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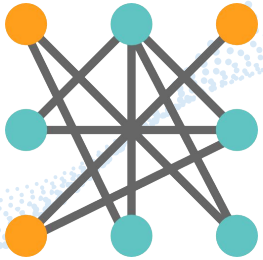
Reimagining communication with qIoT and blockchain

We are living in a connected world powered by the Internet.

Problem

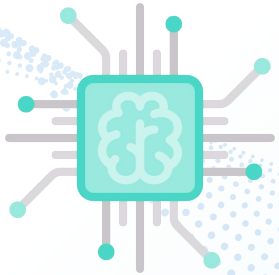
- **80,000** Attacks / Day
- **41 million** Stolen Records / Year
- **$6.2 billion USD** Loss / Year
- **$3.7 million USD** / Breach

Solution



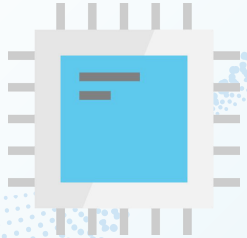
Blockchain platform for decentralized trust

+



Quantum encryption for an unhackable, instantaneous network

=



Secure storage system and communication channels

Quantum Key Distribution

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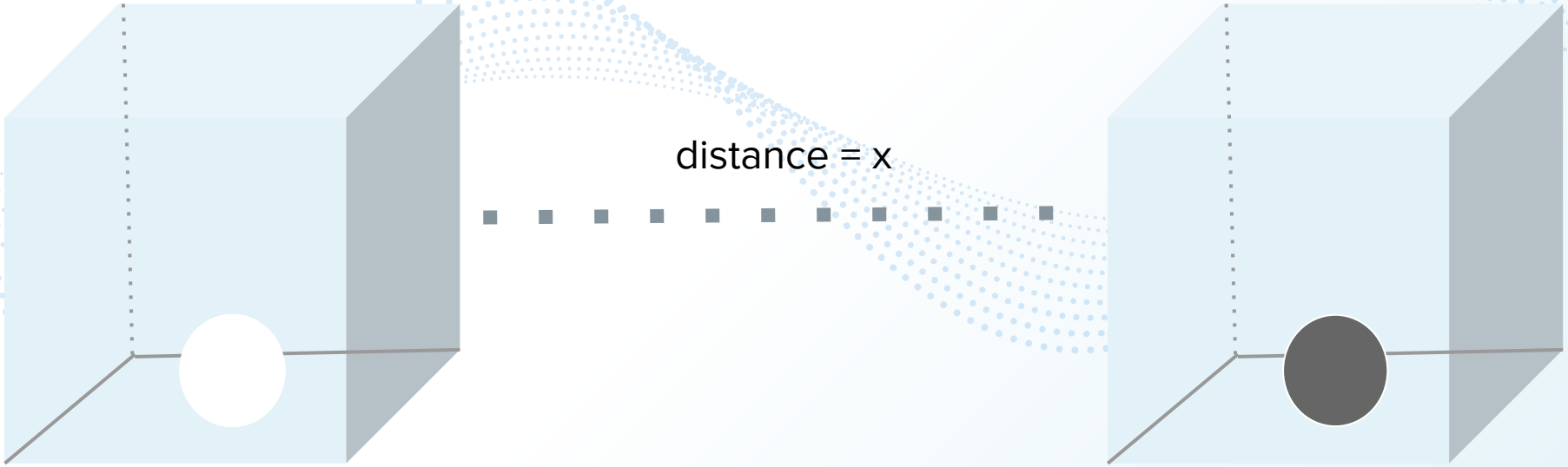
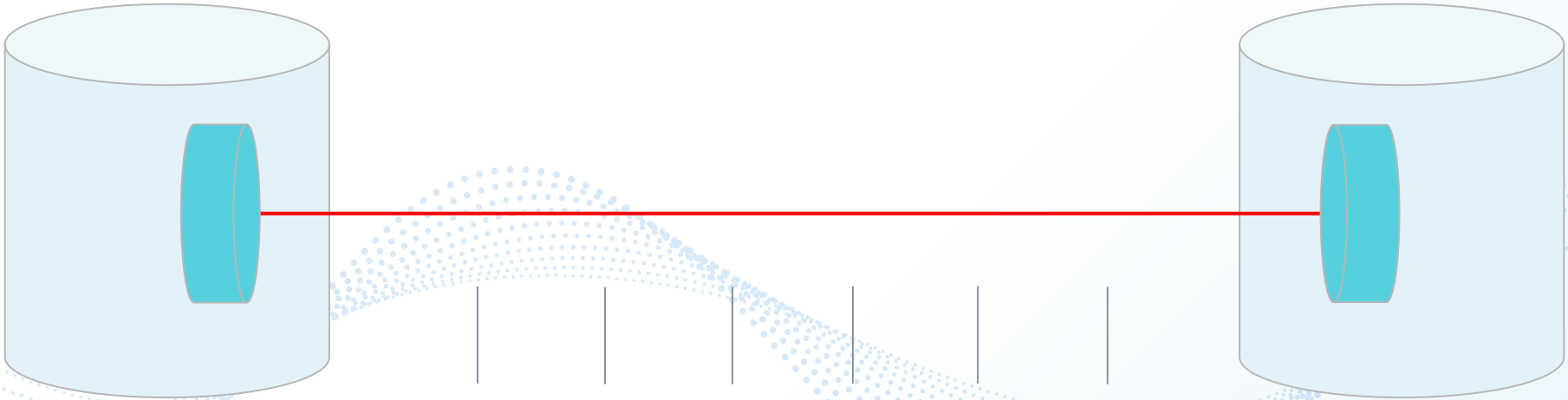
Box 1

