliations

- Capital Good Fund – Vice Chairman, 2010-2012
- The Explorers Club-Member, 2024
- Harvard Club of Rhode Island – President, 2014-2015
- Preserve Rhode Island – Vice-Chairman, 2003-2006
- Providence Public Library – Trustee, 2003-2007
- Rhode Island Archaeological Society – President, 2002-2015
- Rhode Island Mineral Hunters – President, 2022
- Slater Design and Manufacturing Investment Fund – Chairman, 2002-2004
- Social Venture Partners Rhode Island – Chairman 2011-2013

## Education

- Boston University School of Law, J.D., 1993
  - International Law Journal, Editor-in-Chief
- Harvard College, A.B., cum laude 1988
  - John Harvard Scholar
  - Rhodes Scholar State Finalist
  - Sailing Team, Freshman and Varsity
  - Harvard Advocate, Board of Directors
  - Harvard International Review, Editor

## Bar Admissions

- Rhode Island
- Massachusetts
- New York (pending)