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Partner Sales School

Database Security

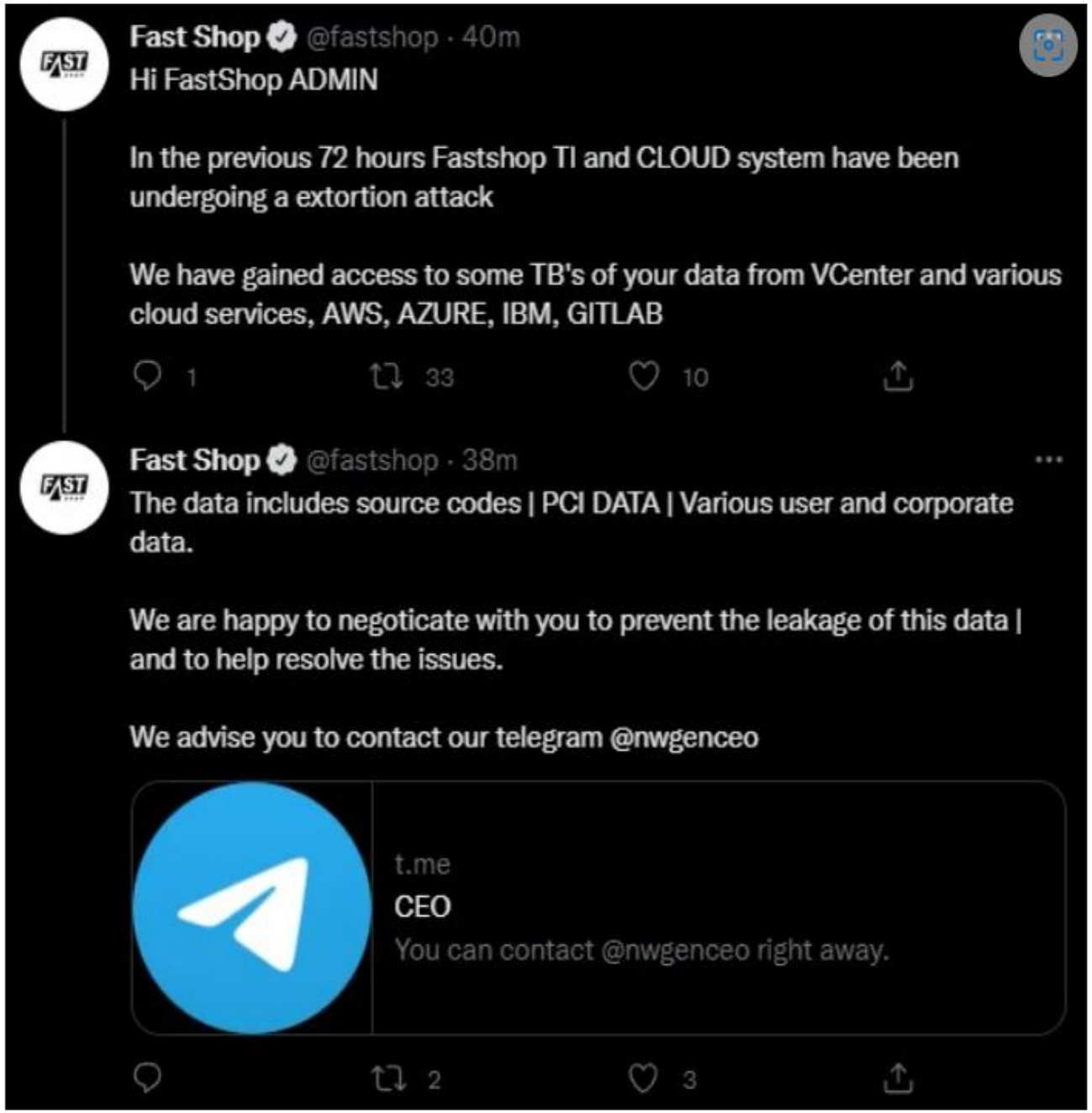
Alexandre Fagundes
LAD Partner Enablement

Growth Machine

Site da loja Fast Shop sofre ataque hacker e grupo quer negociar dados de consumidores

Aviso de invasão foi publicado no Twitter oficial da Fast Shop

POR JULIANO AIRES 23/06/2022 01:26 4 REPORTAR ERRO



[Site da loja Fast Shop sofre ataque hacker e grupo quer negociar dados de consumidores | Adrenaline]

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Agenda

1. WHY — Challenges of our customers
2. WHEN — Market Opportunity
3. WHERE — Target Customers
4. WHAT — Oracle Security Solutions
5. HOW — Uses Cases

Why

DataSecurity Play

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Disruptive Tech

Technology industry leaders see regulation becoming much more disruptive over the next 3–5 years

Change in level of disruption for emerging issues

	Very disruptive today	Very disruptive 3–5 years	
Cybersecurity	59%	64%	+5%
Data-related issues	55%	64%	+9%
Artificial intelligence	52%	47%	-5%
Privacy and surveillance	52%	48%	-4%
Regulation	41%	55%	+14%
Threats to truth and trust	36%	35%	-1%
Web3	24%	29%	+5%
Next-generation manufacturing	21%	18%	-3%
Quantum computing	21%	15%	-6%
Augmented/virtual/ mixed reality	17%	18%	+1%
Cyber-biological convergence	8%	14%	+6%

Note: N = 68.

Source: Deloitte survey of US technology industry leaders, December 2021.

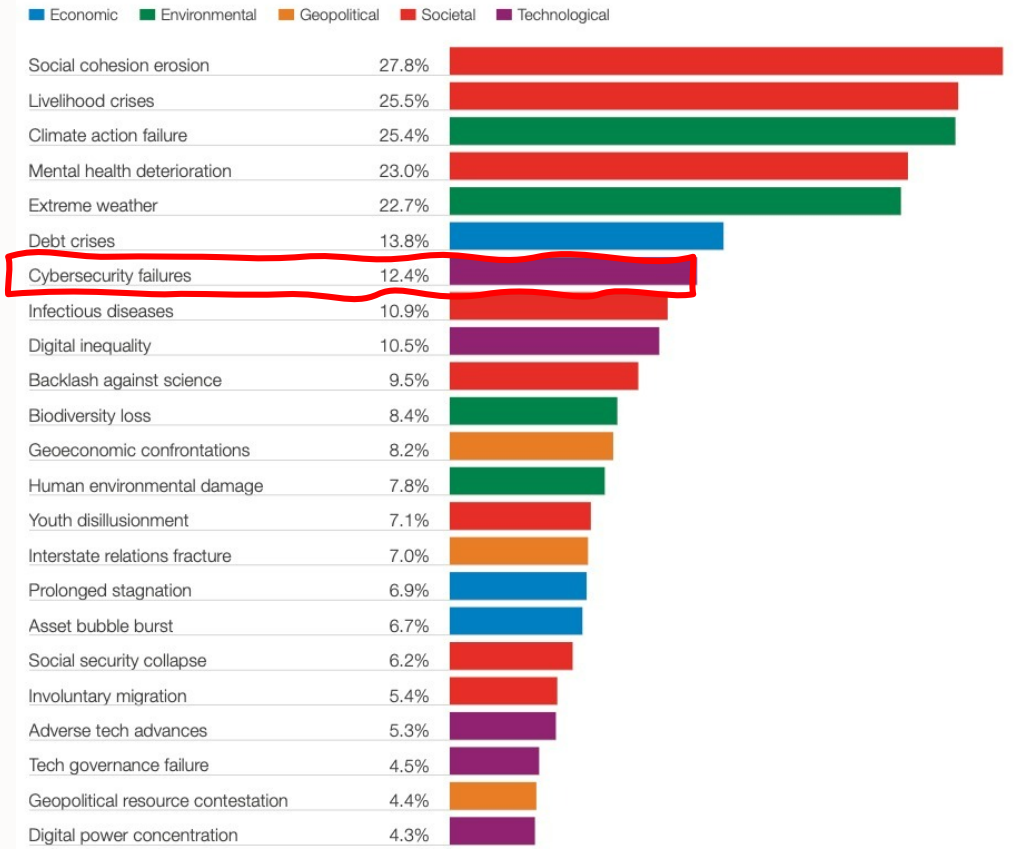
Deloitte Insights | deloitte.com/insights

