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Cybersecurity | Project Management | Software Development | IT Consulting | Document Digitalization

Camara de Comercio de Puerto Rico
8 Mayo 2024

Top Strategic Technology Trends 2024

Technologies Drive Much-Needed Business Outcomes

Optimize

Optimizing IT systems for greater reliability, improving data-driven decision making and maintaining value integrity of AI systems in production

Related Trends:

Digital Immune System
Applied Observability
AI TRiSM

Scale

Accelerating vertical offerings, increasing the pace of product delivery and enabling connectivity everywhere

Related Trends:

Industry Cloud Platforms
Platform Engineering
Wireless-Value Realization

Pioneer

Enabling business model change, reinventing engagement with employees and customers, and accelerating strategies to tap new virtual markets

Related Trends:

Superapps
Adaptive AI
Metaverse

Sustainable Technology

<https://www.youtube.com/watch?v=yvjT8m0hcKU&t>



Digital Immune Systems

- **Immune System** - The immune system is a network of cells, organs, proteins, and chemicals that protects the body from infection. It also protects the body's own cells.
- **Digital Immune Systems** - A digital immune system (DIS) is a set of technologies and processes that help protect an organization's systems and information from cyberattacks. A DIS protects against data breaches and other security incidents. It also helps to reduce system failures that impact business performance.



Digital Immune Systems



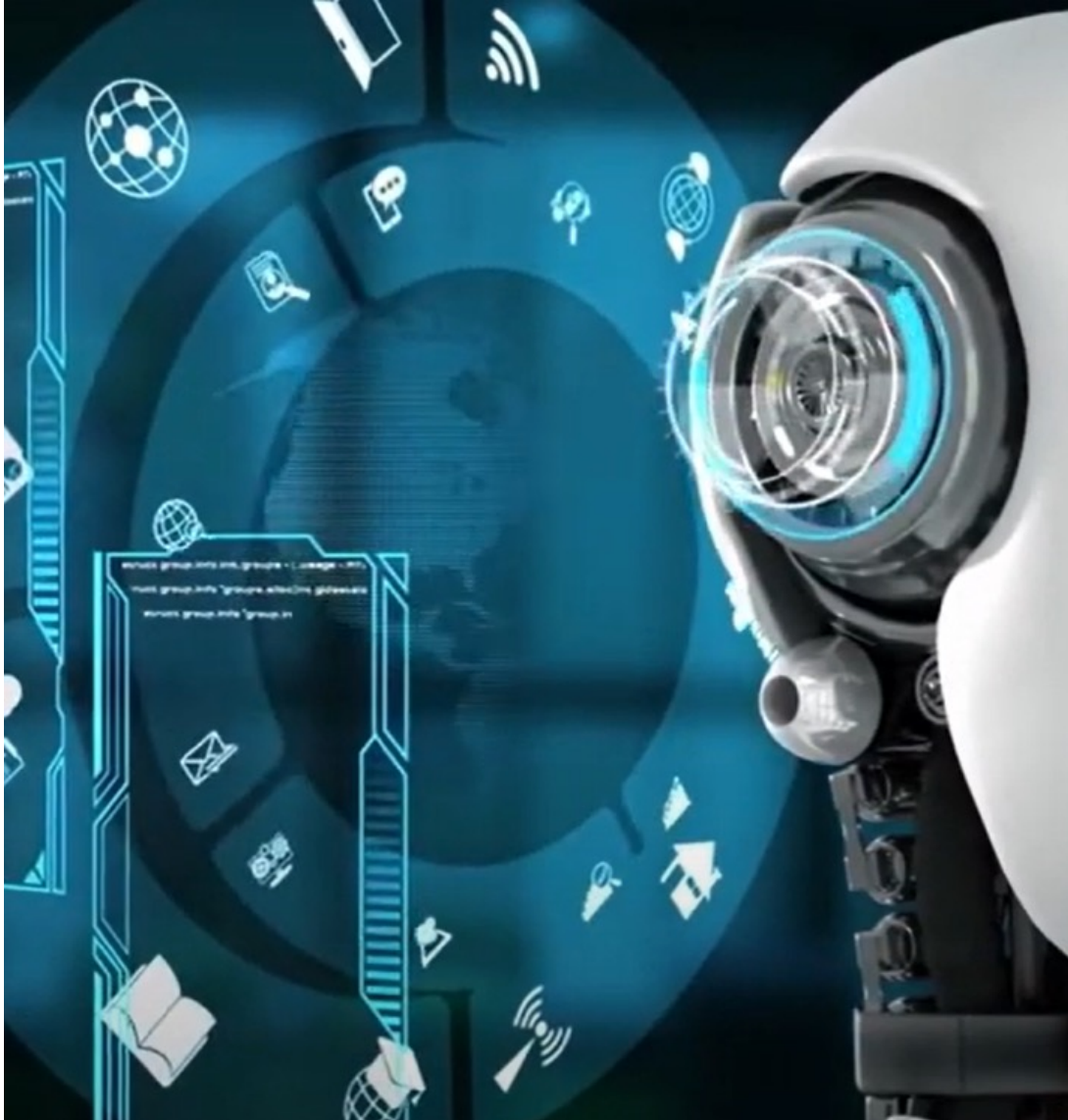
Biological Immune Systems (BIS)
protects the human body from
outside invaders

