

Emerging Technology

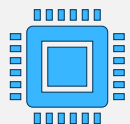
*Navigating the Rapids of
Innovation*



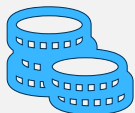
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Agenda



Digital Assets



Stablecoins



The GENIUS Act



Artificial Intelligence



Information Technology

Digital Asset Terminology

Distributed
Ledger
Technology

Digital Asset

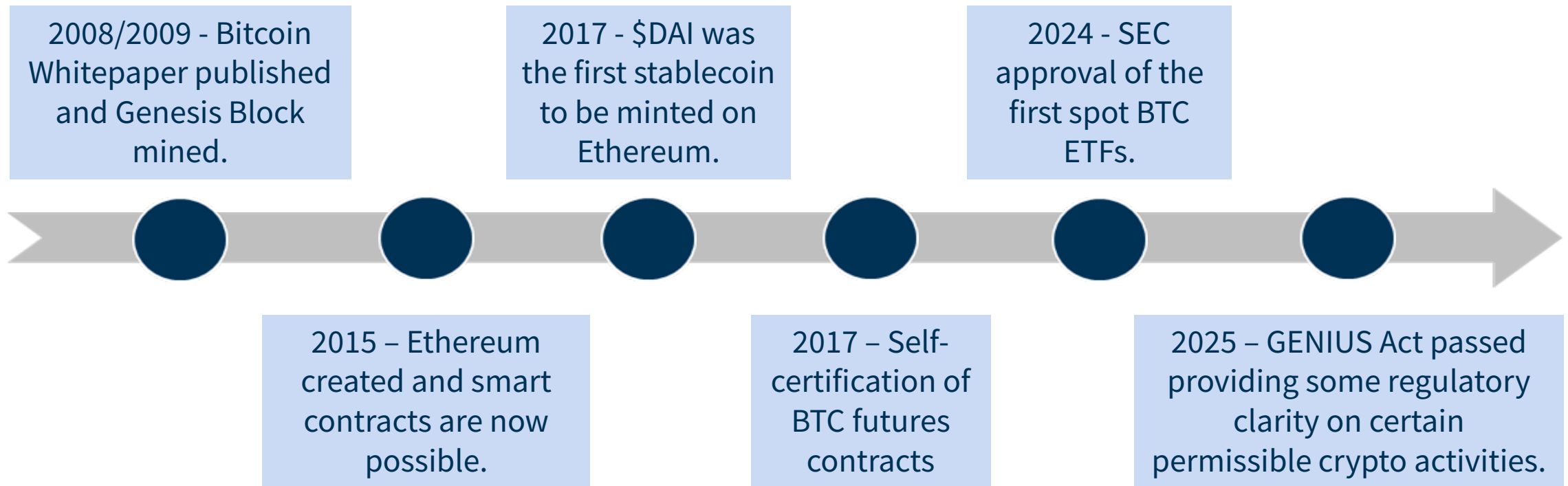
Tokenization

Stablecoin

Smart
Contract

Custody

Digital Assets: A Brief History



Tokenization

Real Estate

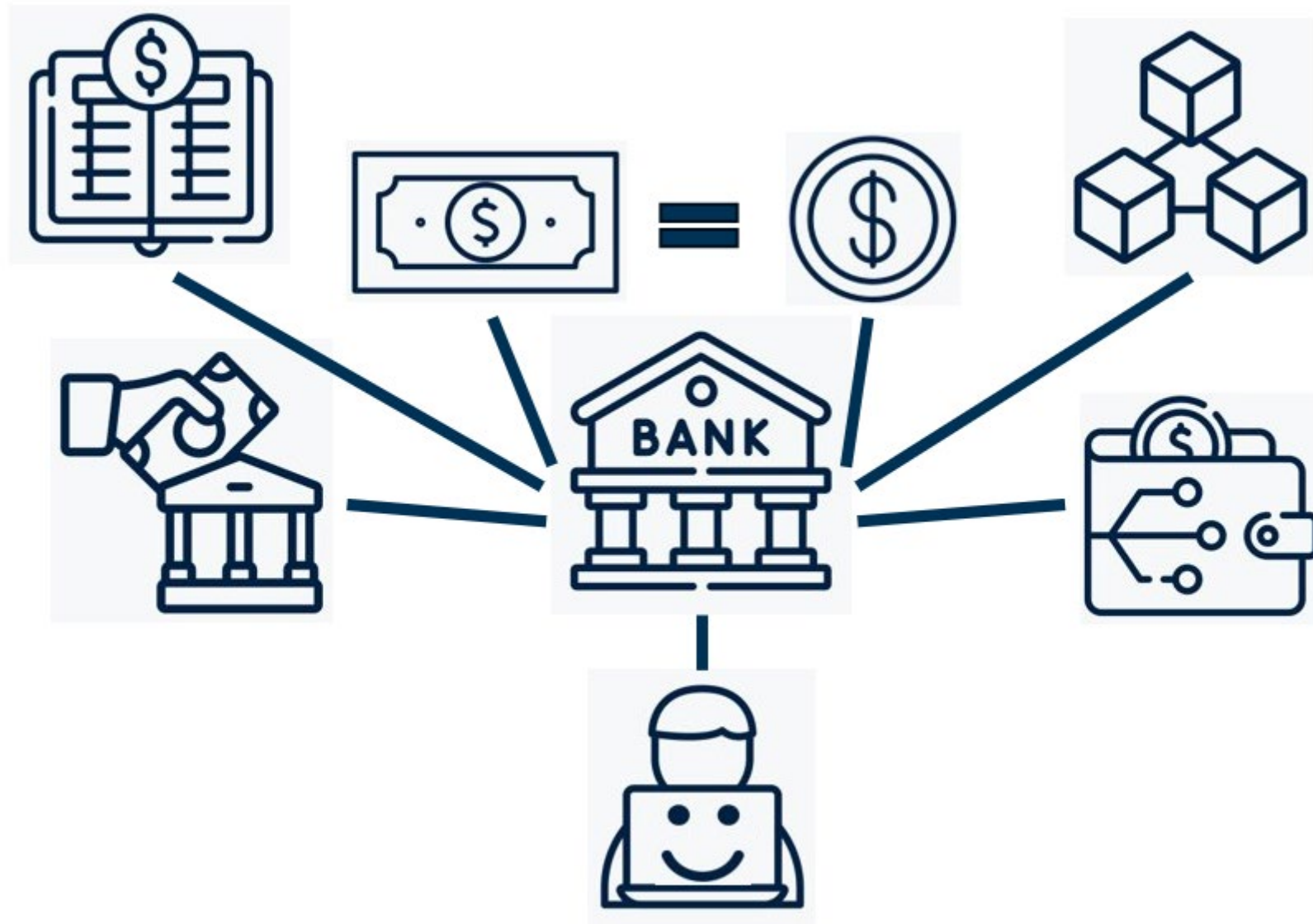
Bonds

Commodities

U.S.
Treasuries

Deposits

Tokenization



Permissible Crypto-Asset Activities

7/22/2020: IL#1170

- Provide crypto custody services, including outsourcing these services with proper oversight.
