



Spiritus®

Medical Device Management Solution

spirituspartners.com

Founders

SUSAN RAMONAT

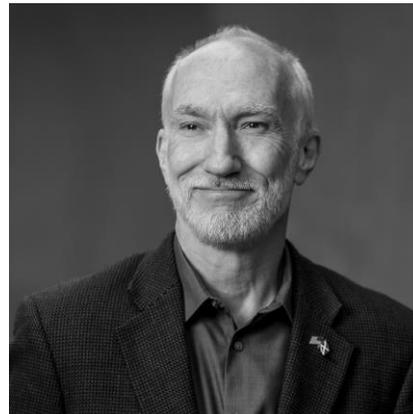
Founder and CEO

A “hands on” SWAT team leader at SEI Investments during the financial crisis, Susan spent nearly a decade building and leading the company’s enterprise risk function.

During nearly two decades at SEI, she also held executive positions in enterprise sales, product management, technology strategy, and corporate development.

She speaks frequently at industry conferences and universities about distributed ledger technology (DLT)/blockchain, data analytics, IoT and cybersecurity.

Susan is a *magna cum laude* graduate of Princeton University.



BOB CLINT

Co-Founder and CTO

Bob builds state-of-the art data analytics solutions that turn insights into operational action plans.

His primary expertise includes big data, analytics and enterprise transformation - from concept and architectural design to engineering and implementation.

Former Director and Global Audit Analytics Leader at Ernst and Young, he previously acted as Senior Partner and National Analytics Practice Manager at CSC. He served in similar positions at IBM and KPMG.

Bob received his BA in International Relations from the University of Minnesota.

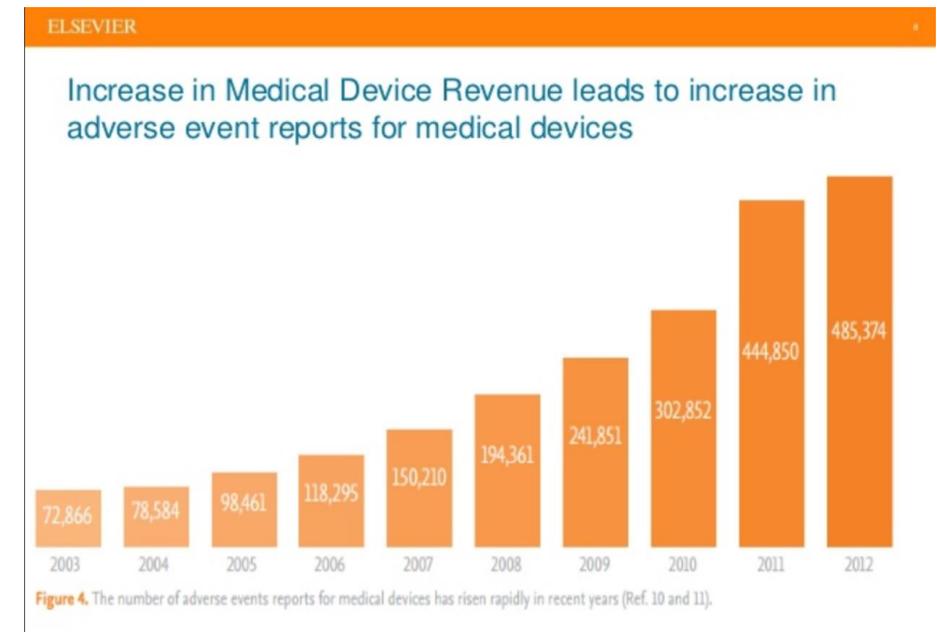
Medical device safety and quality issues are huge problems

Every device is a snowflake:

- Volumes and complexity of devices
- Cybersecurity vulnerabilities – Over 15% connected
- Explosion in adverse events globally
- Hospital-acquired infections (HAIs) ~15% attributable to devices

Impact:

- Patients: Injuries, complications and deaths (millions/year)
- Device manufacturers:
 - \$30+ billion annually (7-9% revenues)*
 - Fines, penalties and litigation costs
 - Reputational damage with top-line revenue impact
- Health systems (\$ billions/yr.):
 - Poor outcomes, higher complications and readmissions
 - Unreimbursed costs in value-based setting
 - Poor patient experiences
 - Clinician frustration