Digital Immune Systems



Digital Immune Systems (DIS) mitigates and responds to business risks by combining different software practices, technologies and data analytics in real time.

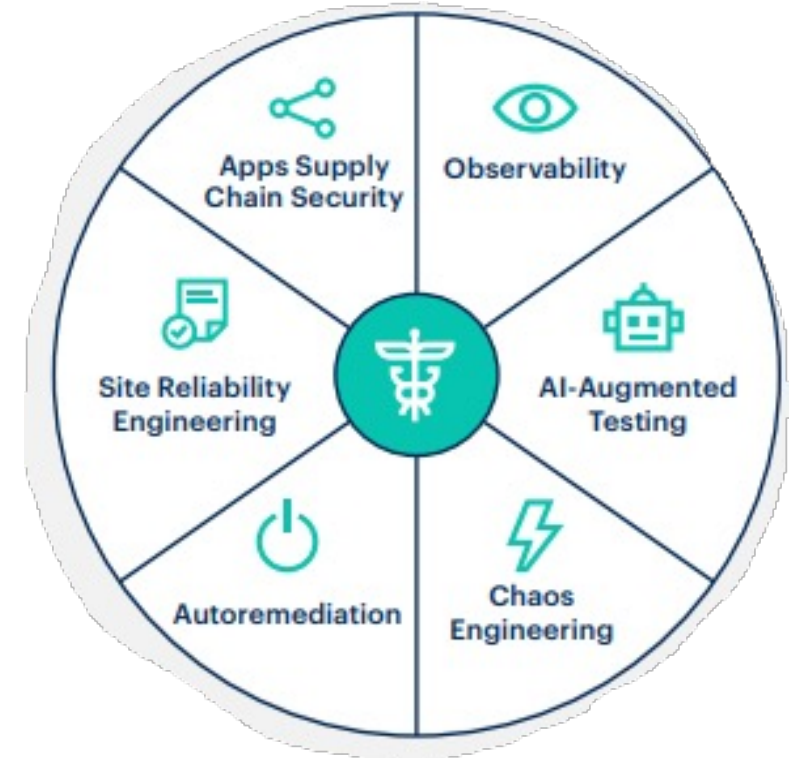
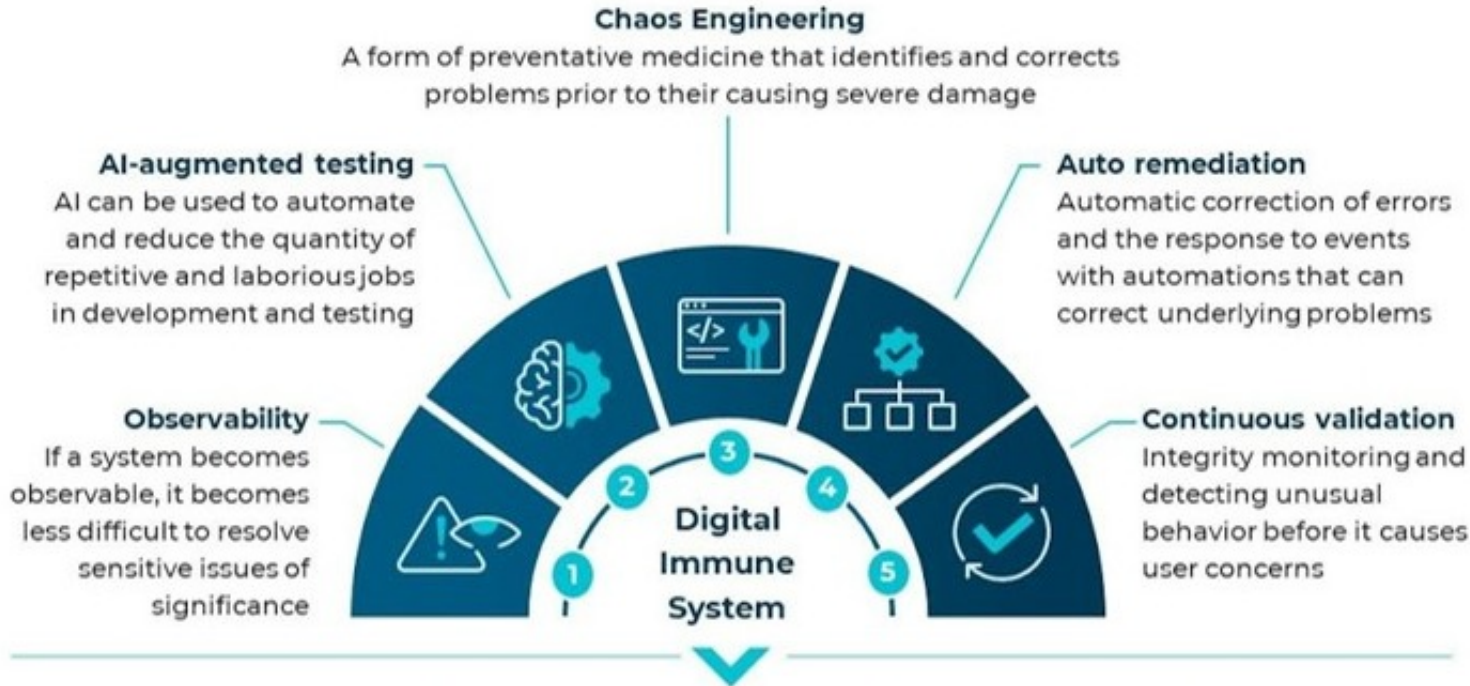
Digital Immune Systems



