

The Evolving Landscape of Data Security and Analytics



Hello!

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Vice President (Offensive Security Research Testing & Attack
Surface Validation)



JnJ - > PSEG - > JLL - > Merck - > Wells Fargo



MS in Information Technology – **Pace University**

BS in Computer Information Systems – **Baruch College**



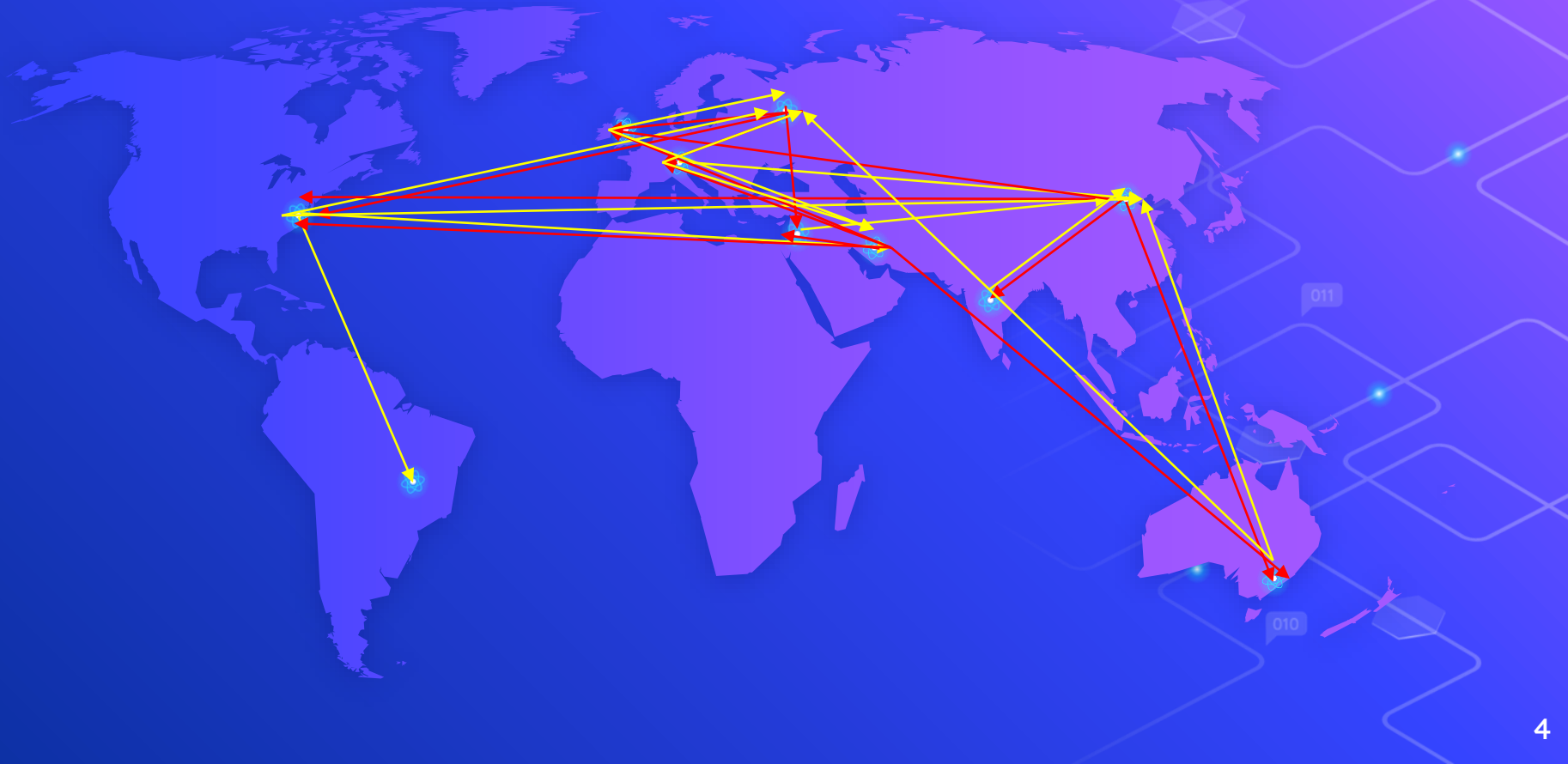
10+ years in Information Technology



CIA – Confidentiality, Integrity, Availability



Threat Landscape





3,205 data breaches

That's a lot of breaches...