Box 2



Alice

Bob



Alice's Sequence	1	1	1	0	0	1
Bob's Bases	+	+	x	x	+	x
Bob's Result	0	1	0	-	0	1
Result	-	1	-	-	0	1

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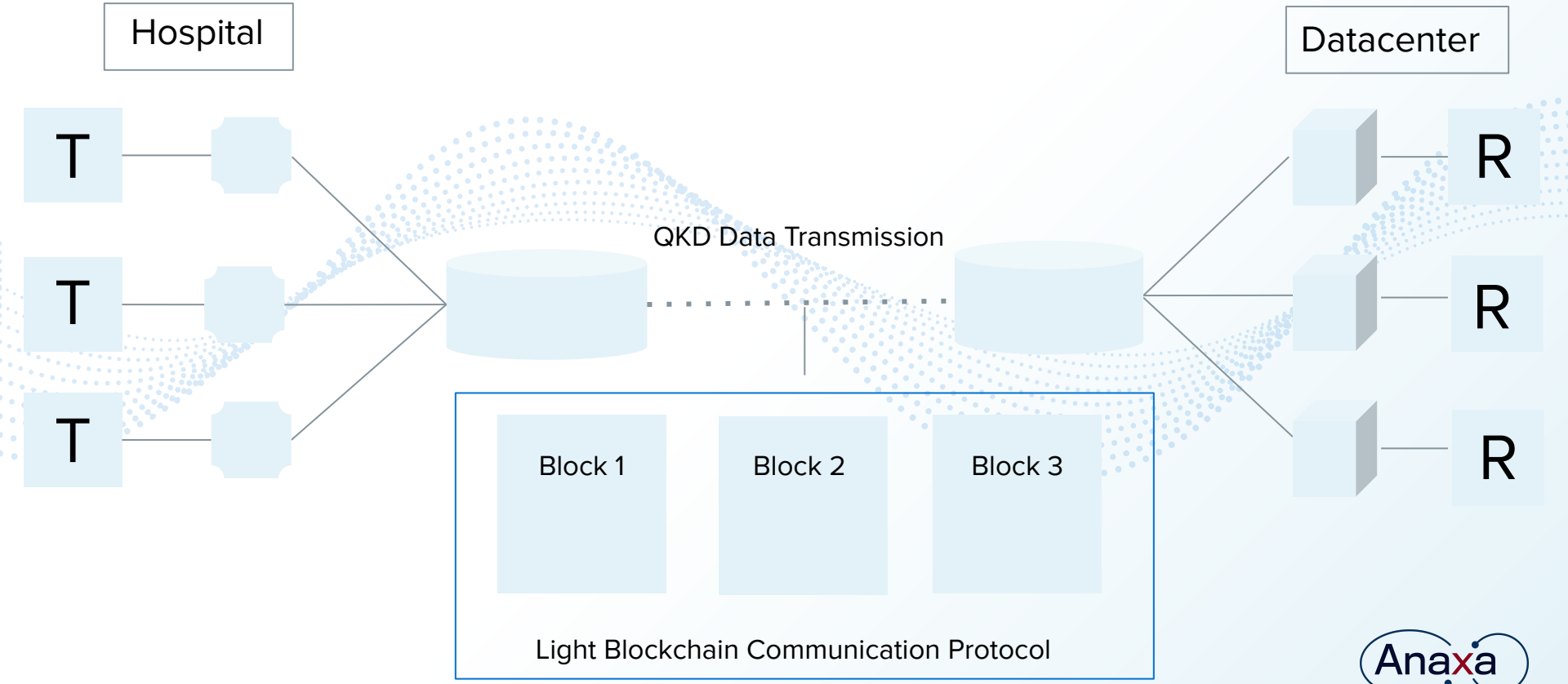
Device Scheme