Digital Immune Systems implementation requires extensive use of artificial intelligence, data analytics and machine learning.

The combination of these technologies will protect your applications and services from failures or anomalies

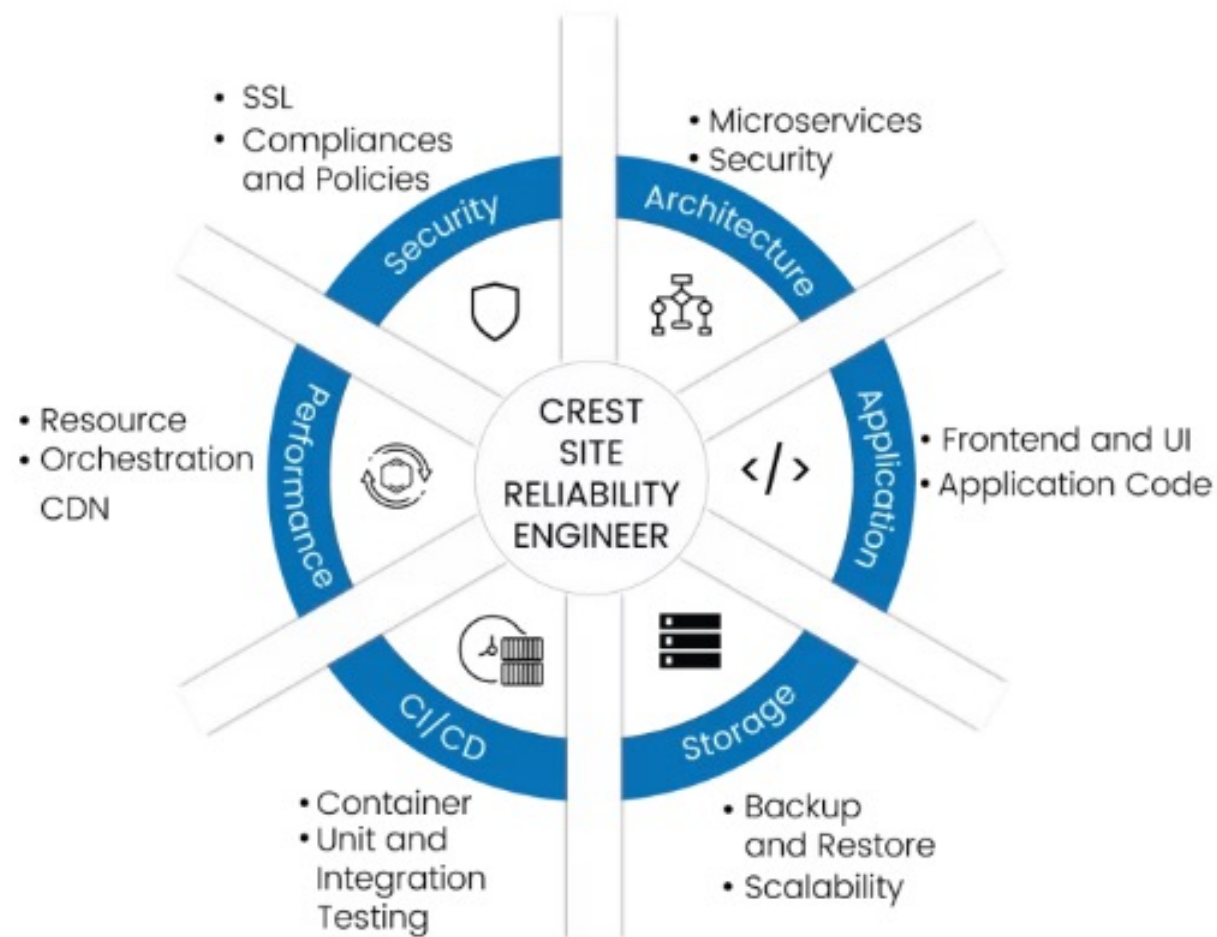
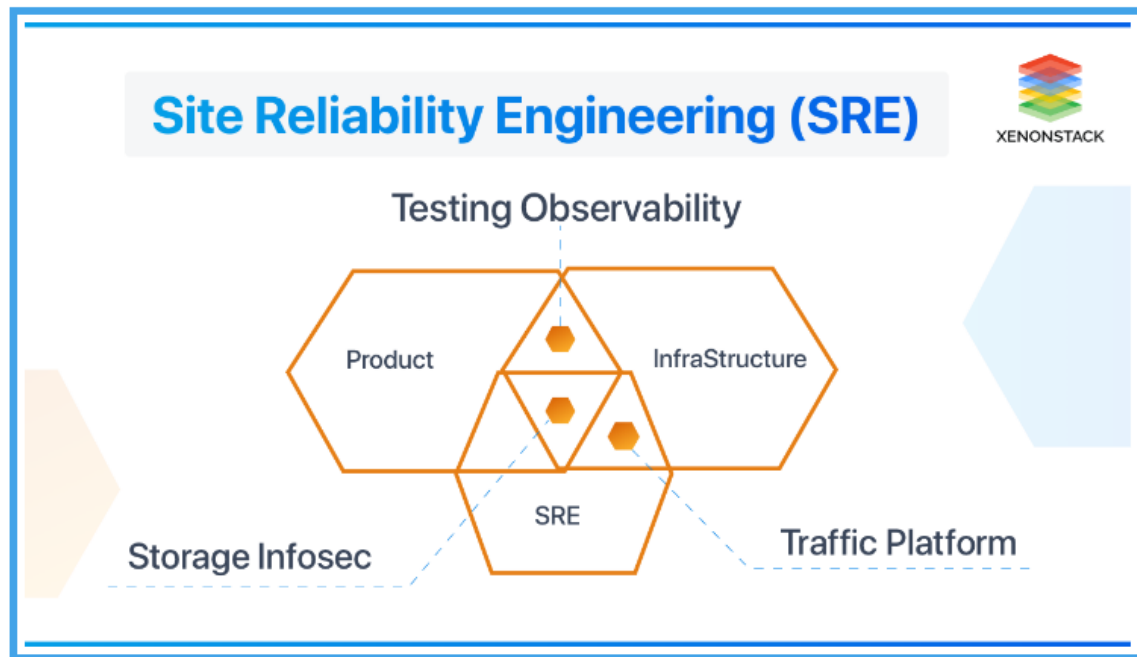
Elements of a Digital Immune System