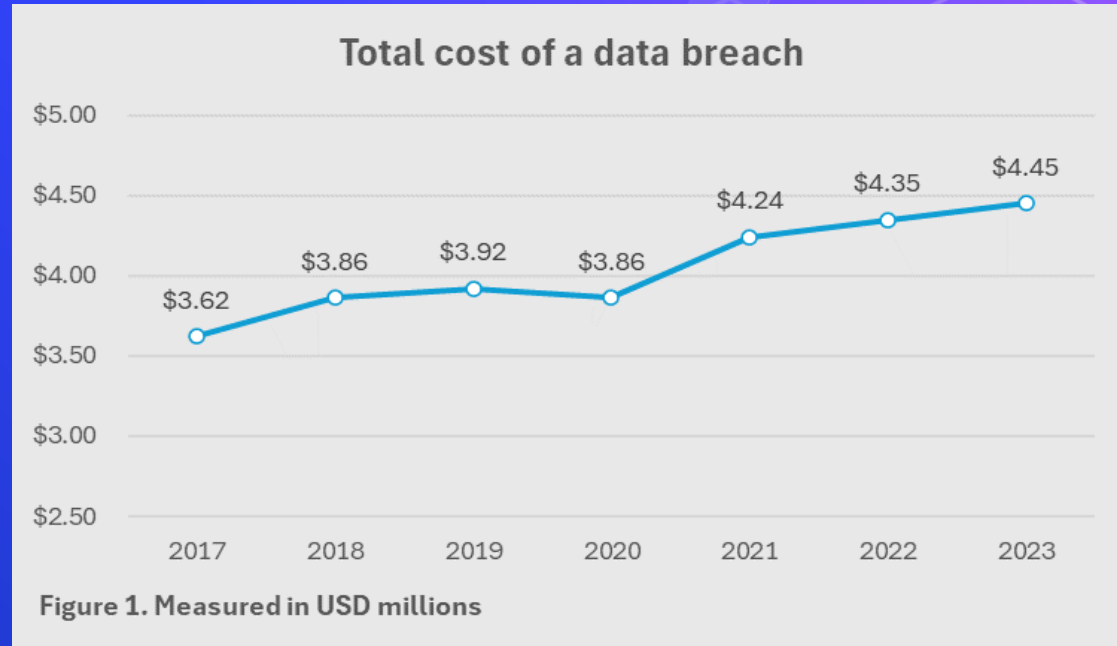
353,000,000 victims

And a lot of victims...

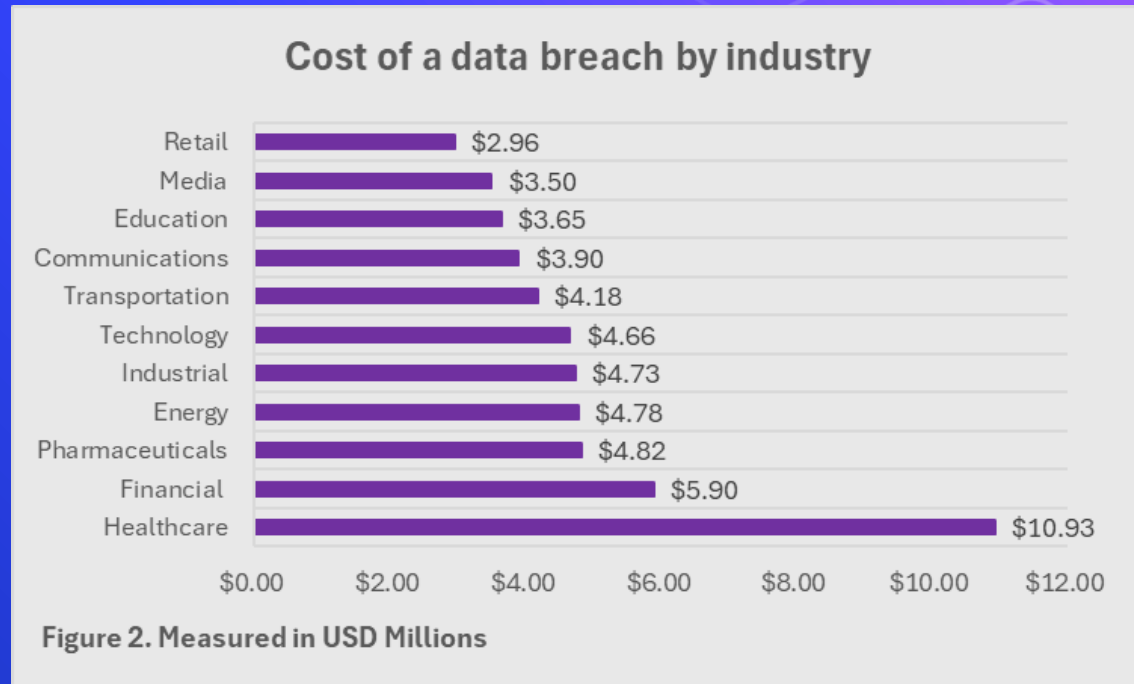
\$6,000,000,000,000

And a whole lotta money!