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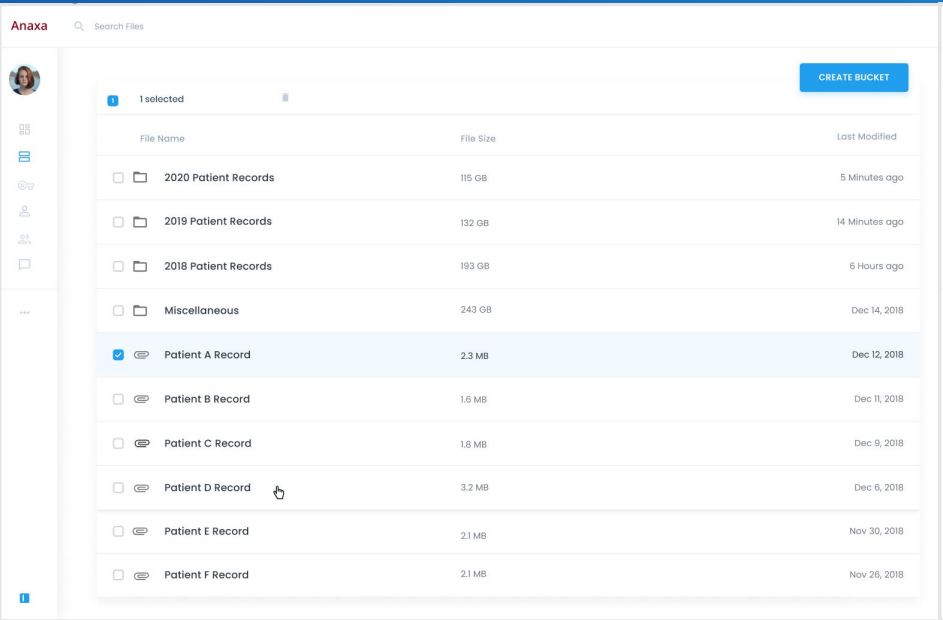
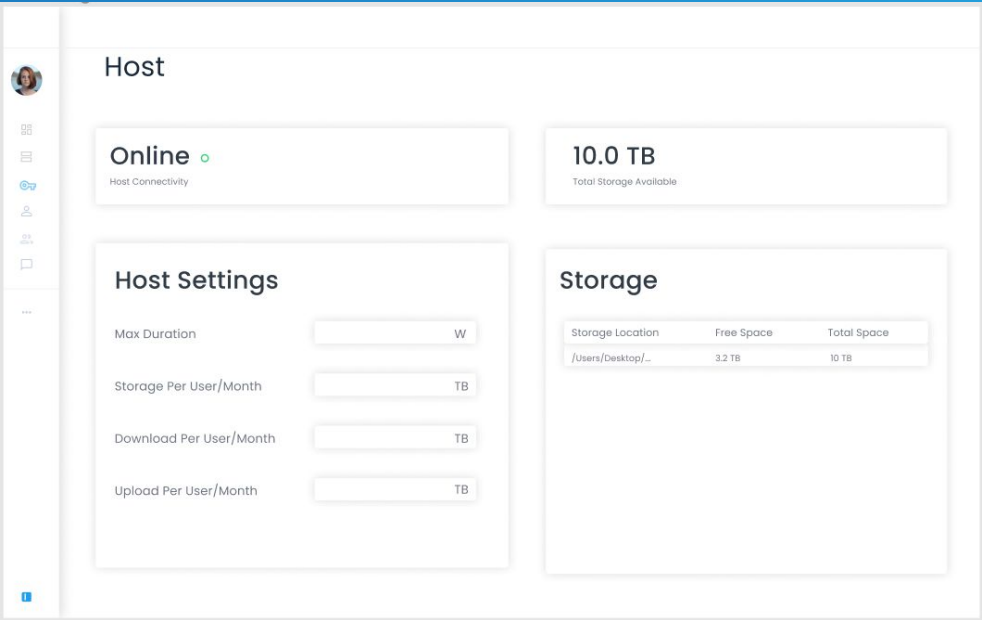
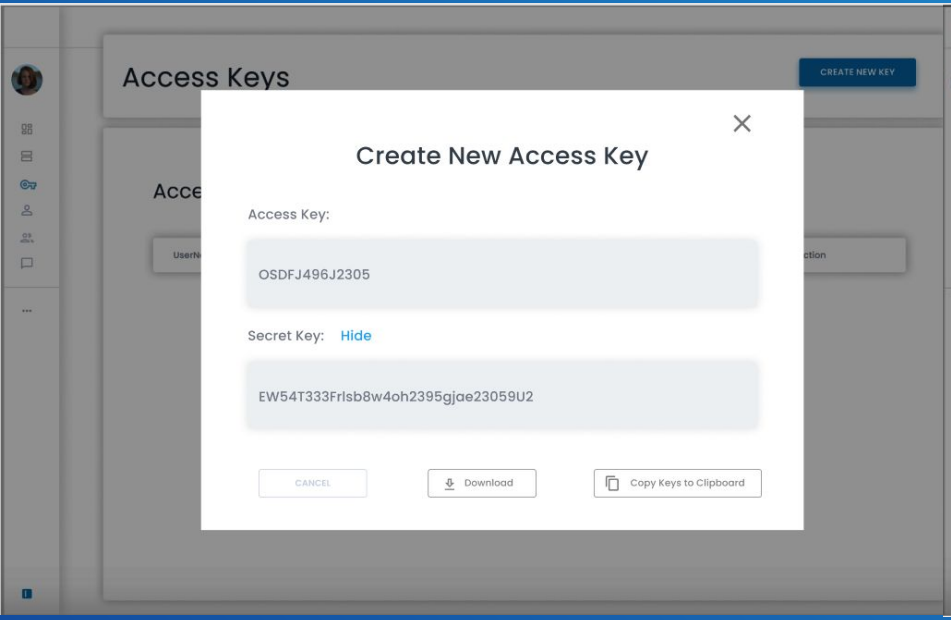
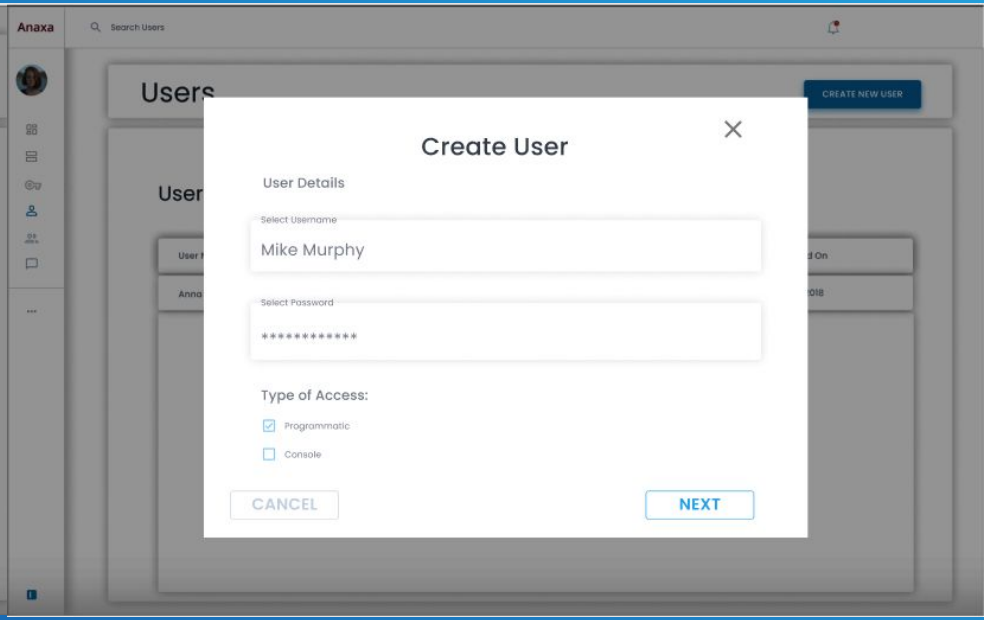
User Mockup