Risks after COVID19

FIGURE I

COVID-19 Hindsight

Risks that worsened the most since the start of the COVID-19 crisis



Why: Cybercrime to Cyber-Economics !

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Cybercriminals can penetrate **93 percent of company networks**

Businesses Suffered 50% More Cyberattack Attempts per Week in 2021

ransomware attack cost businesses $1.85 million on average in 2021

32 percent pay the ransom, but they **only get 65 percent of their data back**

Average cost to pay a ransom is $154,108, with an average **downtime of 21 days**

Only 57 percent of businesses are successful in recovering their data using a backup

Global **cybercrime damage** predicted **to hit $10.5 trillion annually by 2025**

The **Cyberinsurance market is predicted to hit $14.8 billion annually by 2025**

Cyberinsurance will demand PROTECTION, PLANS and AUDITS on your customers!

https://www.forbes.com/sites/chuckbrooks/2022/01/21/cybersecurity-in-2022--a-fresh-look-at-some-very-alarming-stats/

Cyber Threat – One Single Goal

Actors & Targets

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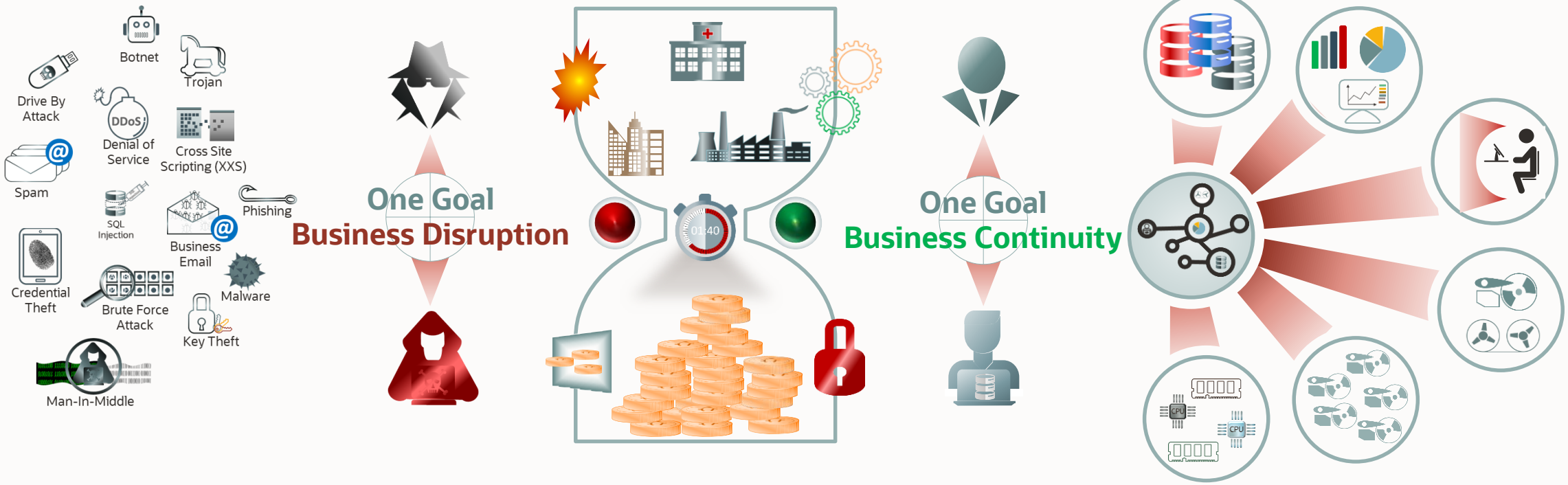
They Need to Succeed Only Once And You Every Time



THREAT GOAL TARGETS

Thinking Like a Hacker

Every Cyber Threat is Targeting Your DATA

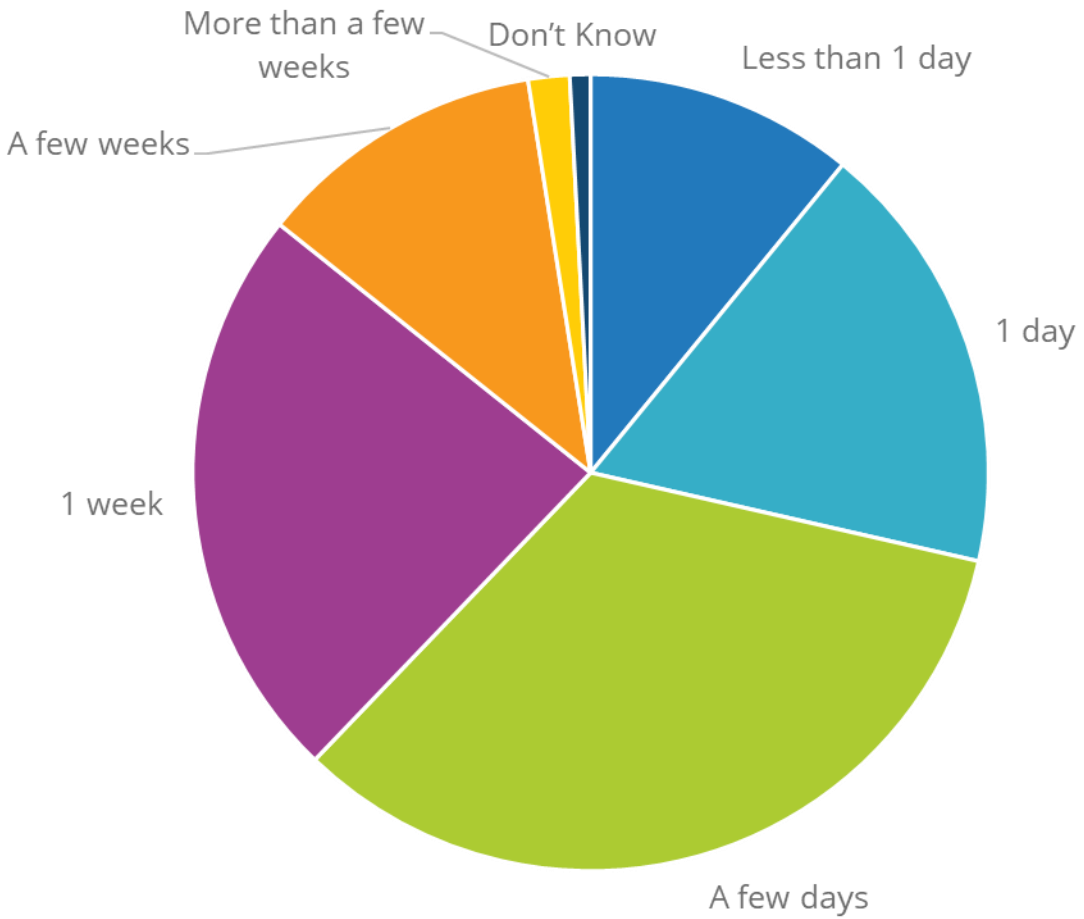
Many conduits to attack, one main target:

1. **Exfiltration** (preferably in Volume/Numbers)
2. **Encryption / Destruction** (Including backups)

Everyone Wants Your Data

It is not just about data recovery; business disruption is the norm

Over 1/3 of respondents report ransomware causing a business disruption of at least one week.



For your most recent ransomware incident, how many days was business disrupted?

Source: Future Enterprise Resiliency & Spending Survey, IDC, July, 2021 N = 199

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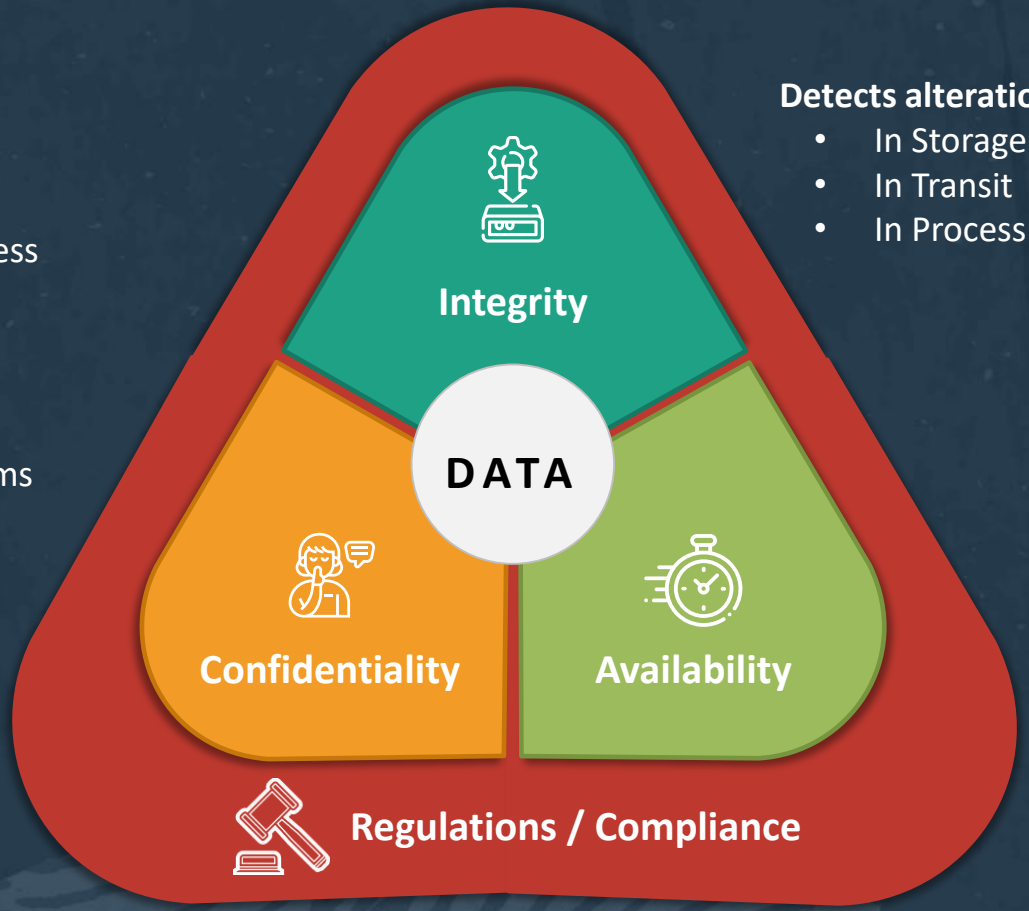
Why : Customer Security Challenges

Protection From
- Unauthorized access
- Unauthorized Use
- Disclosure

Protect Data
- Residing on Systems
- In Transit
- In Process



Detects alteration that has occurred
- In Storage
- In Transit
- In Process

Control Ensure
- Authorized Access
- Acceptable level of performance
- Fault Tolerance
- Redundancy
- Reliable Backup
- Prevention of data loss or destruction
- Disaster Recovery

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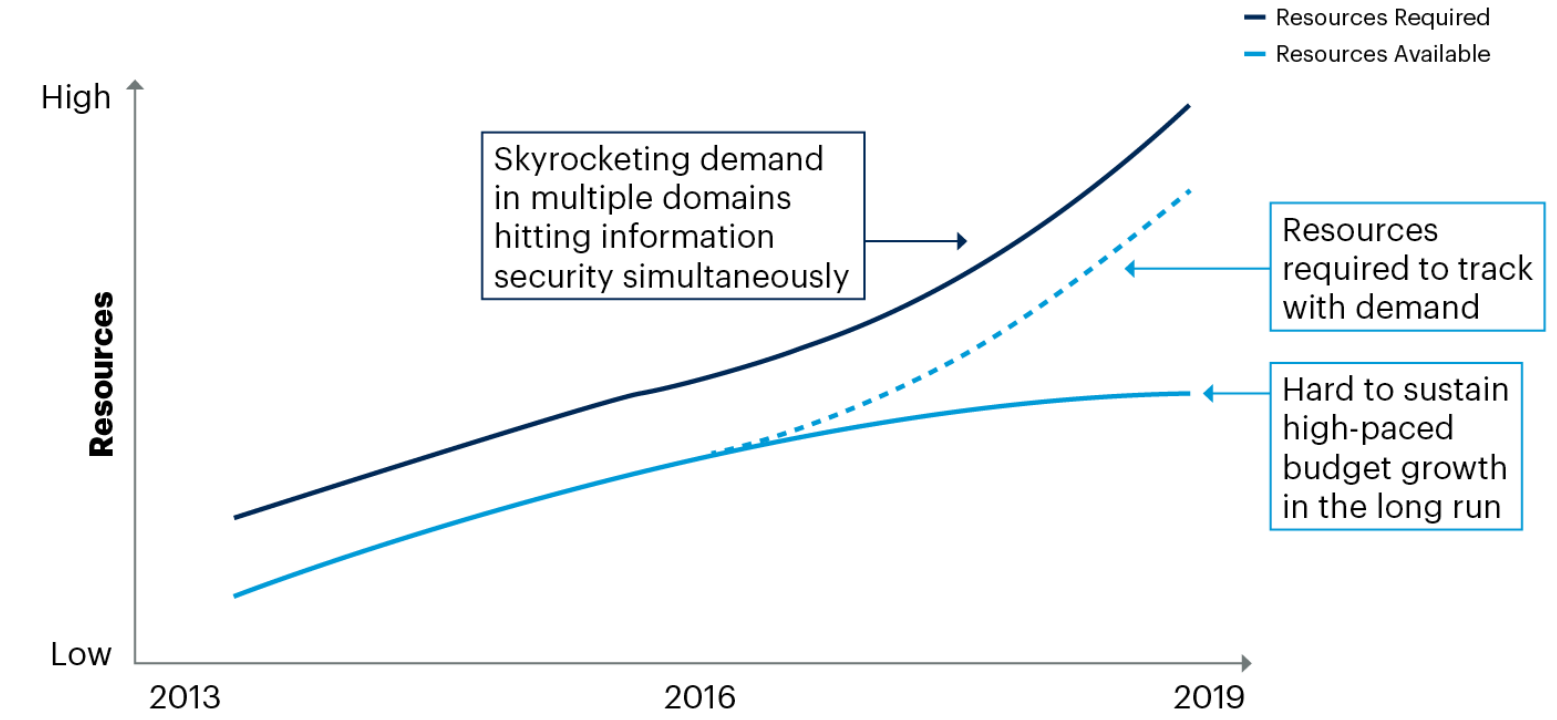
When : Opportunity Market

