2019

TraceLink team grows to **MORE THAN 500+ EMPLOYEES, OVER 1 BILLION SERIAL NUMBERS ARE NOW COMMISSIONED PER QUARTER**

2018

TraceLink surpasses **1,000 CUSTOMERS AND 1 BILLION COMMISSIONED SERIAL NUMBERS**

2017

Gartner
Cool
Vendor
2017

TraceLink receives **TOP INDUSTRY ACCOLADES,** including the Edison Award™ and Gartner's "Cool Vendor" award.

TRACELINK CEO SHABBIR DAHOD is named to **PHARMAVOICE 100 MOST INSPIRING AND INFLUENTIAL PEOPLE**.

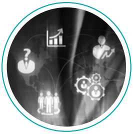
TRACELINK'S VP of Product Management **LUCY DEUS** is recognized by ***BOSTON BUSINESS JOURNAL*** as one of ten **"WOMEN TO WATCH IN SCIENCE AND TECHNOLOGY."**

TraceLink hits **INDUSTRY MILESTONE WITH 100 CONTRACT MANUFACTURING ORGANIZATIONS** serialization-ready on the TraceLink Life Sciences Cloud Network.

TraceLink acquires **ROC IT SOLUTIONS,** the leader in intelligent edge data capture for serialized product inventory in the pharma supply chain.

TraceLink unveils **INDUSTRY'S FIRST EUROPEAN COMPLIANCE AND DIGITAL**

INFORMATION PLATFORM for pharmacies with EU FMD requirements.



- TraceLink executes **UNPRECEDENTED SERIAL NUMBER VOLUMES GLOBALLY**, commissioning more than 460 million serial numbers and processing 2.5 billion serialized events.

- Every hospital on **BECKER'S 100 GREAT HOSPITALS** list is on the **TRACELINK NETWORK**.

- **TRACELINK'S** Director of Global Traceability and Standards **ELIZABETH WALDORF** is named co-chair of the **GS1 GLOBAL TRACEABILITY STANDARD (GTS2) WORKGROUP.**

- **PHASE II OF U.S. DSCSA GOES INTO EFFECT**, requiring unique serial numbers on each saleable unit of drug product sold in the U.S. **FDA ANNOUNCES ONE-YEAR ENFORCEMENT DISCRETION FOR MANUFACTURERS ON PHASE II OF DSCSA**.

2016

- TraceLink secures **$51.5 MILLION IN "SERIES C" FUNDING** led by Goldman Sachs, along with FirstMark Capital, Volition Capital, and F-Prime Capital, securing its position in the global pharma track and trace industry.

- TraceLink racks up **TOP AWARDS FOR SOFTWARE, CLOUD COMPUTING, GLOBAL LEADERSHIP, AND CUSTOMER AND REVENUE GROWTH**, from IDC MarketScape, Business Intelligence Group, Deloitte's Technology Fast 500™, The Boston Globe, and MassEcon.

- TraceLink secures **MORE THAN 100 MANUFACTURING CUSTOMERS**, and has **241,000 SUPPLY CHAIN PARTNERS** on the Life Sciences Cloud network.

- GS1 US HEALTHCARE'S **"APPLYING GS1 STANDARDS FOR DSCSA AND TRACEABILITY" IMPLEMENTATION GUIDELINE (RELEASE 1.2)** is published, with TraceLink's Elizabeth Waldorf serving as one of the two technical editors.

- TraceLink runs a **SUCCESSFUL INDUSTRY PILOT FOR DSCSA COMPLIANCE WITH "BIG 3" WHOLESALERS**, using GS1 EPCIS 1.1 data exchange in the Life Sciences Cloud.

TraceLink is named **FOUNDING MEMBER OF THE OPEN SERIALIZATION COMMUNICATION STANDARD (OPEN-SCS) WORKING GROUP**. **TRACELINK'S VP** of Industry Marketing **BRIAN DALEIDEN** is named to the Executive Steering Committee for the workgroup.

TraceLink completes **EUROPEAN MEDICINES VERIFICATION ORGANIZATION (EMVO) CERTIFICATION**, directly connecting to the European Hub.

THE EU FMD DELEGATED ACT ON SAFETY FEATURES is published, outlining the use of serialization, government reporting, and verification.