- Execute customer-directed trades for crypto assets held in custody with a proper customer agreement.

9/21/2020: IL#1172

- Hold stablecoin reserves.

1/4/2021: IL#1174

- Use independent node verification networks and stablecoins for payment activities, including validating, recording, and facilitating.

Permissible Activities – New in 2025

11/18/2025: IL#1186

- Hold “de minimis” crypto assets to pay a “reasonably foreseeable” amount of blockchain network fees (e.g., gas) for facilitating transactions or testing.

12/9/2025: IL#1188

- Engage in “riskless principal transactions”, like simultaneous purchase/sale of assets with no net asset risk, with and on behalf of customers.



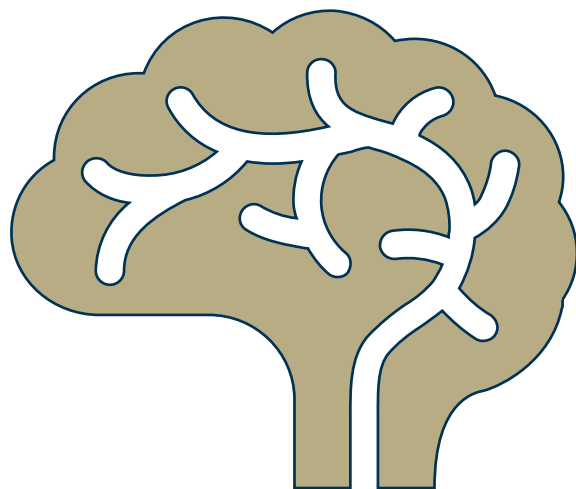
Custody

7/14/2025 -Agencies Issue Joint Statement on Risk-Management Considerations for Crypto-Asset Safekeeping

- Defines “safekeeping” as holding an asset on a customer’s behalf.
- Highlights existing risk-management considerations.
- Risk Management
 - Enterprise-wide, comprehensive risk assessment
 - Cryptographic key control – technological/physical and cybersecurity
 - Asset-specific due diligence
 - Legal and regulatory compliance – AML/CFT, OFAC, securities rules, customer agreements, and disclosures
 - Third-party risk management and audit oversight



GENIUS Act



Guiding and Establishing National Innovation for U.S. Stablecoins (GENIUS)

- Enacted July 18, 2025
- Rulemaking began in 2025 and continues in 2026

GENIUS Act

Payment Stablecoin

- Digital token designed to maintain a stable value relative to a currency issued by a recognized sovereign and used as a means of payment or settlement.
- Not a national currency, a deposit per FDIC Act, FDIC-insured, or an investment or security.

Permitted Payment Stablecoin Issuer (PPSI)

- Maintains a stable value relative a monetary unit like the US dollar.
- Converts, redeems, or repurchases stablecoins for a fixed amount of monetary value.
- Cannot pay interest to stablecoin holders.

GENIUS Act – Reserve Assets

A permitted payment stablecoin issuer (PPSI) shall:

- Maintain identifiable reserves backing the outstanding payment stablecoins of the PPSI on at least a 1:1 basis.
 - Reserves can include
 - U.S. Coins and Currency
 - Demand Deposits at IDIs
 - Treasury bills, notes, or bonds with a remaining or issued maturity of 93 days or less
 - Refer to the GENIUS Act for the full list of potential reserve types
- Publicly disclose the issuer's redemption policy
- Publish the monthly composition of the issuer's reserves on the issuer's website.

Stablecoins: Current & Emerging Use Cases

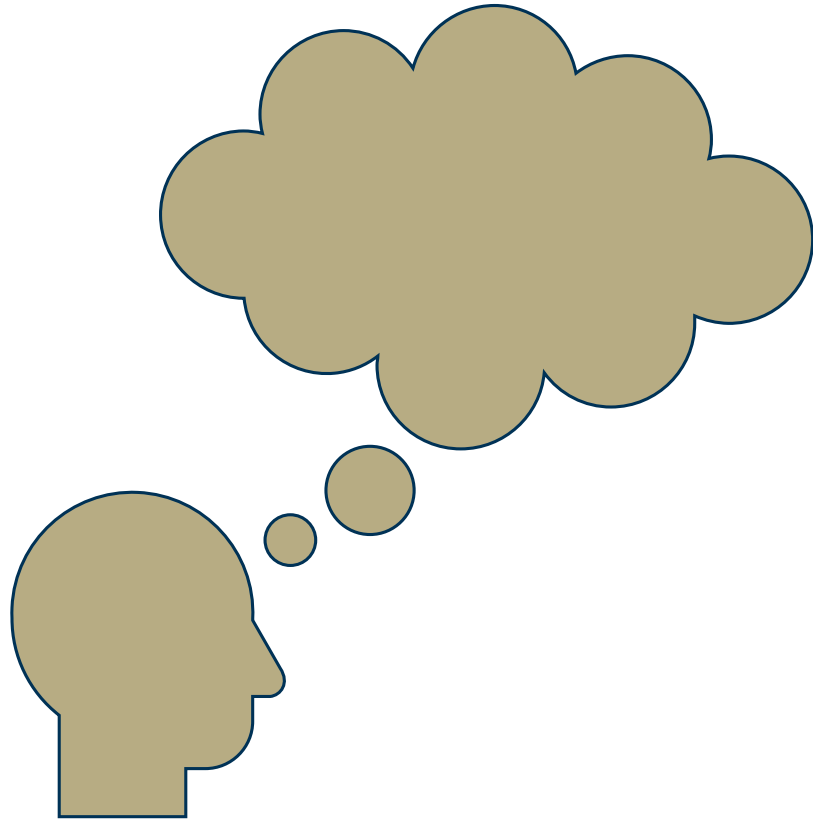
Payment &
Settlement
Services

Digital Asset Market
Participation

Treasury &
Liquidity
Management

Custody &
Safekeeping
Services

Stablecoins: Risk Management Considerations



Third-Party Risk Management

CAMELS

IT & Trust

AML / CFT

Compliance with Laws & Disclosures

Reconciliation & Audit

Crypto Assets: Current & Emerging Use Cases

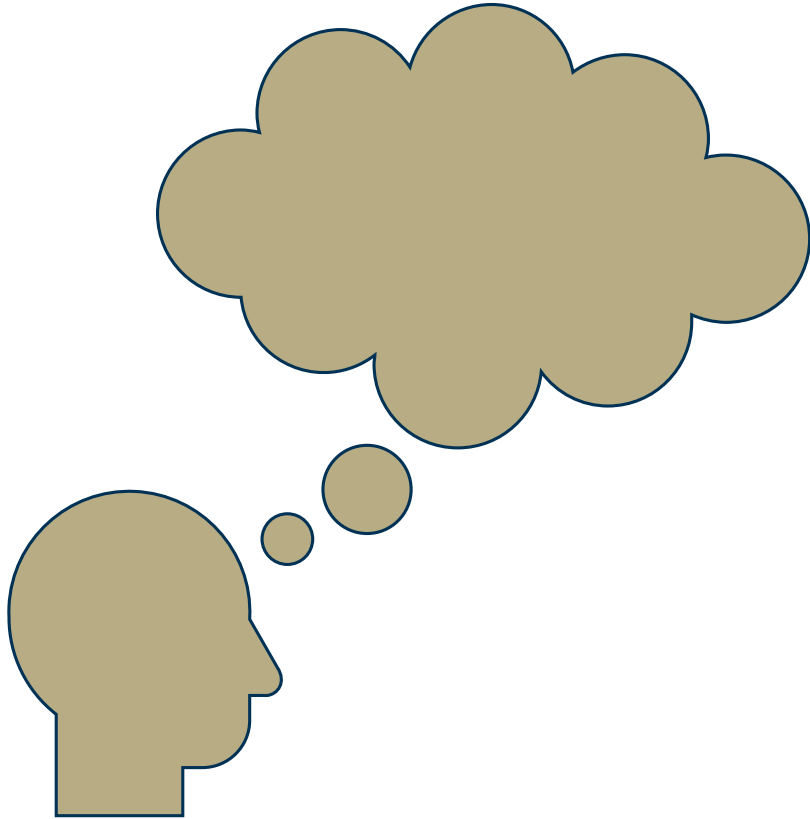
Crypto-Backed
Lending

Digital Asset
Market
Participation

Smart Contracts

Gas Fees

Crypto Assets: Risk Management Considerations



Third-Party Risk Management

CAMELS

IT & Trust

AML / CFT

Compliance with Laws & Disclosures

Reconciliations, Price Monitoring & Audit

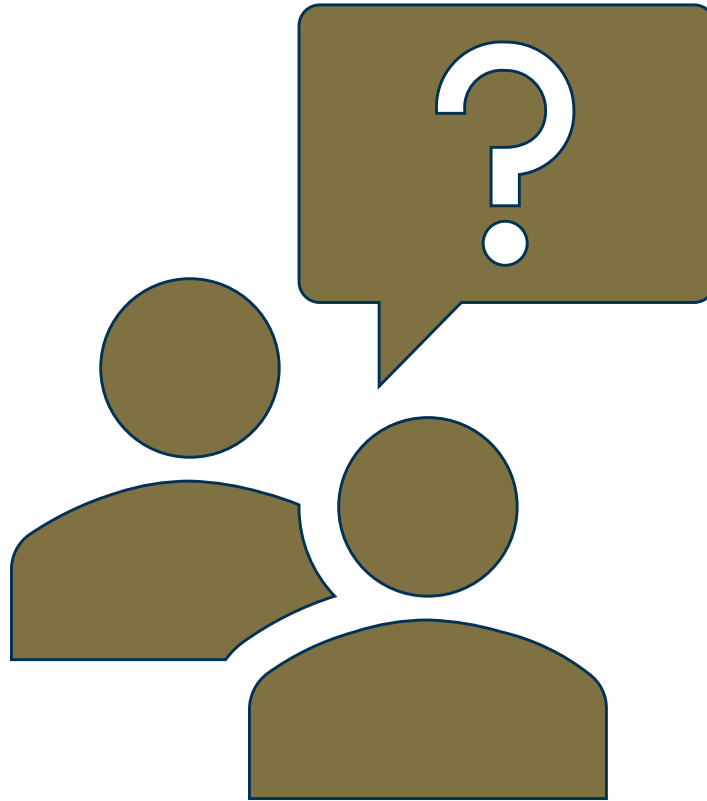
Current Events

Agency Rulemaking

- FIL-59-2025 (12/16/25) NPR to Establish GENIUS Act Application Procedures for FDIC-Supervised Institutions Seeking to Issue Payment Stablecoins
- FIL-11-2026 (4/7/26) NPR to Establish GENIUS Act Requirements and Standards for FDIC-Supervised PPSIs and IDIs



Questions



Artificial Intelligence (AI)



What is AI?

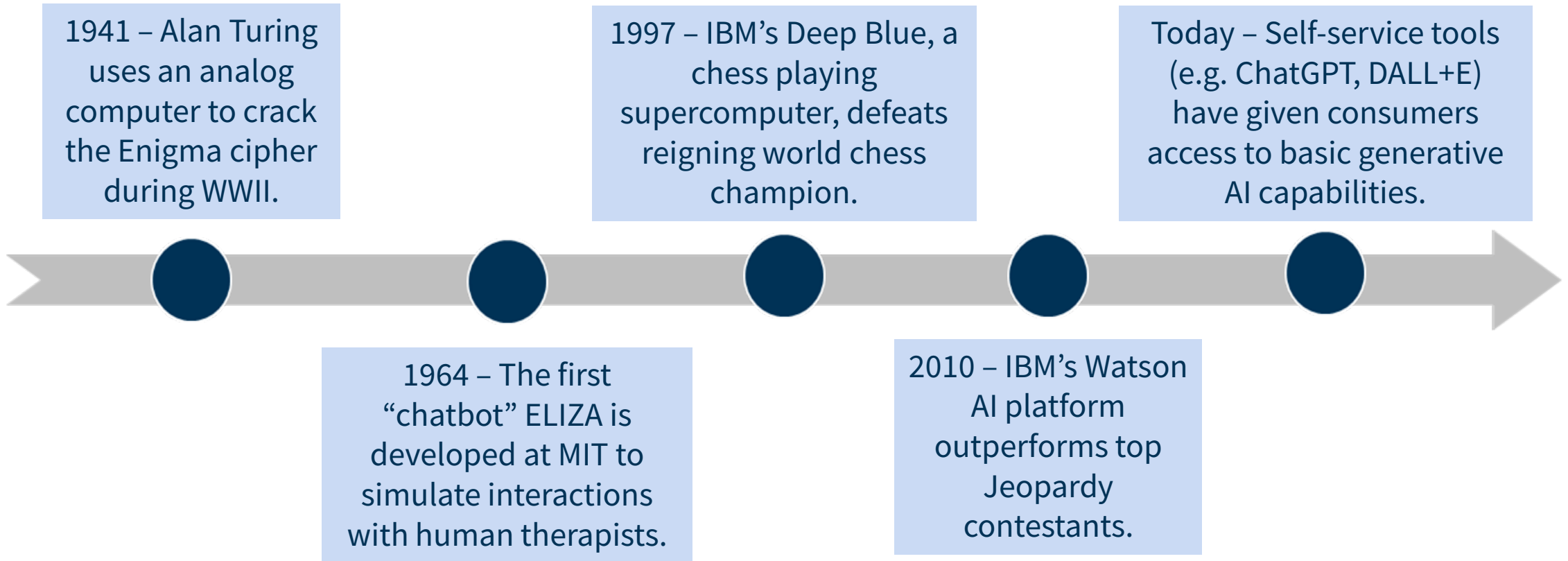
Artificial Intelligence

Machine Learning

Deep Learning

Generative AI (GenAI)

AI: A Brief History



The Importance of Human Oversight

Human-in-the-Loop (HITL)



Human participation in AI decision-making, such as reviewing and approving outputs before they are implemented.

Human-on-the-Loop (HOTL)



Humans continuously monitoring AI systems to ensure ongoing compliance and accuracy of automated processes.

Post-Process Review



Humans auditing AI decisions post-implementation to identify areas of improvement and address unintended impacts.

AI: Current & Emerging Use Cases

Fraud
Monitoring

AML / CFT

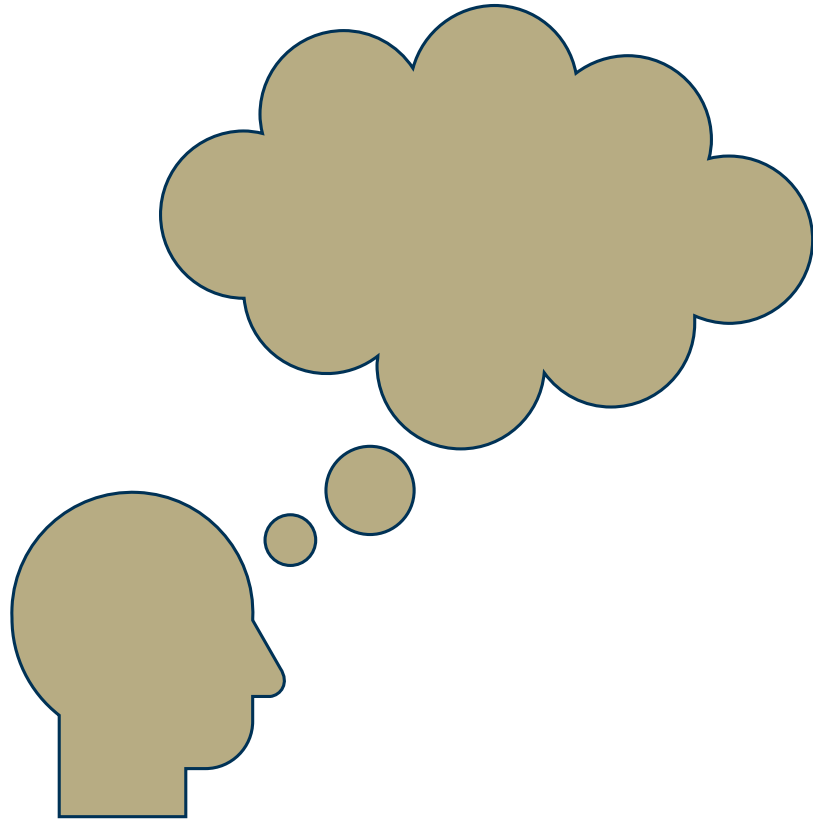
Customer
Service

Credit
Underwriting

Consumer
Tools

Market
Analysis

AI: Risk Management Considerations



Governance & Accountability

Model Risk Management

Data Privacy

Change Management

Information Security

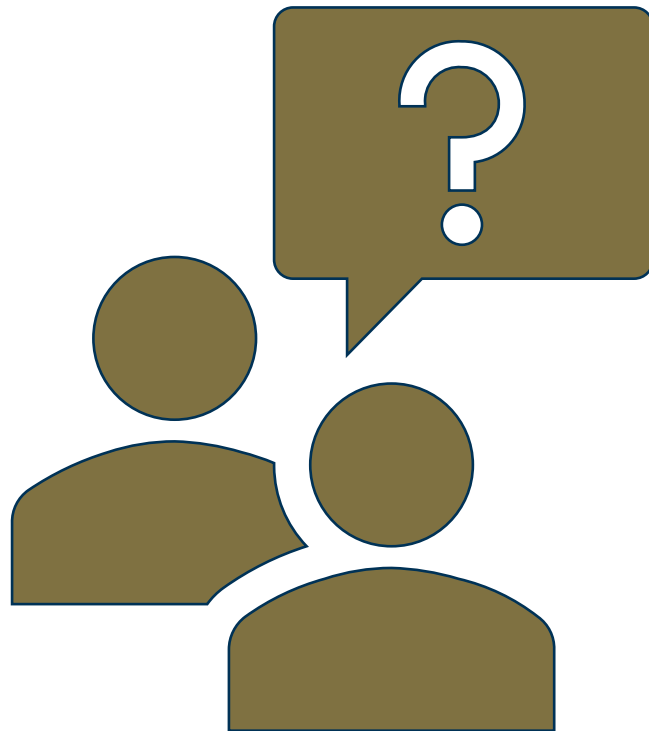
Third-Party Risk Management

AI Adoption

- What do you want this technology to solve?
- Will the AI be embedded in critical business functions?
- What are your financial expectations?
- Will the AI be internal or external facing?
- How will you use your team to test and deploy this tool?
- How does your bank data (especially customer data) and publicly available data interact with this tool?
- Are you buying the AI model or developing it yourself?



Questions



Information Technology

*The Thread Holding the Raft
Together*



2026 InTREx Core Examination Areas



BOARD AND
MANAGEMENT
OVERSIGHT



IT AUDIT



THIRD-PARTY RISK
MANAGEMENT



BUSINESS
CONTINUITY AND
DISASTER RECOVERY



INFORMATION AND
CYBER SECURITY

Business Continuity and Disaster Recovery

Business Impact Analysis (BIA)

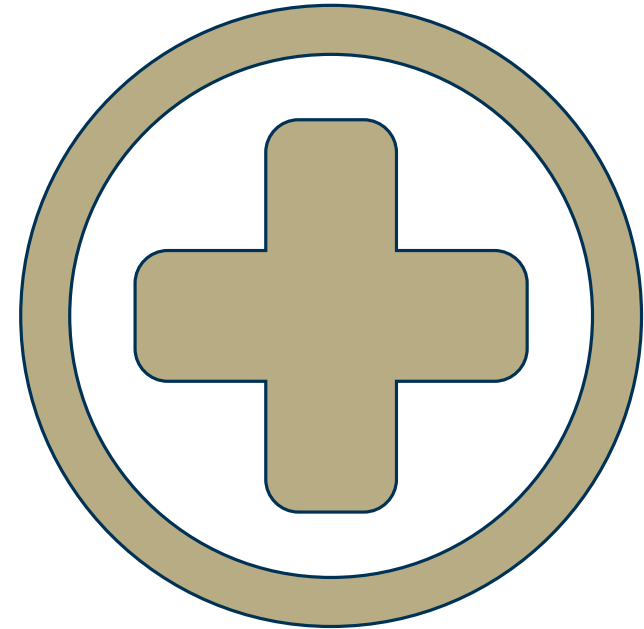
Business Continuity Plan (BCP)

Backup Recovery

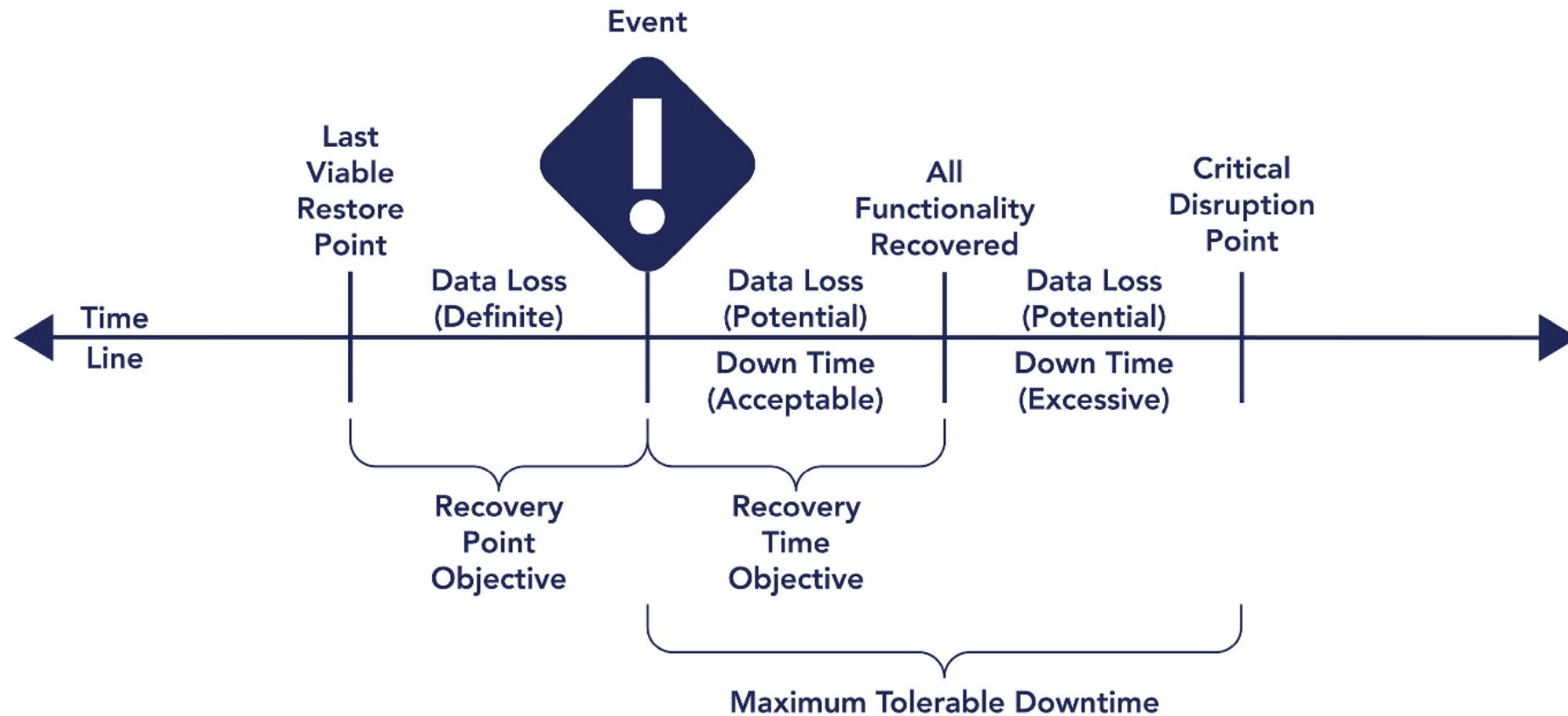
Business Continuity Strategies

BCM Training

Incident Response (Part 304, Part 364)



Business Continuity and Disaster Recovery



Cybersecurity – 2025 Data Breach Report

Financial services sector tops the list...again

Professional services firms...gateway

Skimming...resurgence

Concentrations...systemic vulnerability



2025 Annual Data Breach Report, Identity Theft Resource Center

Evolving Threats

Cybercrime-as-a-Service (CaaS)

- Groups develop platforms to sell/rent to others who perform the actual attacks
- Providers behave like software development houses, with systems development life cycles, product roadmaps, even marketing
- Allows larger pool of lesser skilled people to initiate attacks
- Darkside (RaaS), Darcula (PhaaS)

Evolving Threats

Ransomware-as-a-Service (RaaS) - DarkSide

- Sold access to their platform
- Offered 24/7 technical support for their users
- Press room, mailing lists, victim hotline accessible via the group's website
- Fee calculated using a sliding scale for percentage of the ransom payments based on payment size

Evolving Threats

V 3 The new version is now available for testing. The functions have been redesigned. Now, you can customize the front desk yourself. You can complete the production of a front desk in 10 minutes using darcula-suite. It

Phishing-as-a-Service (PhaaS) - Darcula

- Subscription-based monthly fee access
- SDLC-based updates and feature rollouts, announced via Telegram like a commercial software release
- Version 3.0 (Feb. 2025) added automated brand impersonation, cloning websites with editable drop in scam templates

Evolving Threats

ATM Jackpotting

- Criminals access ATMs and place malware on the system to illegally dispense cash
- Physical access to ATM, typically target rural or unattended locations
- Often perform surveillance on the site, checking for cameras, response times, restocking routines etc.
- 650 cases reported to FBI in October 2025 with estimates \$12,500,000 in losses
- Mitigation considerations: unique access keys, encrypted hard drives, hood alarms requiring code

Evolving Threats...and Solutions

Artificial Intelligence

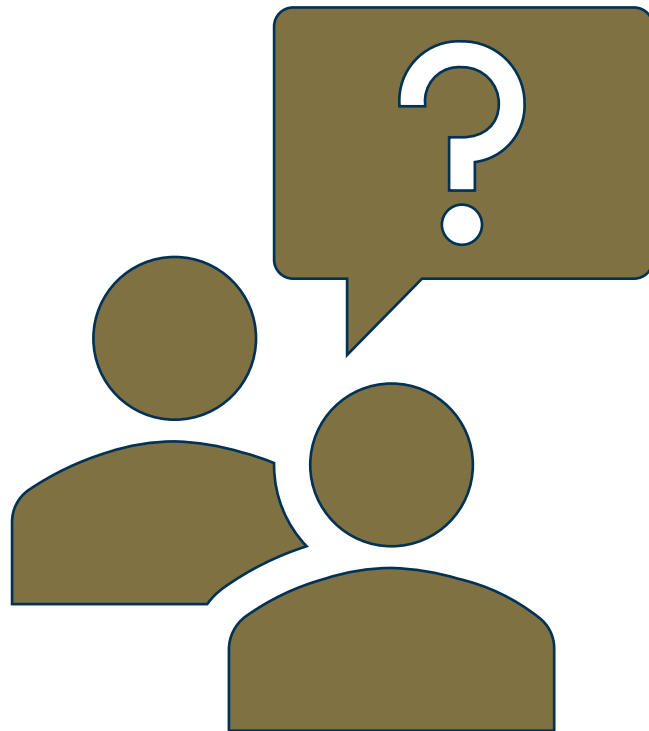


Used by bad actors to automate and intensify attacks.

Used by good actors to monitor and prevent attacks.



Questions



Emerging Technology Takeaways



Executing a Clean Run through the Rapids

- Ensure new technology meets your business needs and aligns with your strategies, financial goals, and culture.
- Understand and own the risks associated with new technologies including technology from or associated with third-parties.
- Stay current on regulations impacting the technologies you are using or considering.