The Collective Impact of Digitization on Information Security



Source: Gartner
741054_C

Gartner

- Lack of security talent
- Finite Talent Resources

+ Security Budgets growing by 5% - 6% YoY

+ Complex technologies taking time to implement

+ More projects!!! In the CISO Agenda.

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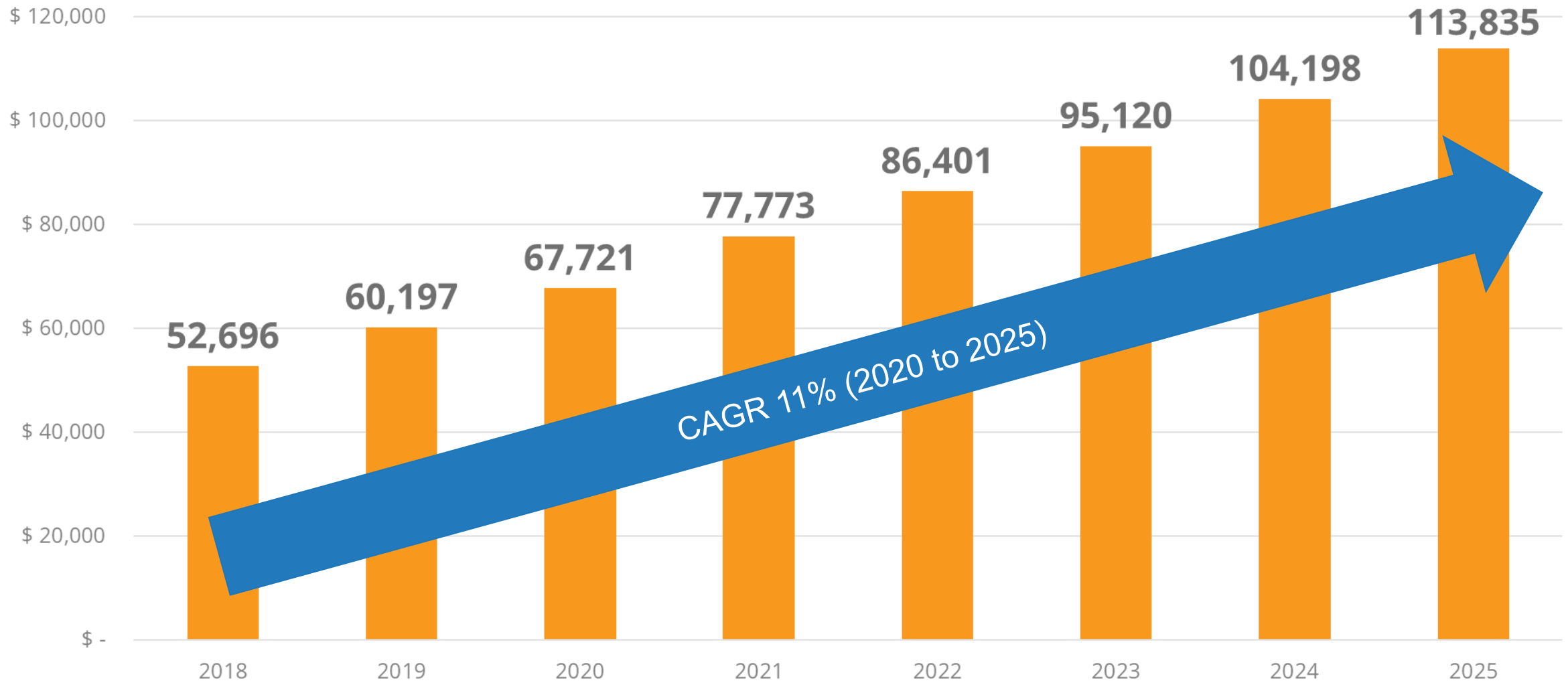
Security Market Revenue ($ Millions)



Source: IDC Semiannual Security Products Tracker - 2020H2

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When : Oracle Opportunity

66,6%

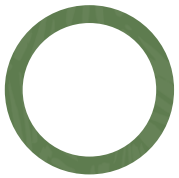
Enterprise Edition Installed Base Customers with **NO Security Options.**

+4000

Standard Edition Installed Base Customers to upsell Audit Vault, DB Firewall, DataSafe

+300

Highly Support Fees Enterprise Edition Customers, with no RA, no Exa, no ExaCC, No ODA.