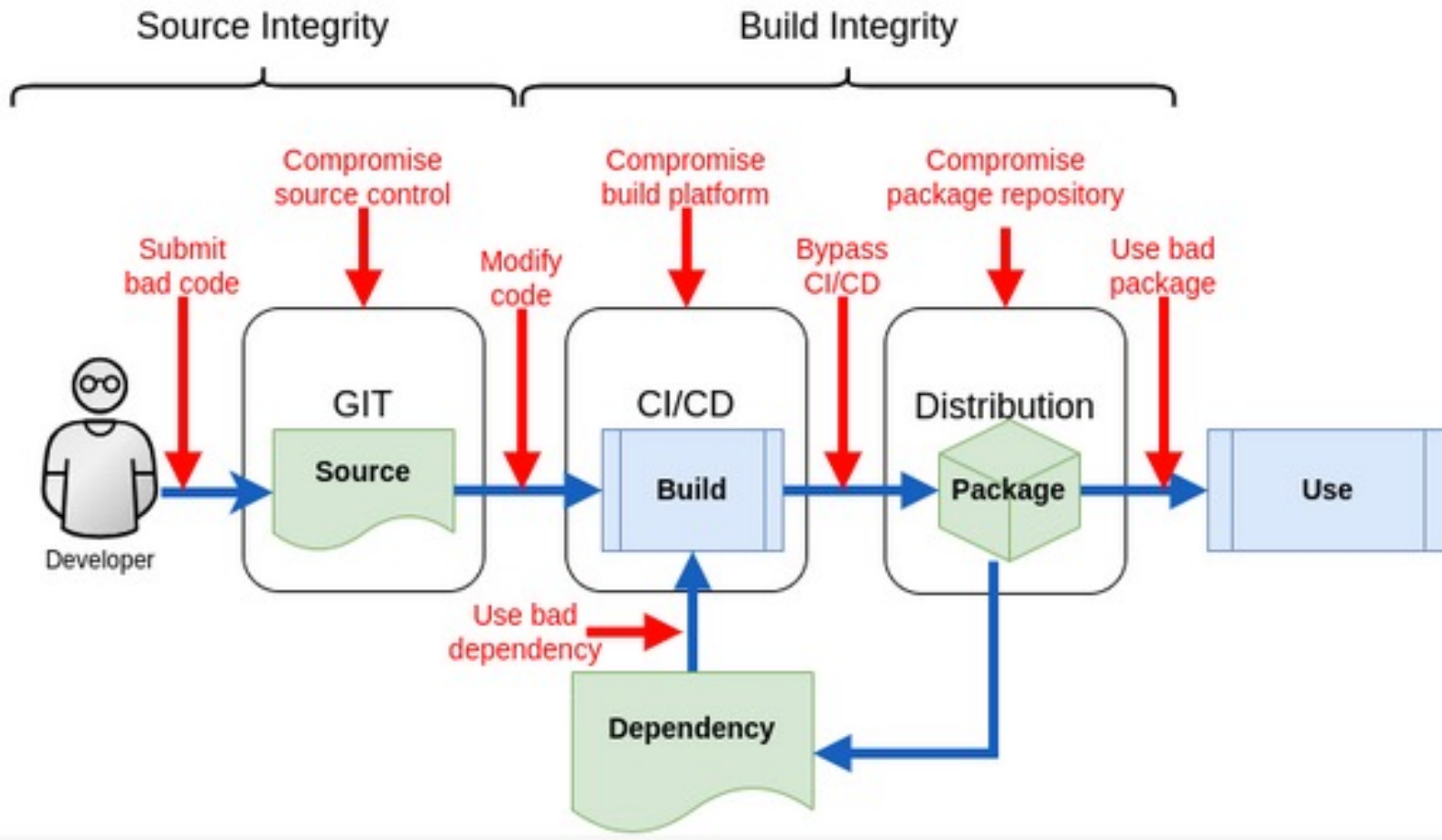
Why should companies adopt the digital immune system?