BRAZIL INTRODUCES SERIALIZATION AND TRACKING for all pharmaceuticals, with a 3-year deployment for all industry stakeholders.

SERIALIZATION REQUIREMENTS IN SOUTH KOREA cover 100% of pharmaceutical drugs, and call for use of GS1 standards for barcoding.

TraceLink customers go into commercial production with **SOUTH KOREA** and **INDIA COMPLIANCE MODULES**.

2015

TraceLink secures **$20 MILLION IN GROWTH FUNDING** led by Volition Capital.

VOLITION CAPITAL

INDUSTRY RECOGNITION OF TRACELINK AS FAST-GROWING AND CUTTING-EDGE continues to build, with the company garnering award wins from GS1 Brasil and CPhI, and Deloitte's Technology Fast 500™.

TRACELINK SURPASSES 100 CUSTOMERS ON THE TRACELINK NETWORK.

100+ Life Sciences Customers

PHASE I OF DSCSA IS IMPLEMENTED, requiring lot-level traceability on all specified drug products sold in the U.S. Moving forward, pharmacies can't accept product unless lot-level product tracing information is provided.

CHINA mandates **SERIALIZATION AND GOVERNMENT COMPLIANCE REPORTING** for all pharmaceuticals.

TraceLink unveils **FIRST LIFE SCIENCES COMPLIANCE SOLUTION TO ADOPT EPCIS-BASED IMPLEMENTATION GUIDELINES** for **BRAZIL**.

- "Brazilian Medicine Traceability Using GS1 EPCIS Implementation Guide" is published, with **TRACELINK'S** Director of Global Traceability and Standards **ELIZABETH WALDORF** serving as **CO-CHAIR OF THE GS1 BRASIL WORKGROUP**.

2014

- TraceLink supports **NEWLY ANNOUNCED HDMA 856 ADVANCE SHIP NOTICE FORMAT** designed to facilitate implementation of DSCSA across the supply chain.

- **THE TRACELINK LIFE SCIENCES CLOUD** becomes the **WORLD'S LARGEST TRACK AND TRACE NETWORK** with more than 80,000 supply chain participants.

- **TRACELINK EXCEEDS 90 LIFE SCIENCES CUSTOMERS**, including 16 of the global top-20 pharmaceutical companies.

- TraceLink launches **TRACK AND TRACE SOLUTIONS for CHINA, SOUTH KOREA**, and **BRAZIL**.

2013

- TraceLink wins **UNIQUE DISTINCTIONS AND TOP HONORS IN INNOVATION**, from Amazon, Red Herring, Edison Awards, and more.

- TraceLink expands product portfolio, introducing **CORE SERIALIZATION MODULES SNX, SOM**, and **SNM**.

President Barack Obama signs DQSA into law, with a provision to preempt all existing and future state serialization and pedigree laws. Title II of DQSA, the **DRUG SUPPLY CHAIN AND SECURITY ACT (DSCSA)**, outlines steps to build an electronic, interoperable system to identify and trace prescription drugs distributed in the U.S.

THE EU COMMISSION ENACTS THE FALSIFIED MEDICINES DIRECTIVE (FMD) to enable harmonized, European-wide measures to rigorously control the safety and supply of medicines.

CHINA'S State Food and Drug Administration (SFDA) announces its **IMPLEMENTATION OF A NATIONAL TRACK-AND-TRACE STRATEGY**, leaping ahead of the U.S. in national serialization efforts.

2012

FIRSTMARK

TraceLink secures **$5.5 MILLION IN FUNDING** from FirstMark Capital.

Frost & Sullivan names TraceLink as **2012 GLOBAL ENTREPRENEURIAL COMPANY OF THE YEA**R for Supply Network Collaboration.

TRACELINK UNVEILS PRODUCT TRACK, the industry's only Transaction History Management System providing all the necessary network connectivity, operational use case, and compliance data management tools.

WITH PFIZER AND "BIG 3" WHOLESALERS, TraceLink runs first EPCIS pilot using GS1 standards for serialized products.

A COUNTERFEIT VERSION OF THE BLOCKBUSTER CANCER DRUG, AVASTIN, enters the U.S. supply chain, dispelling the notion that the U.S. counterfeit market is generally focused on "lifestyle" drugs like diet and hair growth pills.