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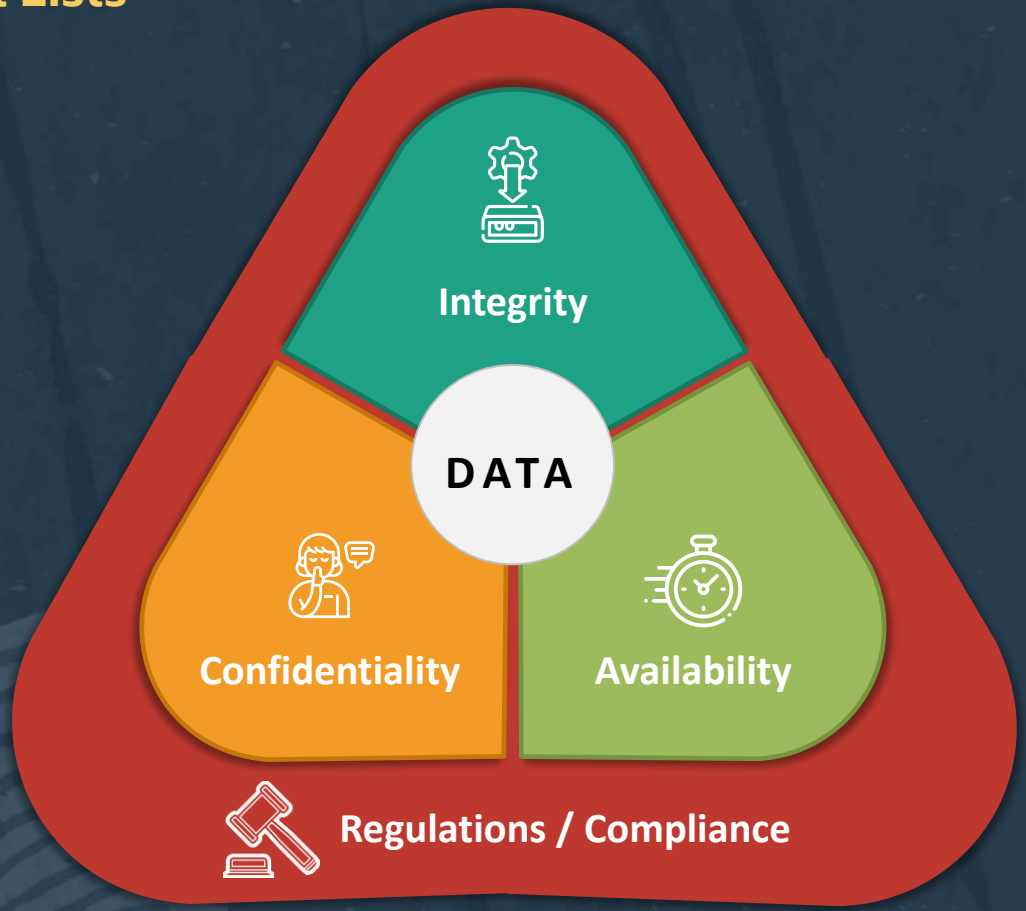
Where : Go To Markets!

Go to Markets available as a Engament Lists

- Data Soveraignity / Personal Data Protection/Compliance (GDPR, HYPAA, PCI-DSS)
- Data Encryption
- User and Access Management
- Segregation of Dutties, securing sensitive Data
- Secure, Isolate, consolidate your workloads
- Audit & Monitoring
- Continuos Data Protection
- Business Continuity (HA)



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Target Customers

Propensity

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Highly Regulated Industries

- Banking
- Healthcare
- Retail
- Government
- Cooperative Banking

Industries

- Utilities
- Hospitality
- BPO/CallCenters
- Electronic Payment
- Solidarity Banking
- Education

Oracle

- Existent customers of Exadata and ExaCC
- Existent customers of EE with no sec options
- Upgrade SE to EE and Sec Options
- Existent Oracle Apps IB
- Customers with Highly support fees of EE with no Oracle HW.

3rd Party Plays

- 3rd Core Applications based on Oracle DB
  - Core Banking
  - Core ERP
  - Healthcare
  - Education
- SAP on Oracle DB

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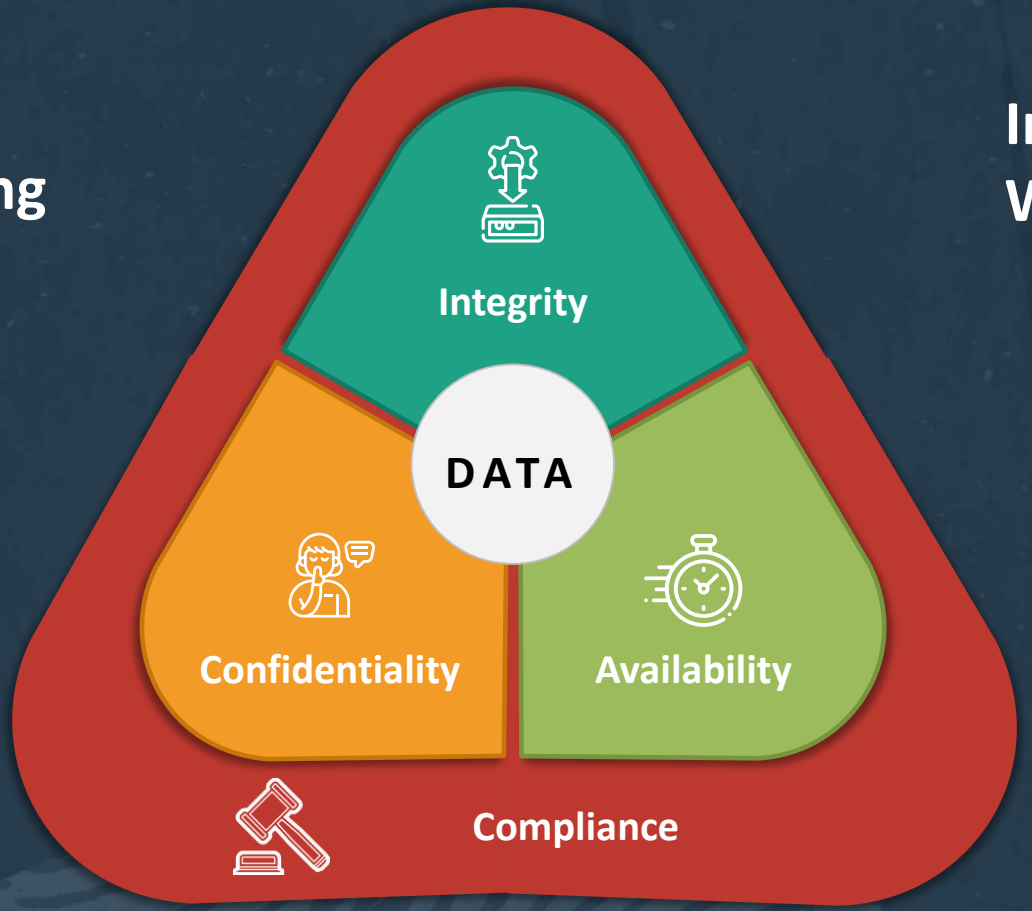
What : Oracle Security Solutions

Audit & Monitoring

Infrastructure, OS, Workload Protection



Data Protection

Business Continuity

Audit & Monitoring

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Database Security
Compliance

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Regulations Compliance

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How to position Oracle Security Solutions using regulations, standards and certifications?

- Get knowledge about regulations that apply to your country/customer as a compelling factor to invest in security.
- Get knowledge about security standards and certifications that apply to your customer as a compelling factor to invest in security.
- Map Oracle security solutions with regulations, standards and certifications
- Measure financial impact

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What are regulations, standards and certifications?

Regulations Compliance

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Regulations: Rules or Directives issued by an authority in order to protect social, political or economic aspects that are of public interest.

Security Standards: **Cybersecurity standards** are collections of **best practices** created by experts **to protect organizations** from **cyber threats** and help improve their cybersecurity posture.

Certifications: The action or process of providing someone or something with an **official document attesting** to a status **or level of achievement**.

Does GDPR apply everywhere?

The GDPR applies to all citizens of the EU. This means that any business or organisation which holds, and processes, the personal data of these citizens has to comply. This is the case no matter where in the world the business or organisation is based.