Offers an exceptional user interface and reduces failures	Provides defensive actions and reduces downtime	Enhances overall software quality and reduces maintenance costs	Establishes a secure online environment	Delivers actionable insights and threat prevention methods

Digital Immune Systems



Digital Immune Systems



MOST Trust, Risk & Security Management



Threat Vector

Human / Human controlled Bots
Error, Social Engineering,
Compromise

System Faults
Vulnerability, Exploit,
Process Error

Query Attacks
Challenge/Response

Malicious Inputs, Benign Mistakes
Perturbations
Digital, Physical (behavior)



Types of Damage

**Theft of Data, Money,
Intellectual Property**

**Asset (human, physical, system)
Damage or Manipulation**

Model Manipulation or Theft
via Inversion, Malicious Training,
Altered Business Rules, Mistakes...

Model Data
Data Poisoning
Data Drift, Data Bias



MOST Measures

T **Trustworthiness**
Enterprise Risk Mgt.
Responsible AI, Bias Mitigation
Fairness, Explainability ...

S **Enterprise Security**
Network & Endpoint Security,
IAM, Data Protection ...

MO **ModelOps: AI Model Integrity**
Model Hardening, Tracking, Lineage,
Auditing, Validation Checks

MO **ModelOps: AI Data Integrity**
Data Drift, Data Poisoning
Detection Data Bias Detection

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■ Pre-existing

■ After AI

Gartner.

Digital Immune Systems

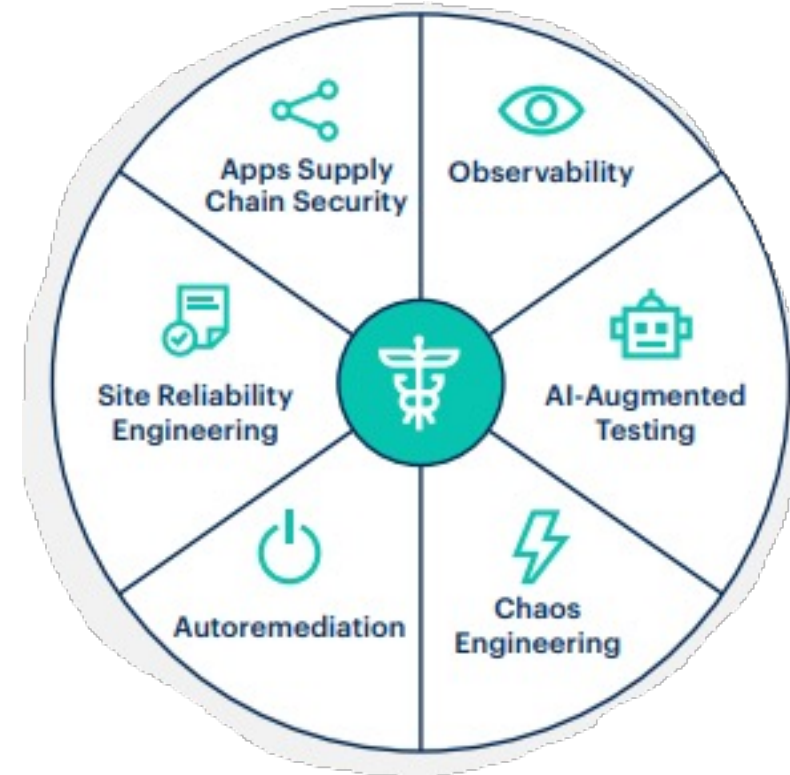
Key Takeaways:

- A digital immune system creates a superior CX and UX by being more resistant to failures.
- A digital immune system combines practices and technologies to increase the resilience of products, services and systems.
- Take into consideration how much business value a DIS creates for both business and IT stakeholders.