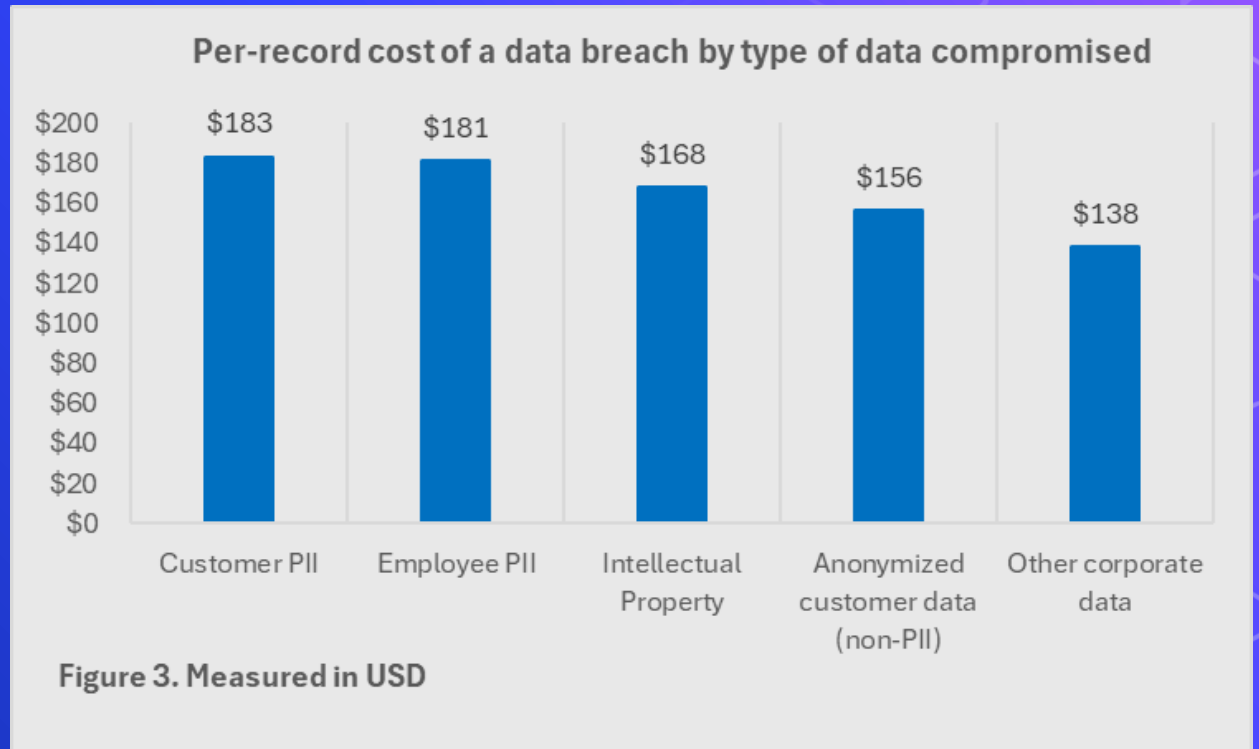
Globally, the average cost of a data breach rose to USD \$4.45 million. This represents a 2.3% increase from 2022 average cost of USD \$4.35 million. Since 2020, when the average total cost of a data breach was USD \$3.86 million, the average total cost has increased 15.3%.