Incumplimiento LFPDPPP hasta por 320,000 Días de Salario mínimo por evento = **~$3,000,000 USD**

Incumplimiento por demora en entrega de información financiera a la BMV 200 a 10,000 Días de Salario mínimo por evento = **~$100,000 USD**

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USE CASE: Example

Regulations Compliance

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Audit Vault and Database Firewall

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Advanced Security

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Database Vault

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Label Security

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Key Vault

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Identity and Access Management

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Availability

Database Security

Availability

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Availability

Is the ability of a service, data or system **to be accessible and usable** by authorized users (or processes) **when they require it.**

Assumes that the **information can be retrieved** at the time it is needed, **avoiding its loss or blockage**.

Cybersecurity risks: It is associated with cybersecurity incidents that arise from the loss of availability

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WHAT

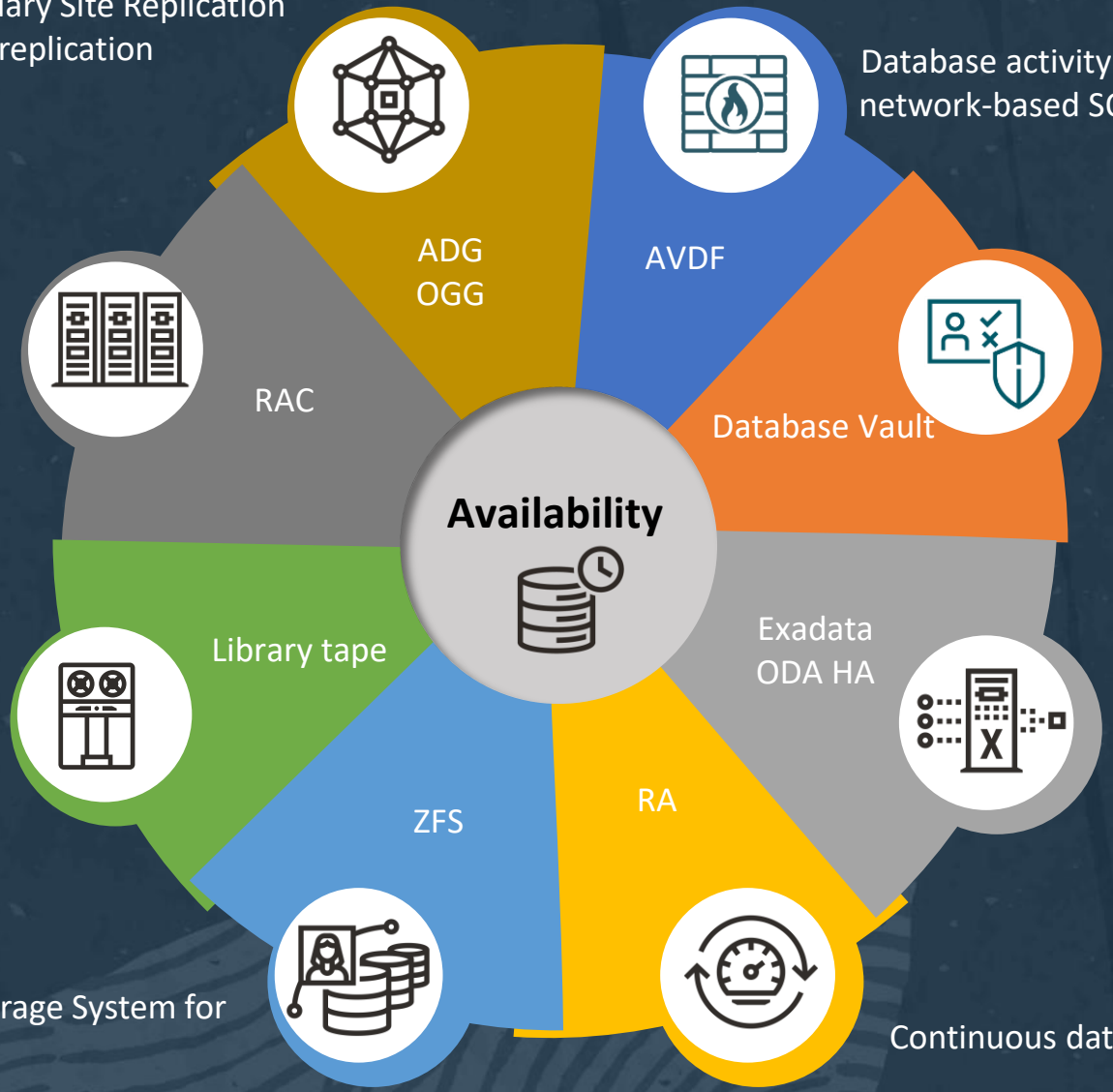
Availability

Secondary Site Replication
Active replication

Database activity monitoring with network-based SQL traffic capture

High availability of services

Separation of duties and access control for privileged users



Long-term backup storage and compliance

Specialized systems for the execution of oracle databases

Unified Storage System for Backups

Continuous database Protection

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HOW : Use Cases

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Availability

European multinational financial services firm specialized in asset and wealth management, corporate and investment banking, insurance and payments.

Goal

A more stable, reliable, scalable and predictable data protection solution for Oracle databases with mission critical applications

Outcomes

- They **reduced security risks** by auditing and monitoring database activity.
- **Unauthorized SQL traffic was blocked** from reaching the database.
- Audit and activity **reports for compliance** and security investigations.
- **Replication of transactions** to standby databases instances in a remote site and local backup.
- Certainty of recovery from backups and **zero data loss** for more than 100 databases, with a 3x reduction in times
- Offline backups of **historical tape backups**

APPLICATIONS

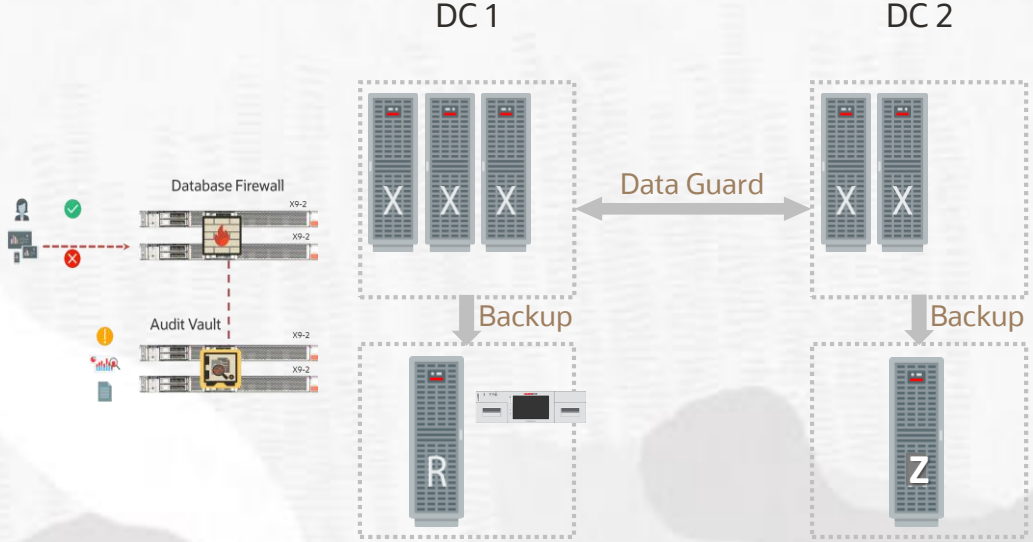
- HR
- Finance
- Risk Assessment
- P&L Analysis
- Investment Banking
- Insurance