THE U.S. DRUG QUALITY & SECURITY ACT (DQSA) is introduced in the House of Representatives by Rep. Fred Upton, in an effort to replace a patchwork of state regulations with a unified, national law to safeguard the prescription drug supply.

THE NEW ENGLAND COMPOUNDING CENTER manufactures steroids with expired and contaminated ingredients and is blamed for **A MENINGITIS OUTBREAK** that infects 750 and kills 64 people, prompting new federal and state laws to better regulate compounding pharmacies, and expediting creation of the related DQSA.

The **EUROPEAN COMMISSION** meets to determine specifications for changing the EU's "point-of-dispense" verification system for **ENSURING DRUG AUTHENTICITY TO A**

TRACK AND TRACE SYSTEM.

- **ARGENTINA IMPLEMENTS A TRACK AND TRACE LAW** that mandates using GS1 standards for barcoding.

2011

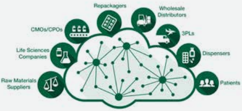
- TraceLink with Robert Handfield, PhD, Distinguished Professor of Supply Chain Management at North Carolina State University, execute a **GROUNDBREAKING STUDY** examining **COLLABORATIVE LIFE SCIENCE SUPPLY NETWORKS**.

- TraceLink helps eliminate point-to-point integration complexities by implementing an **INTEROPERABLE, “INTEGRATE-ONCE”** MODULE on its network platform for seamless data exchange.

- TraceLink becomes the **FIRST SOLUTION PROVIDER IN THE MARKET** to support large-scale life sciences commercial shipments with GS1 Electronic Product Code Information Services (EPCIS) standard exceeding 69,000 serialized shipments.
- GARTNER names TraceLink a **“COOL VENDOR”** for Supply Chain Management.

2010

- TraceLink unveils its **LIFE SCIENCES CLOUD, THE FIRST MULTI-TENANT, CLOUD-BASED NETWORK PLATFORM FOR THE LIFE SCIENCES INDUSTRY**, hosted by Amazon Web Services. Its unique, network architecture leverages on-demand computing resources and database architectures custom-designed to handle massive sets of data unlike traditional on-premise systems.



- Contract packagers and manufacturers **SHARP, PATHEON, and CATALENT PHARMA SOLUTIONS PARTNER WITH TRACELINK** for improved data sharing with customers.

The Pharmaceutical Security Institute reports the following 2010 figures: **1,735 COUNTERFEIT DRUG INCIDENTS WORLDWIDE**, and **201 PHARMACEUTICAL CRIME INCIDENTS IN NORTH AMERICA**.

Across the globe, more countries introduce laws that will have an impact on companies producing, distributing, or dispensing medicines across borders. **CHINA INTRODUCES AN ELECTRONIC CODE REGULATION SYSTEM** for tracing each box of drugs sold in the Chinese mainland. **TURKEY PASSES LEGISLATION** requiring serialization track and trace using GS1 standards for barcoding.

THE FDA OFFICE OF CRIMINAL INVESTIGATION OPENS 72 NEW CASES OF COUNTERFEIT DRUGS.

The FDA publishes ***FINAL GUIDANCE FOR INDUSTRY STANDARDS FOR SECURING THE DRUG SUPPLY CHAIN - STANDARDIZED NUMERICAL IDENTIFICATION FOR PRESCRIPTION DRUG PACKAGES.***

2009

TRACELINK, INC. IS FOUNDED BY SUPPLYSCAPE LEADERS SHABBIR DAHOD, PETER SPELLMAN, AND LUCY DEUS, and partners with Lawrence Lenihan and FirstMark Capital to offer solutions specifically architected to address tracking format complexities and built to scale the vast data volumes expected with serialization.

TraceLink's **LUCY DEUS** is named **ONE OF THE *PHARMAVOICE 100***.

2008

- **COUNTERFEIT VERSIONS OF HEPARIN**, a blood thinner, are detected in 11 countries and, in the U.S., is linked to hundreds of allergic reactions and 81 deaths.

- **CALIFORNIA FURTHER EXTENDS THE EFFECTIVE DATE FOR THE IMPLEMENTATION OF THE ePEDIGREE REQUIREMENTS** to Jan. 1, 2011, and then to 2015 at the earliest, citing a lack of technology readiness, and strong resistance from retail pharmacies.