Digital Immune Systems

What benefits does it offer:

- Resolve bugs instantly
- High level security
- Improve the customer experience



https://www.youtube.com/watch?v=UzvPP6_LRHc



AI TRiSM

AI TRiSM: Optimize Trust in AI

Four pillars of AI trust, risk and security management



Unmanaged
Risks



AI TRiSM



Managed
Risks

Explainability/Model
Monitoring



ModelOps



AI Application
Security



Privacy

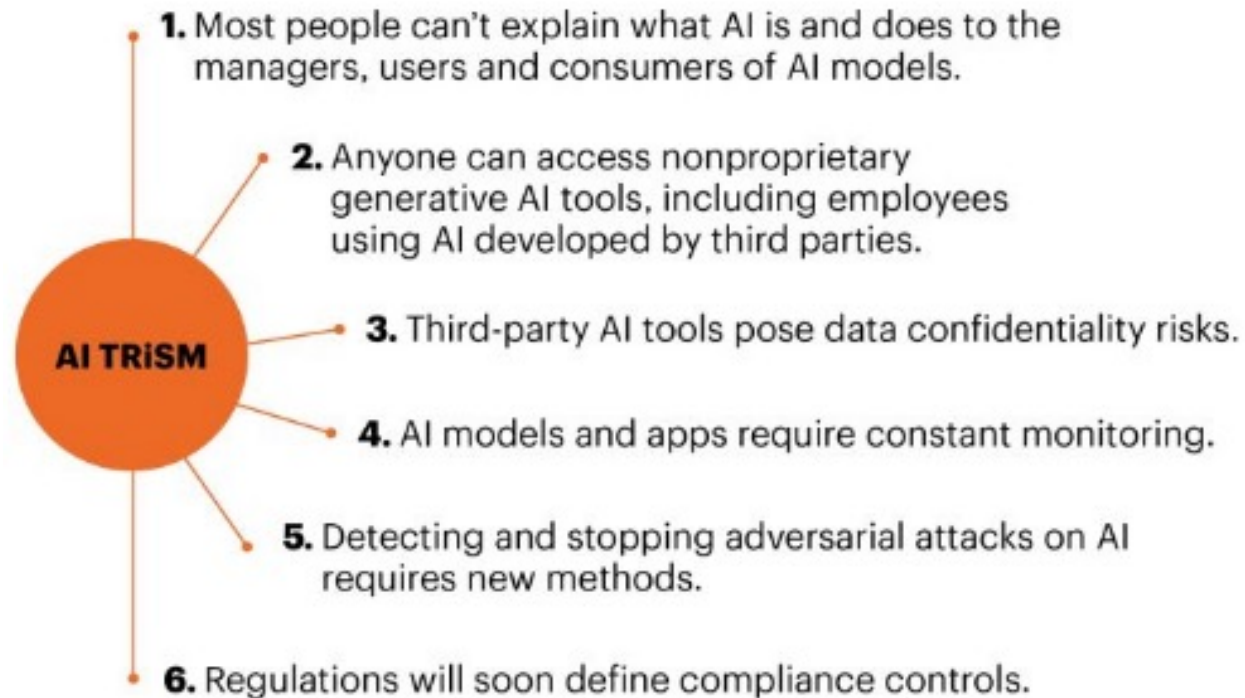


Source: Gartner

AI TRiSM

6 Reasons

You Need an AI Trust, Risk, Security Management (TRiSM) Program



Source: Gartner