DB OPTIONS

- RAC
- ADG
- Partitioning
- Multitenant

SEC OPTIONS

- AVDF



5 Exadata Systems, 1 Recovery Appliances, 1 SL150, 1 ZFSSA

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Integrity

Database Security

Integrity

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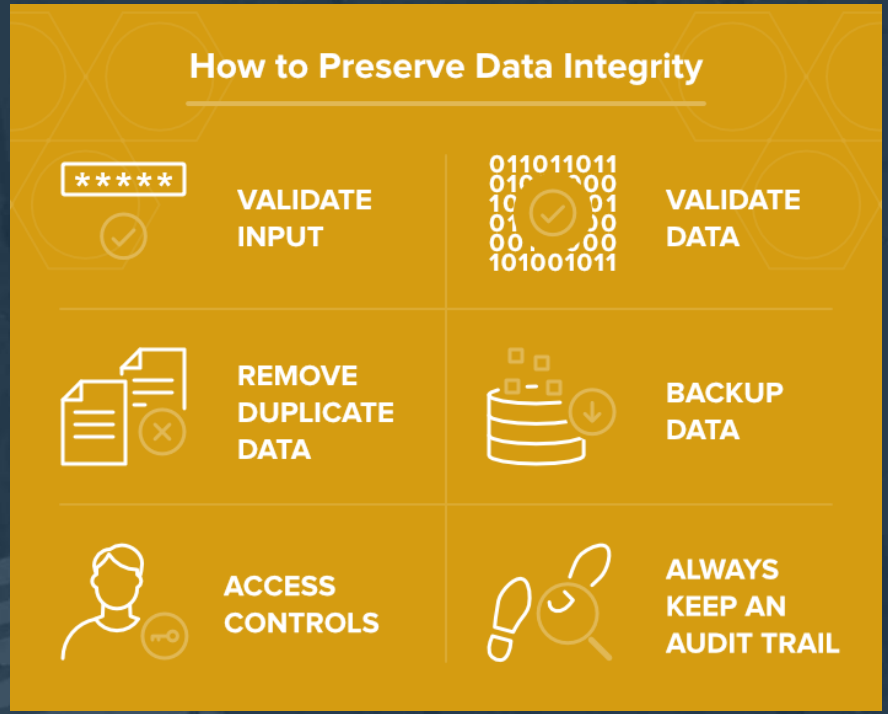
Integrity

Integrity

What is:

Data Integrity refers to the accuracy and consistency of the data. Data reliability means that the data remains intact and unchanged.



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Integrity

Integrity

- Unified Security on-premise and cloud

- Data sensitivity, evaluate data risks, mask sensitive data, implement and monitor security controls

Data Safe

Database Auditing

- Native tool to monitoring and recording of selected user database actions.

- Early detection of suspicious activities, and finely-tuned security responses

- Prevent internal and external attacks
- First line of defense for databases

Database Firewall

- Separate Keys from Data
- Simplify Admin and Deployment

Audit Vault

- Audit Access to Sensitive Data
- Audit Privileged User Activity

Key Vault

TDE

- Encrypt Data at Rest and In-Motion
- Encrypt Exports and Backups

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HOW :

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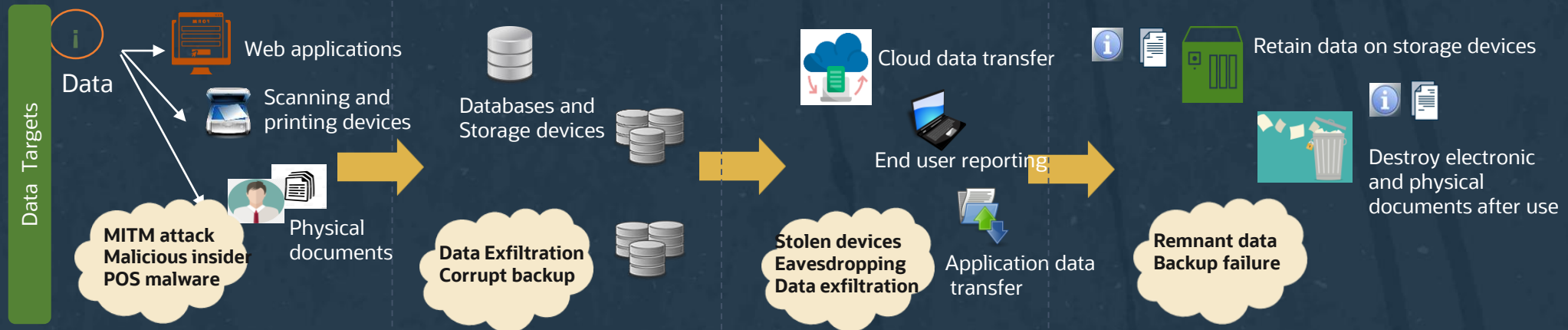
Integrity

Data Collection	Data Storage	Data Usage and Shared	Data Retention

Data Targets



Data Protections Capabilities

- Data Discovery, inventory and classification
- Database security
- Data loss prevention — Data Safe / TDE / Key Vault ✓
- Data access governance — Database Firewall & Audit Vault / Database Audit ✓
- Information rights management
- Data retention and destruction — TDE / Key Vault ✓
- Data encryption, tokenization and obfuscation/ Key and certificate management/ Payment security
- TDE / Key Vault ✓