Anaxa
Search Files
CREATE BUCKET
1 selected
File Name
File Size
Last Modified
2020 Patient Records
115 GB
5 Minutes ago
2019 Patient Records
132 GB
14 Minutes ago
2018 Patient Records
193 GB
6 Hours ago
Miscellaneous
243 GB
Dec 14, 2018
Patient A Record
2.3 MB
Dec 12, 2018
Patient B Record
1.6 MB
Dec 11, 2018
Patient C Record
1.8 MB
Dec 9, 2018
Patient D Record
3.2 MB
Dec 6, 2018
Patient E Record
2.1 MB
Nov 30, 2018
Patient F Record
2.1 MB
Nov 26, 2018


Host
Online
Host Connectivity
10.0 TB
Total Storage Available
Host Settings
Max Duration
W
Storage Per User/Month
TB
Download Per User/Month
TB
Upload Per User/Month
TB
Storage
Storage Location
Free Space
Total Space
/Users/Desktop/...
3.2 TB
10 TB

User Mockup


Access Keys
CREATE NEW KEY
Create New Access Key
Access Key:
OSDFJ496J2305
Secret Key: Hide
EW54T333Frlsb8w4oh2395gjae23059U2
CANCEL
Download
Copy Keys to Clipboard

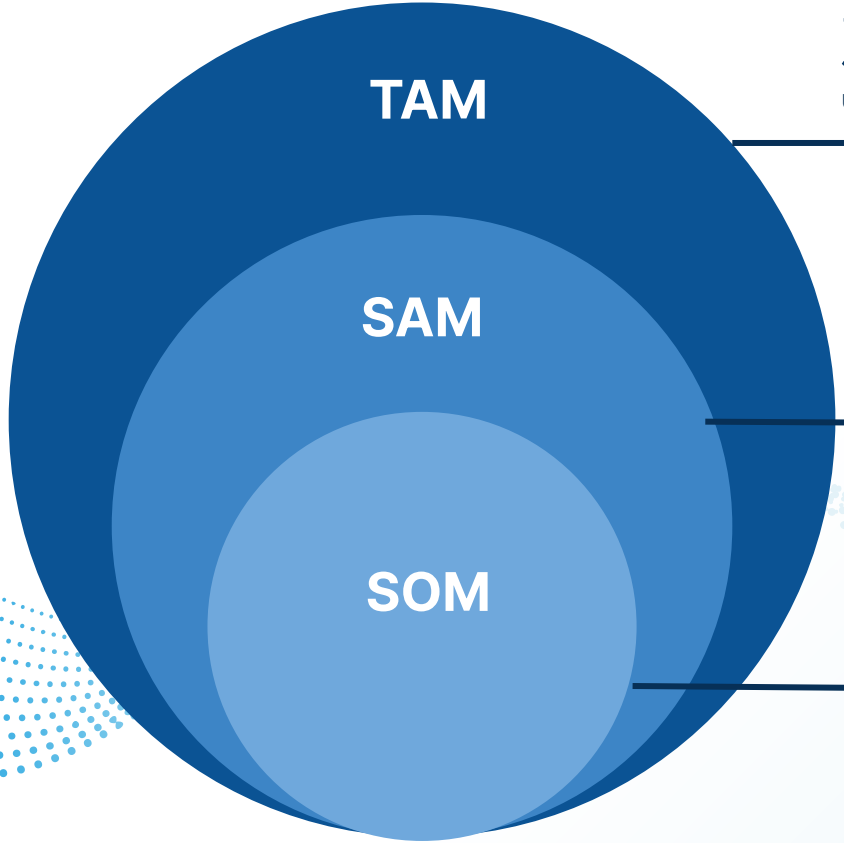

Anaxa
Search Users
Users
CREATE NEW USER
Create User
User Details
Select Username
Mike Murphy
Select Password
Type of Access:
Programmatic
Console
CANCEL
NEXT

Competitive Advantage

Classical vs. Quantum Network Potential

5G	QG
• *Encryption Speed* 10 Gbps	• *Encryption Speed* **100 Gbps**
• *Latency* 1 ms	• *Latency* **0 ms**
• *Spectrum Efficiency* 30 bits/hz	• *Spectrum Efficiency* **60 qubits/hz**

Market Size



300 Million

U.S. population with health insurance

40 Million

U.S. Population with health insurance who experienced data breaches

8 Million

East Coast population who experienced a health data related breach

Business Model

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Revenue Model

$28,100

Blockchain network and quantum encryption for storage and communication channel

$26,000

/ Per year additional costs for blockchain network layer

Metrics:

50 users:

- ➔ Projected Revenue: = $2.7 million
- ➔ ARPA: $4,500

Revenue Model Breakdown

Product Breakdown

1. User data gathered
2. Data processed by client, prepare to send/save in decentralized storage nodes
3. QKD Transaction completes, data encrypted + sent using Light Blockchain Communication Protocol (LBCP)

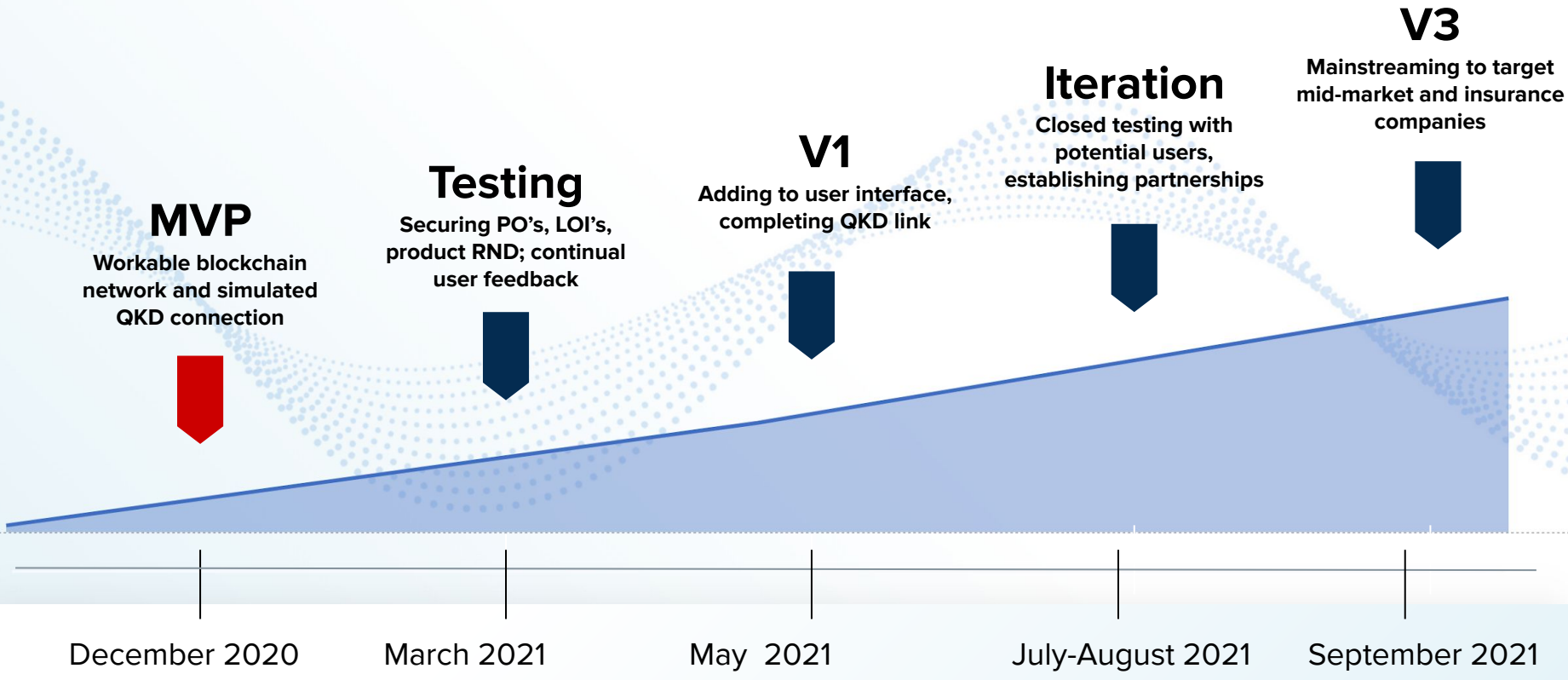
Pricing by Component

Quantum Hardware
- Manufacturing cost: ~$20,000
- Profit Margin: 30% (17% industry average)
- 5 minimum user devices allotted
- “Pay as you go”

Decentralized Storage
- Manufacturing cost: ~$50 per TB + qHardware
- Profit Margin: 30% (17% industry average)
- 20 nodes minimum (2TB each, $100)
- SAAS model for maintenance
- $28,100 upfront cost, $26,000 afterwards (annually)

User Platform Software
- SAAS Model
- $200 per user (medical staff/personnell)
- 5 users minimum tier
- Pay for maintenance + upkeep
- Optional, depending on need of client

Product Roadmap



Team and Contact

Anaxa

Affiliations:

Biomedical Zone

DMZ

Board of Medicine 2019 2020 Primum Non Nocere

TKS

Ryerson University

Alice Liu

Co-Founder

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Co-Founder

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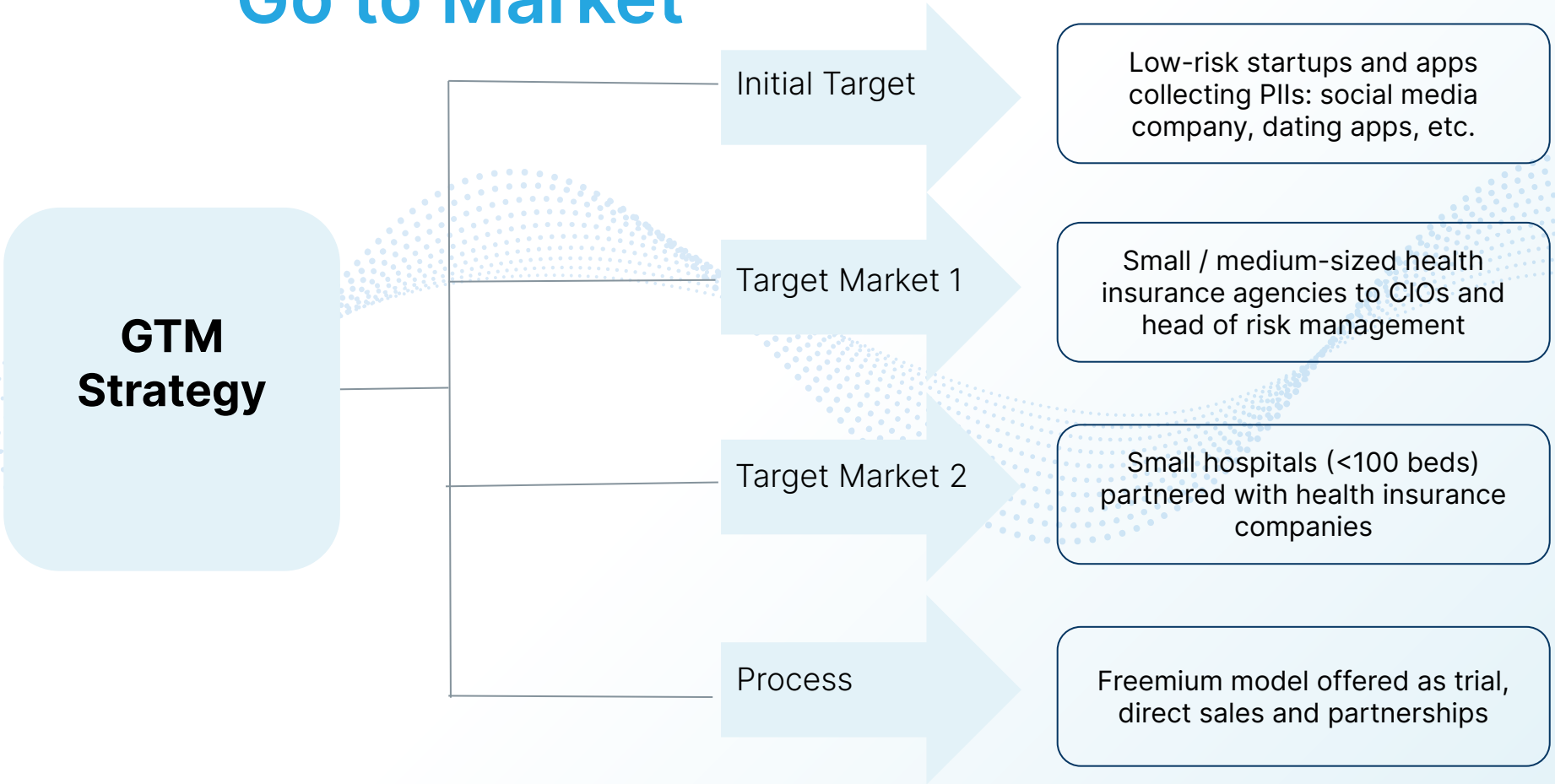
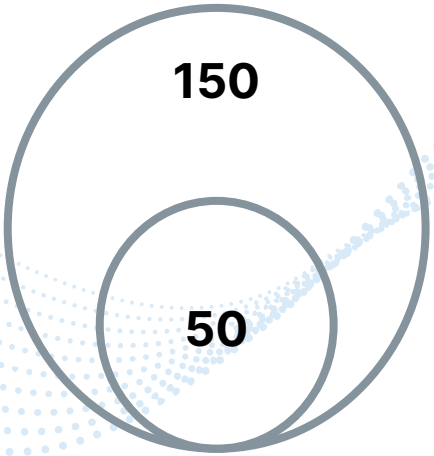
APPENDIX

Go to Market


GTM Strategy
Initial Target
Low-risk startups and apps collecting PIIs: social media company, dating apps, etc.
Target Market 1
Small / medium-sized health insurance agencies to CIOs and head of risk management
Target Market 2
Small hospitals (<100 beds) partnered with health insurance companies
Process
Freemium model offered as trial, direct sales and partnerships