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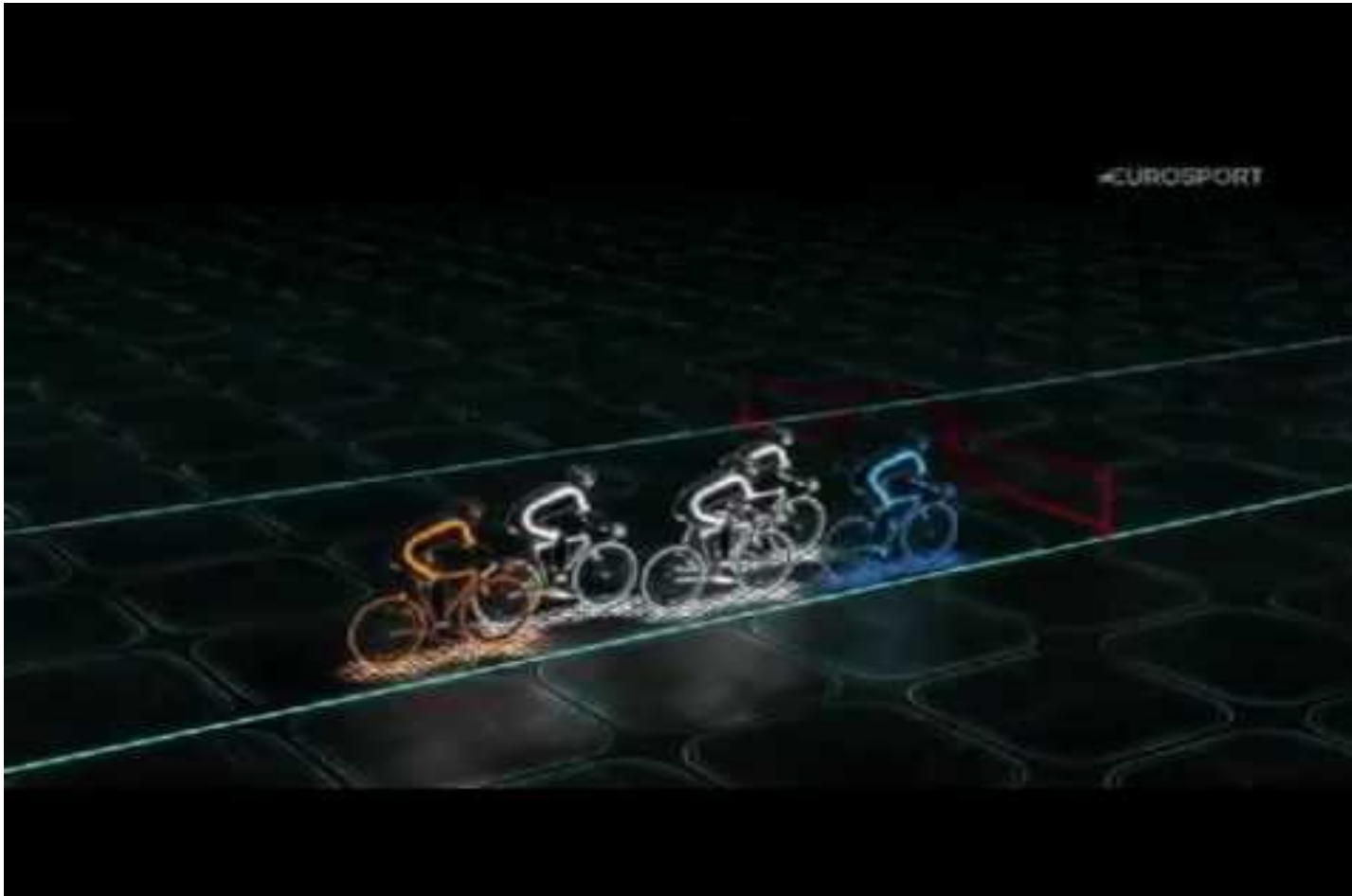
AI TRiSM

3 things to tell your peers

1. AI TRiSM capabilities are needed to ensure the reliability, trustworthiness, security and privacy of AI models.
2. They drive better outcomes related to AI adoption, achieving business goals and ensuring user acceptance.
3. Consider AI TRiSM a set of solutions to more effectively build protections into AI delivery and establish AI governance.

Strategy & Plan – How to win a Cycling Sprint

<https://www.youtube.com/watch?v=mCqmIPRhzzs&t>



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Thanks!
William Bonaparte