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Integrity

HOW : Use Cases

NOS

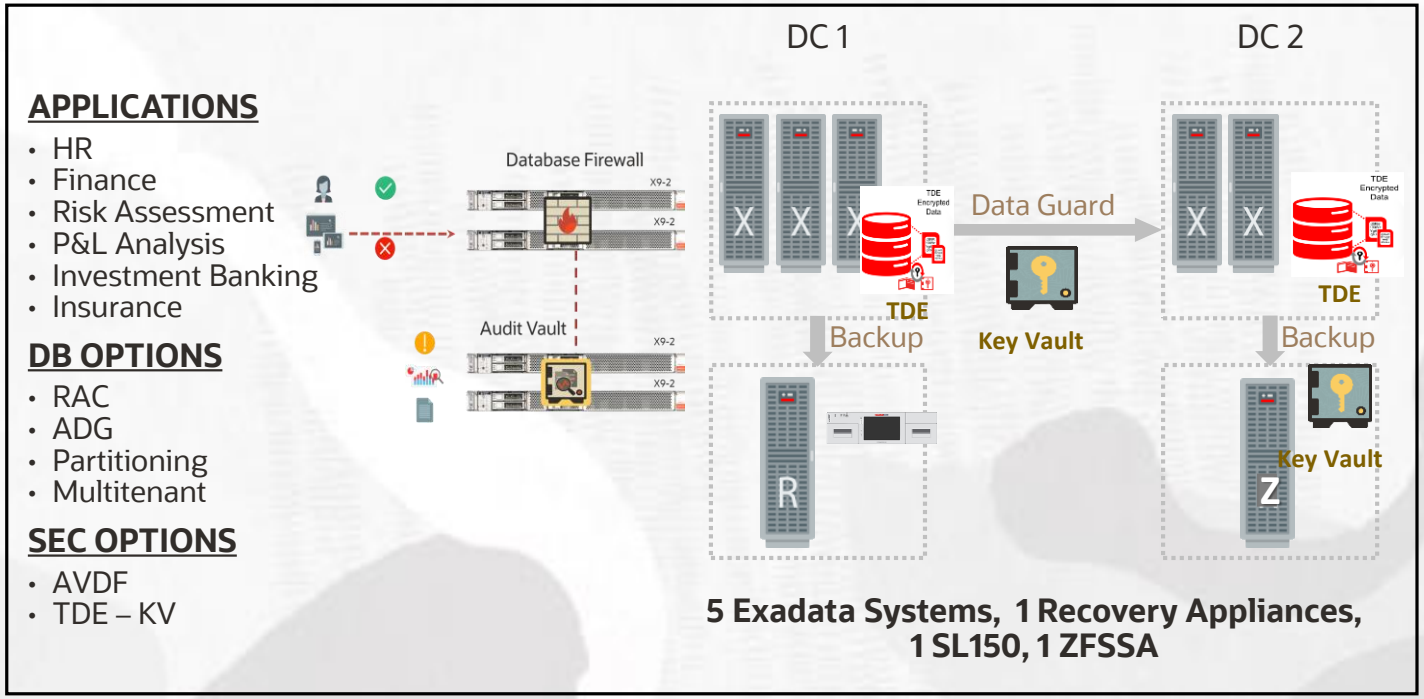
Goal

With Database Security solutions including **Oracle Advanced Security, Oracle Key Vault**, Oracle Database Vault, **Oracle Audit Vault and Oracle Database Firewall** to streamline and simplify and minimize risk and further enhance our overall security.

As a large communication and entertainment provider, NOS manages large amounts of customer data. They have the responsibility to protect the data of their clients, customers, and employees. That's why they selected Oracle Database Security solutions.

Outcomes

- They encrypted sensitive information **avoiding information leaks**
- They **reduced security risks** by auditing and monitoring database activity.
- **Unauthorized SQL traffic was blocked** from reaching the database.
- They defined **access control rules** managing access to sensitive information.
- They manage encryption keys **efficiently** and **securely**



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Database Security Play

Confidentiality

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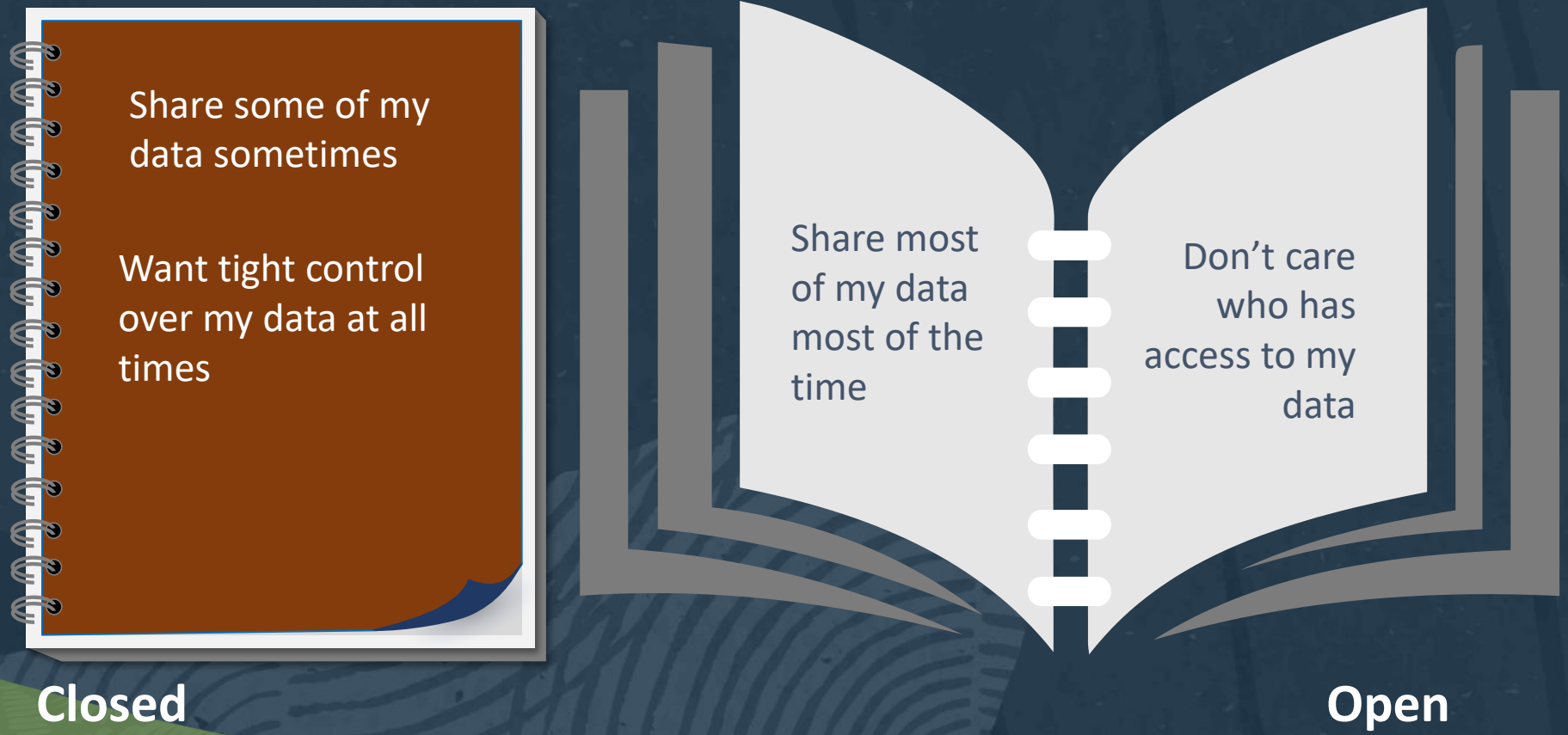
Confidentiality

CONFIDENTIALITY

What is? *Ensure that the information is available only to authorized persons*



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What

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Confidentiality

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Confidentiality

How

Data Collection

Data Storage

Data Usage and Shared

Data Retention

Data Targets

Data

Web applications

Scanning and printing devices

Physical documents

MITM attack
Malicious insider
POS malware

Databases and Storage devices

Data Exfiltration
Corrupt backup

Cloud data transfer

End user reporting

Application data transfer

Stolen devices
Eavesdropping
Data exfiltration

Retain data on storage devices

Destroy electronic and physical documents after use

Remnant data
Backup failure

Data Privacy Capabilities

- Data Discovery, inventory and classification
- Data Masking and Subsetting/Label Security ✓
- Database security
- Database Firewall ✓
- Multitenant ✓
- Data access governance
- OIAM ✓
- Data retention and destruction
- Information rights management
- OIAM / Database Vault ✓
- Data encryption, tokenization and obfuscation/ Key and certificate management/ Payment security
- Security on Exadata, ExaCS, ExaCC, ODA, PCA, ZS ✓

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Database Security

Alexandre Fagundes
LAD Partner Enablement

Thank You

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