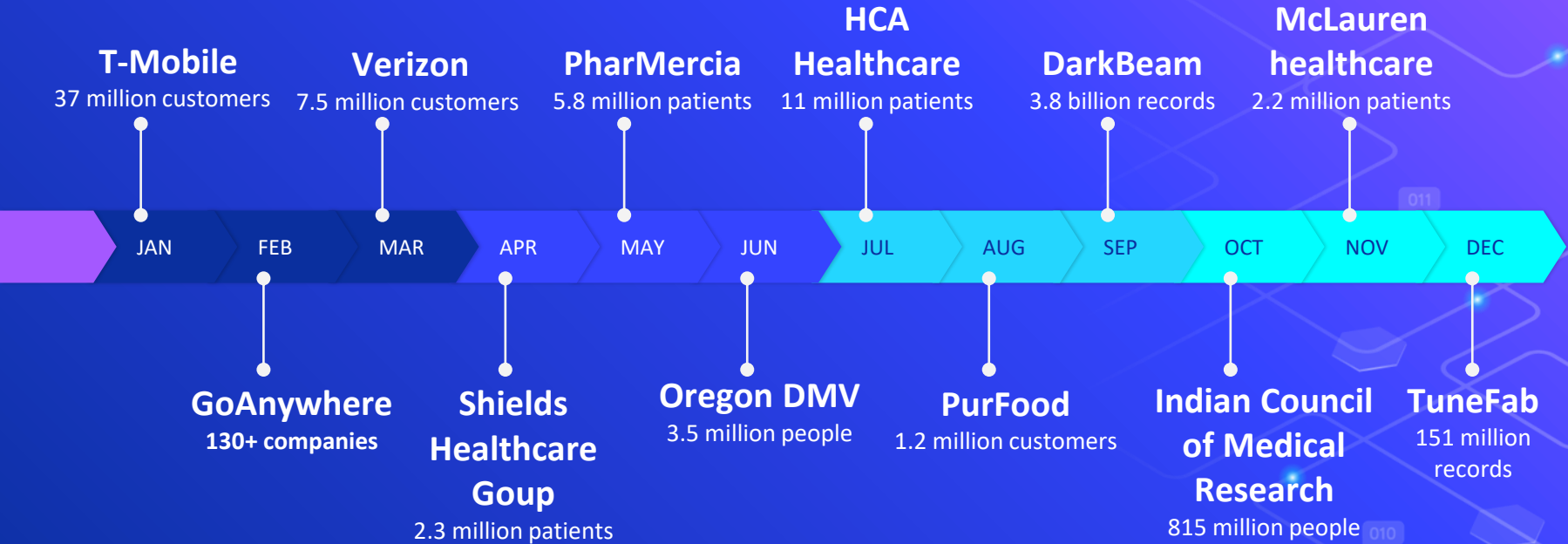
Healthcare continues to experience the highest data breach costs of all the industries, increasing from USD \$10.10 million in 2022 to USD \$10.93 million in 2023, an increase of 8.2%. Healthcare faces high levels of regulation and is considered critical infrastructure by the US government. Since the Covid-19 pandemic, the industry has seen notably higher data breach costs.



In 2023, customer PII such as names and Social Security numbers cost organizations USD \$183 per record, with employee PII close behind at USD \$181 per record. 52% of all data breaches involved customer PII. This is an increase of five percent from 2022. Compromised employee PII has also seen a sizeable growth.



Largest data breaches of 2023



Key Strategies

- Integration of data analytics with cybersecurity
- Validation testing
- Cyber Resilience

Organizations needs to employ these strategies proactively as cyber threats become increasingly sophisticated.

Key Technologies

- Artificial Intelligence (AI) and Machine Learning (ML)
- Blockchain Technology
- Edge Computing
- Quantum Cryptography
- Zero Trust Architecture (ZTA)



Predictive Analytics

- Enhancing Threat Intelligence
- Strategic Decision-Making
- Proactive Security



Quantum Computers

- ⬡ Cryptographic Vulnerability
- ⬡ Post-quantum cryptography (PQC)
- ⬡ R&D
- ⬡ Security Assessments
- ⬡ Data Lifecycle Management



Blockchain Technology

Distributed Ledger Technologies (DLT)

- ⬡ Data Integrity
- ⬡ Traceability
- ⬡ Decentralized Identity Management

Blockchain technology makes it difficult to tamper with, offering a robust solution for secure data storage, transaction processing, and identity management.



Strategic Integration

Challenges

- ⬡ Silos in Security
- ⬡ Compliance
- ⬡ Change Management
- ⬡ Skill gaps

Opportunities

- ⬡ Enhanced Threat Detection & Response
- ⬡ Efficiency
- ⬡ Collaboration
- ⬡ Competitive Advantage

Governance, Compliance, and Ethical Considerations

- ⬡ Governance
- ⬡ Compliance
- ⬡ Ethical Considerations

As the threat landscape continues to evolve, the integration of Governance, Compliance and ethical considerations ensure sustainable and socially responsible business practices.

Thanks!

Any questions?

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