- Drug companies, frustrated by the existing patchwork of state laws, **CALL FOR A UNIFORM NATIONAL SYSTEM FOR PEDIGREE REQUIREMENTS**, prompting the FDA's pledge to provide guidance for a standardized identification numbering system for drugs by March 2010.

- **INDUSTRY FORMS MULTI-STAKEHOLDER PHARMACEUTICAL DISTRIBUTION SECURITY ALLIANCE (PDSA)** to unify the patchwork of state level pedigree laws and take it to the federal level.

- **CHINA MAKES SERIALIZATION MANDATORY** for certain pharmaceuticals, from May 2013.

2007

- Health Industry Insights (an IDC company) and SupplyScape publish the **FIRST EVER RESEARCH STUDY ON REVENUE LEAKAGE** regarding chargebacks and returns in the pharma supply chain.

- EPCglobal **SUPPLYSCAPE IS AWARDED CERTIFICATION** for Drug Pedigree Messaging Standard by EPCglobal.

- **19 STATES INTRODUCE PEDIGREE BILLS.**

- **CALIFORNIA** ePedigree legislation **IS UPDATED TO INCLUDE SERIALIZATION BY 2009**.

2006

- SupplyScape launches RxAuthentication service, **THE INDUSTRY'S FIRST EPC VERIFICATION SERVICE FOR DRUG PRODUCTS**.

- SupplyScape co-founder **LUCY DEUS SERVES AS TECHNICAL EDITOR OF EPCGLOBAL'S DRUG PEDIGREE MESSAGING STANDARD (DPMS)**, the first industry standard for the exchange of data used for drug traceability.

- **CALIFORNIA** legislation moves the effective date of its **ePEDIGREE** law to Jan. 1, 2009.

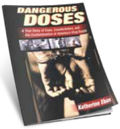
Florida
Orlando
Tampa
Petersburg
Bradenton
Sarasota
Fort Myers
Naples
Cape Canaveral
Melbourne
Fort Pierce
West Palm Beach
Boca Raton
Fort Lau
Hollyw
MIAMI
Cape Sable
Key West

- **FLORIDA'S STATE PEDIGREE LAW GOES INTO EFFECT** and becomes the first comprehensive state pedigree regulation for the tracking of all prescription drugs from manufacturer to pharmacy.

2005

- **SUPPLYSCAPE CONTRIBUTES INTELLECTUAL PROPERTY FOR THE UNIVERSAL ELECTRONIC PEDIGREE INTERCHANGE FORMAT** (which includes formats for the ePedigree and the ePedigree envelope) to the EPCglobal Drug Pedigree Messaging Interface Requirements Joint Working allowing companies to access and use the information for open, industry-wide interoperability.

- SupplyScape introduces an **ePEDIGREE COMPLIANCE SOLUTION, DELIVERING END-TO-END TRACK AND TRACE CAPABILITIES** for California, Florida, and Nevada, to ensure compliance in any state.



- Investigative reporter Katherine Eban publishes a book, D***ANGEROUS DOSES: HOW COUNTERFEITERS ARE CONTAMINATING AMERICA'S DRUG SUPPLY***, documenting recent counterfeit incidents in the U.S.

- **GS1 GLOBAL HEALTHCARE USER GROUP (HUG)** is formed to lead the healthcare industry in the effective utilization and development of global standards, with the primary focus on automatic identification to improve patient safety.

2004

- **SUPPLYSCAPE TEAMS UP WITH SUN MICROSYSTEMS INC.** to provide the Pharmaceutical Anti-Counterfeit RFID Package, a technology solution aimed at combating counterfeit drugs entering the supply chain.
- SupplyScape, in conjunction with global consulting firm CapGemini, opens an RFID Center of Excellence, in Cambridge, MA, to allow pharmaceutical companies to conduct an anti-counterfeiting, **RFID-BASED PILOT CALLED THE DRUG SECURITY NETWORK**.
- The work of the MIT Auto-ID Center is taken up by EPCglobal (an industry-standards organization focused on track and trace, and whose activities are merged into GS1 in 2005), and the **CONCEPTS EMBODIED BY PML EVOLVE INTO THE ELECTRONIC PRODUCT CODE INFORMATION SERVICES (EPCIS) GLOBAL STANDARD**.
- GS1 creates the **FIRST STANDARD FOR THE IMPLEMENTATION AND USE OF RFID (RADIO FREQUENCY IDENTIFICATION) CHIPS** as they start to become more common.