Profitability Metrics Breakdown

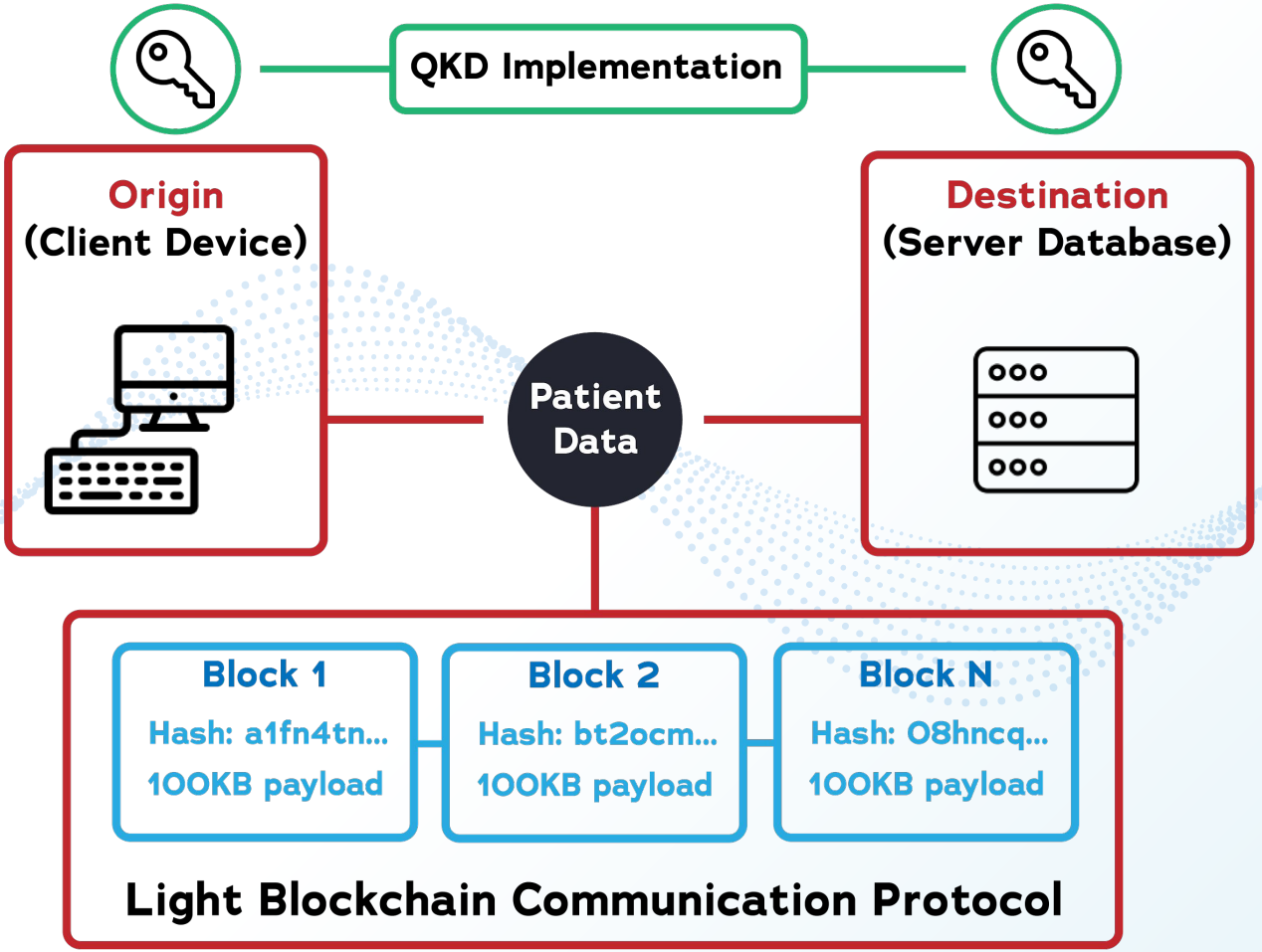


Massachusetts Hospitals and Health Insurance Agencies

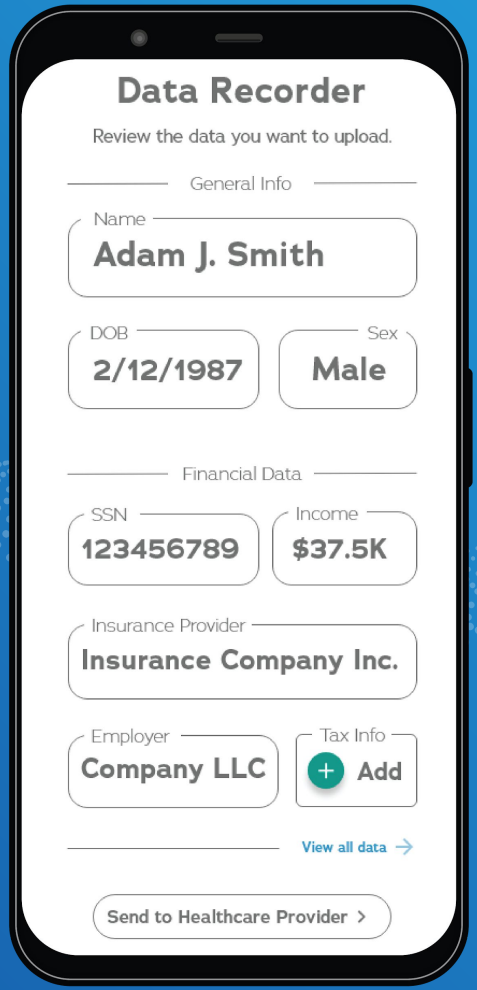
# of smaller hospitals (<100 beds) in Massachusetts + health insurance agencies

Metrics:

- **Projected Revenue**: # Units * Price = $2.7 million
- **ARPA** (average revenue per account): MRR / # Units = $4,500


QKD Implementation
Origin
(Client Device)
Destination
(Server Database)
Patient
Data
Block 1
Hash: a1fn4tn...
100KB payload
Block 2
Hash: bt2ocm...
100KB payload
Block N
Hash: O8hncq...
100KB payload
Light Blockchain Communication Protocol

User Mockup


Data Recorder
Review the data you want to upload.
General Info
Name
Adam J. Smith
DOB
2/12/1987
Sex
Male
Financial Data
SSN
123456789
Income
$37.5K
Insurance Provider
Insurance Company Inc.
Employer
Company LLC
Tax Info
Add
View all data
Send to Healthcare Provider