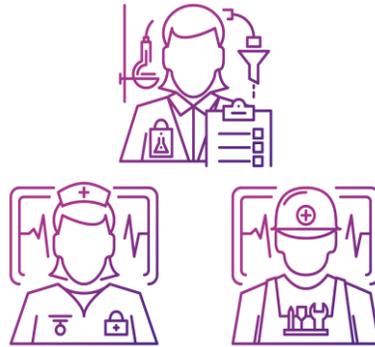


* McKinsey (2011 and 2017)

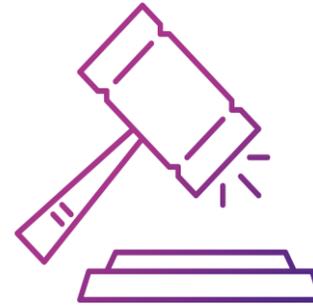
Problems with medical devices



**Volumes &
complexity**



**# of
players**

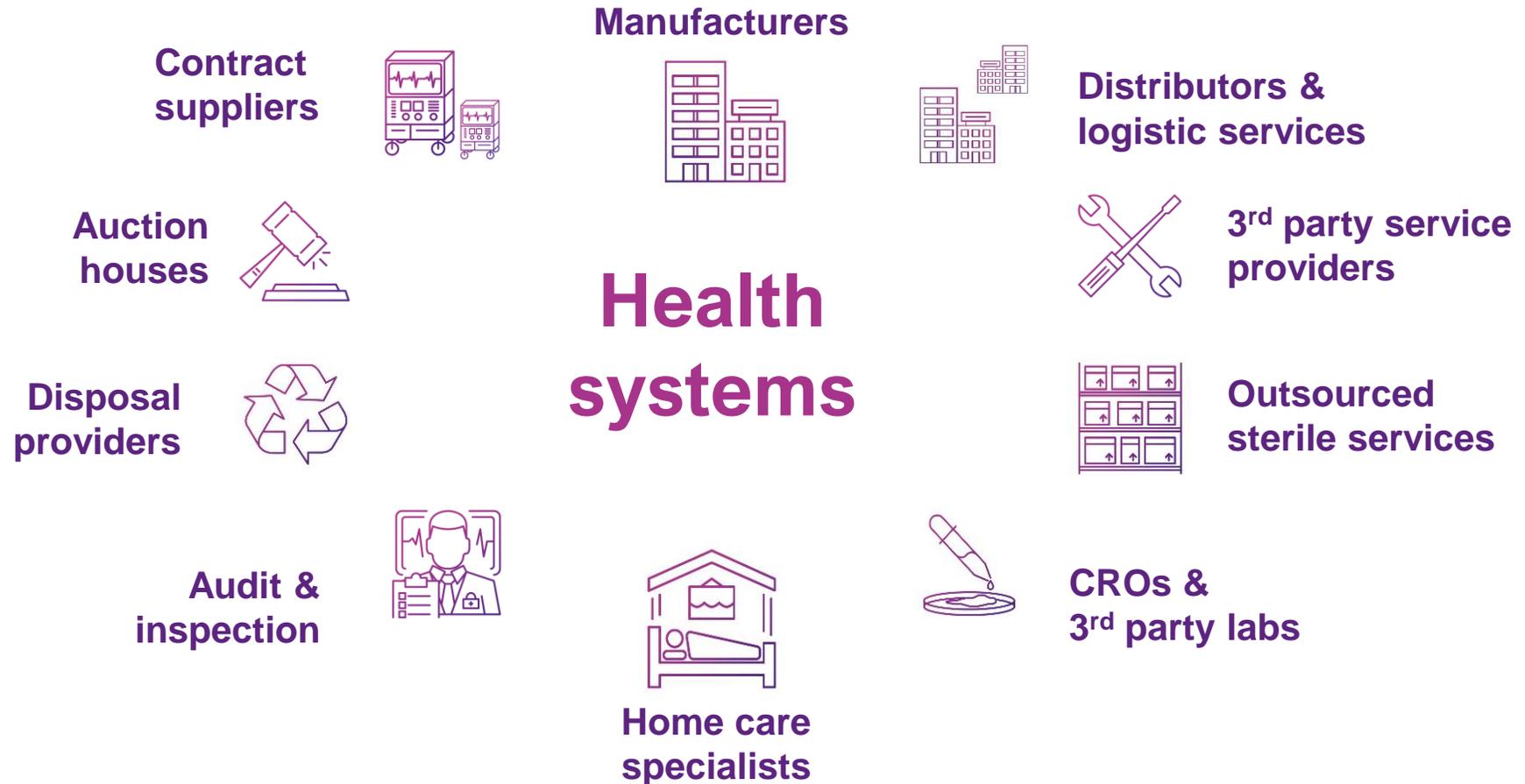


**Regulatory
changes**



**Poor
transparency**

Medical device ecosystem: Why DLT/blockchain?

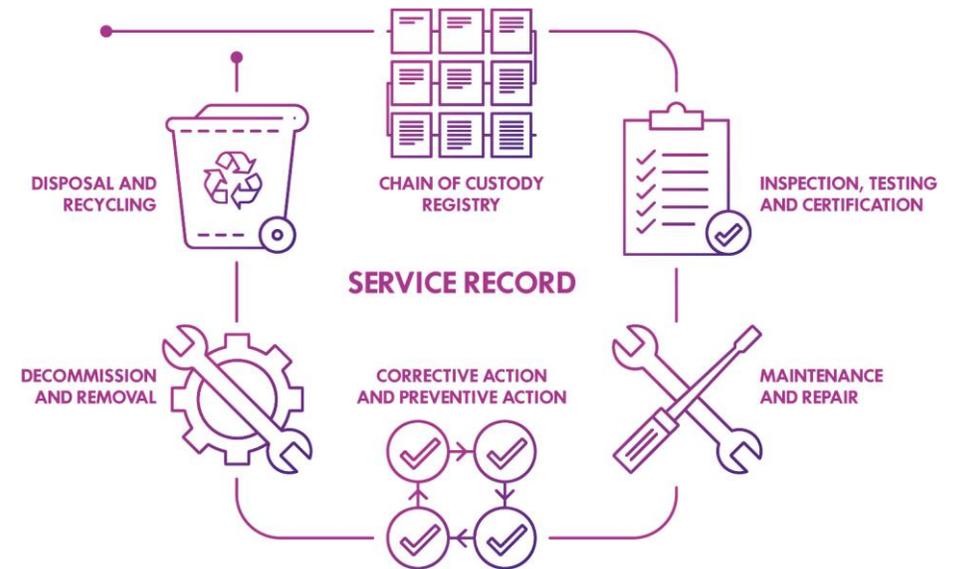


Point solutions and silos

						
Service management (All assets, parties & locations)	●	○			○	
UDI tracking (All assets)	●			○	○	○
Cybersecurity management	●		●			
Recall management	●			●		○
Sterile & reprocessing services support	○				●	
Case to cash (ERP, EHR & claims integration)	○			●		●
Supply chain management	○			○		●
Risk & compliance reporting	●		●	●		●

Spiritus solution

- Provides traceable, verifiable and tamper-evident service records across a medical device's entire lifecycle:
 - Creates shared registry among all parties (DLT/blockchain) for all assets
 - Enables shared control and governance
 - Supports physical and digital assets
- **Delivers timely, actionable insights:**
 - Leverages investments in UDIs and RFID/RTLS tracking
 - Uses light-weight API integrations to ERP, EHR and claims
 - Capitalizes on geospatial services, analytics and ML
- **Reduces cycle times for CAPAs/recalls**
- **Spans all service delivery settings**

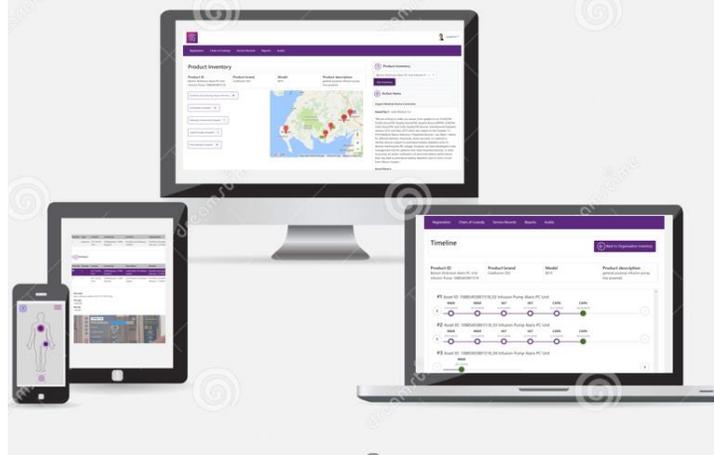


Solution partners



Arc GIS

Geospatial data,
analytics and
dashboards



GS1

Identifiers and
standards



Azure

Healthcare
blockchain, AI and
cloud suite



A path of evolution