CALIFORNIA REPUBLIC

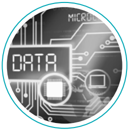
- **CALIFORNIA** passes aggressive legislation to clamp down on counterfeit drugs, including **MANDATED ELECTRONIC TRACKING OF DRUGS FROM THE MANUFACTURER THROUGH THE WHOLESALER TO THE PHARMACY**, with an initial effective date of Jan. 1, 2007.
- SupplyScape goes to Washington, DC to present to the FDA and pharma industry executives a demonstration of the ePedigree that would give **SELF-AUTHENTICATING, IRREFUTABLE TRACK HISTORIES FOR ALL DRUG PRODUCTS**, at any point in the supply chain.

- The FDA publishes a report promoting the **ADOPTION OF RELIABLE MODERN TRACK AND TRACE TECHNOLOGY AIMED AT CURBING DRUG COUNTERFEITING**, including the use of RFID tags, which the FDA concludes is feasible by 2007.
- The research company Meta Group makes the surprising assertion that **PHARMACEUTICAL COMPANIES' USE OF RFID WILL OUTPACE THAT OF RETAILERS** within the next year and a half.

2003

- The SupplyScape team, along with Robin Koh (who previously worked at MIT Auto-ID Center) collaborate with MIT's Sanjay Sarma to **APPLY IOT AND RFID TO THE LIFE SCIENCES SUPPLY CHAIN**.

AUTO-ID LABS



- SupplyScape engineers develop an innovative way to create **AN ELECTRONIC PEDIGREE FOR EVERY DRUG PRODUCT, USING TECHNOLOGY SIMILAR TO BLOCKCHAIN**.

- SupplyScape demos **ePEDIGREE AND AUTHENTICATION** at CapGemini Pharma Summit in Princeton, NJ.

- Shabbir Dahod, Peter Spellman, and Robin Koh, along with Lucy Deus, Craig Leckband, and Brenda Kelly, launch **SUPPLYSCAPE CORP**., in Cambridge, Massachusetts.

SupplyScape

- The FDA recalls **MORE THAN 18 MILLION FAKE AND REPACKAGED LIPITOR TABLETS** from the legitimate U.S. supply chain.

- An FDA task force is created to identify steps that the FDA and the private sector can take to minimize the threat to consumers posed by counterfeit drugs, including the implementation of **NEW TECHNOLOGIES-LIKE RFID**.

- **A FLORIDA GRAND JURY** indicts 19 people for contaminating and diluting prescription drugs needed by AIDS and cancer patients in a multimillion-dollar scheme.

- **FLORIDA** Governor Jeb Bush signs a law **REQUIRING PRESCRIPTION DRUG WHOLESALERS TO CARRY PEDIGREE PAPERS** to prove drugs are authentic, making it a felony to sell drugs without these documents.

2001

Focusing efforts on “intelligent infrastructure,” the MIT Auto-ID Center publishes a paper proposing the **PHYSICAL MARKUP LANGUAGE (PML)**, intended as “a common ‘language’ for describing physical objects, processes and environments.”

1999

At MIT, Dr. Sanjay Sarma and Kevin Ashton (who coined the term “Internet of Things”) co-found **THE AUTO-ID CENTER (TODAY, MIT AUTO-ID LAB)**, which eventually develops many of the key technologies behind the EPC suite of RFID standards used today worldwide.

The WHO publishes guidelines to help member states of the WHA develop national **MEASURES TO COMBAT COUNTERFEIT DRUGS**.

1989

GS1 creates the **FIRST INTERNATIONAL STANDARD FOR ELECTRONIC DATA INTERCHANGE**.

1988

The World Health Assembly (WHA) adopts a resolution that requests the World Health Organization (WHO) to initiate **PROGRAMS TO PREVENT ACTIVITY AROUND COUNTERFEIT PHARMACEUTICAL DRUGS**.

The **PRESCRIPTION DRUG MARKETING ACT OF 1987 (PDMA)** is signed into law to increase safeguards in the U.S. prescription drug distribution system, and requires drug pedigrees aimed to provide full traceability of drug products in the supply chain.