Sales Funnel

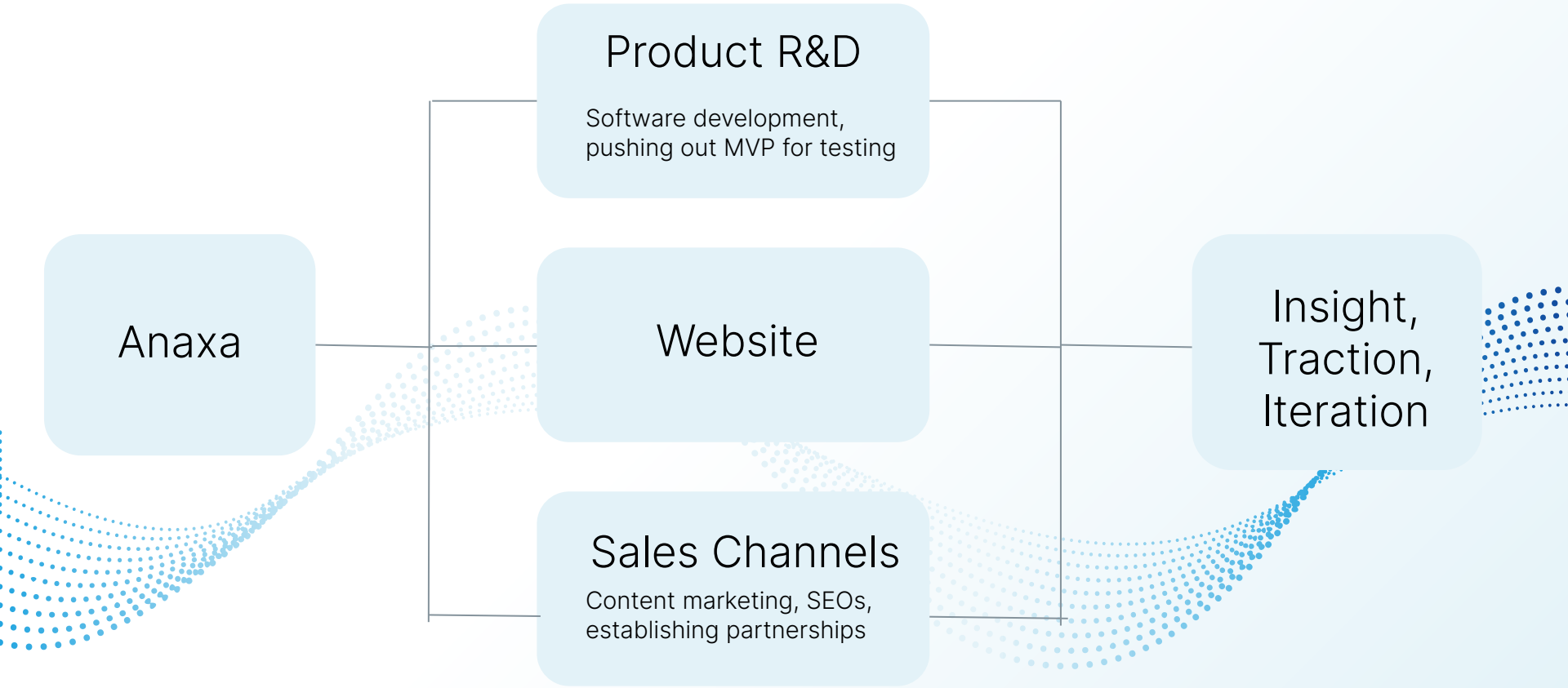
Mid-market: self service and partnerships within healthcare space

Attention (of manager) → white paper, short demo videos, testimonials, security page covering key data concerns, etc.

Consideration (managers, end users, developers) → case studies, demos, webinars, tutorials

Decision → take up the trial, completing price quotes, giving additional walk throughs of product

Initial Funding



Competitive Market

Market Concentration:

Major Players:

IBM

Check Point SOFTWARE TECHNOLOGIES LTD

DELL Technologies

AVG

CISCO

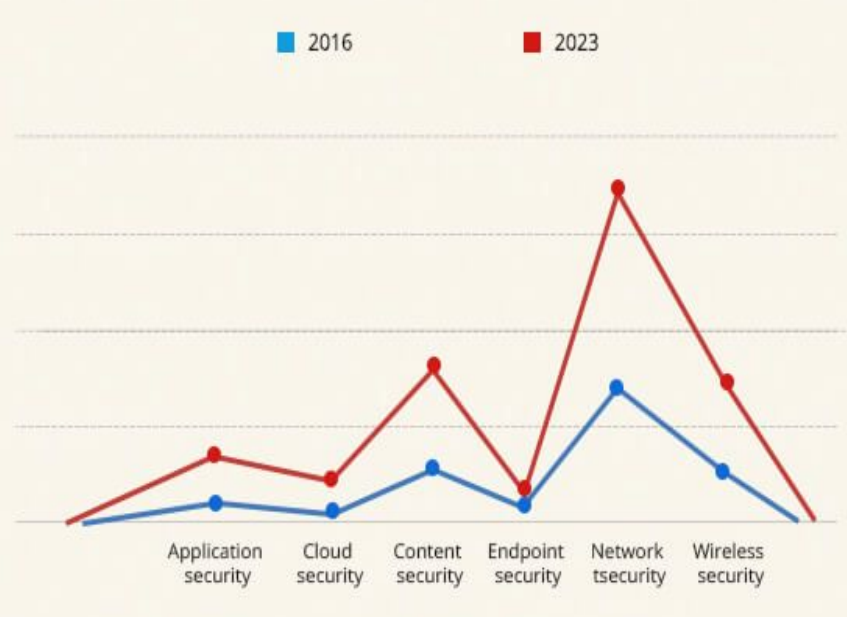
Consolidated– Market dominated by 1-5 major players

Cybersecurity Market

Fragmented – Highly competitive market without dominant players

Competitive Market

Global Healthcare Cybersecurity:



U.S. Cybersecurity Market: