Emerging Technology

Navigating the Rapids of Innovation

FDIC

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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

2008/2009 - Bitcoin Whitepaper published and Genesis Block mined.

2015 – Ethereum created and smart contracts are now possible.

2017 - $DAI was the first stablecoin to be minted on Ethereum.

2017 – Self-certification of BTC futures contracts

2024 - SEC approval of the first spot BTC ETFs.

2025 – GENIUS Act passed providing some regulatory clarity on certain permissible crypto activities.

Tokenization

Real Estate

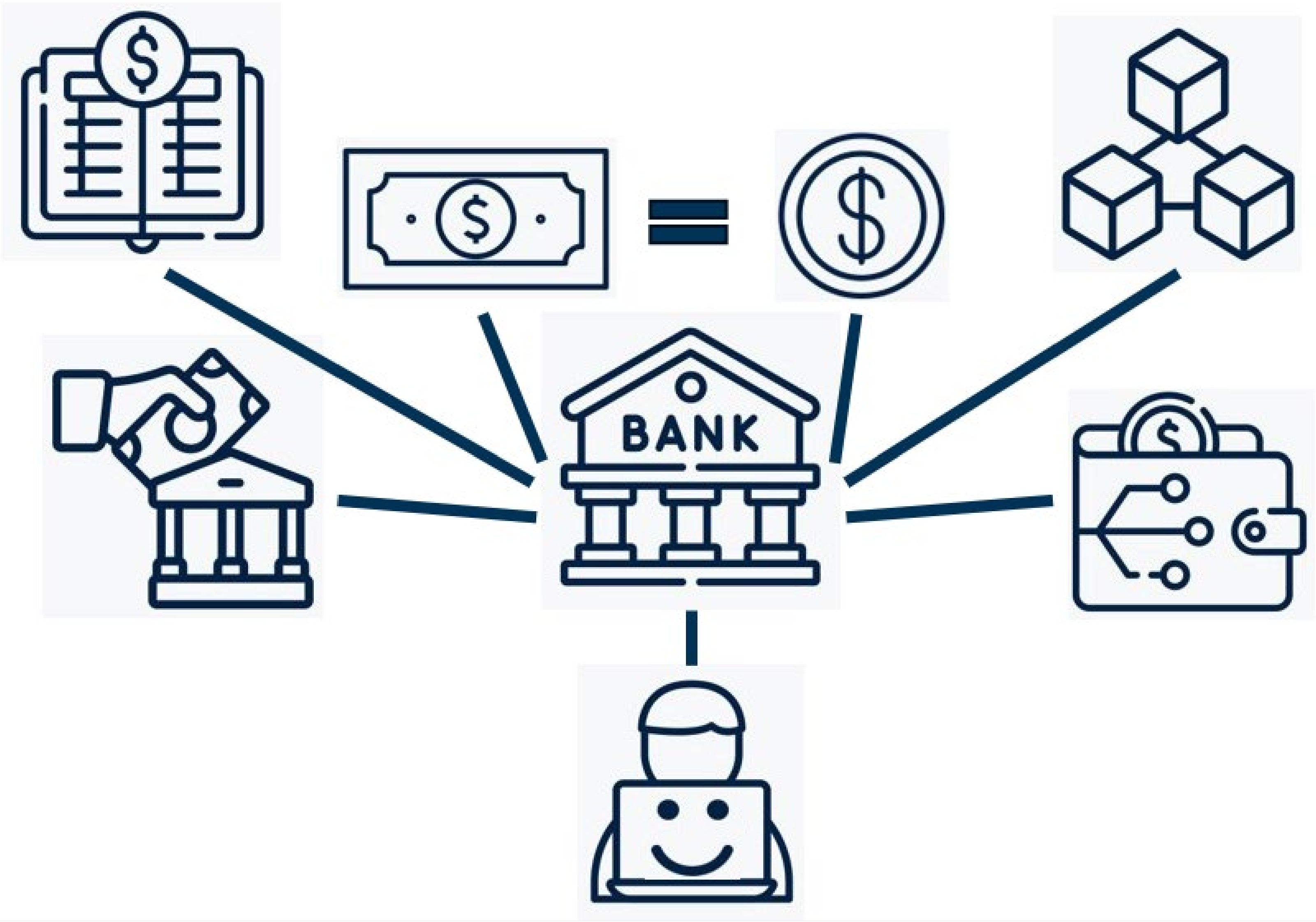
Bonds

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

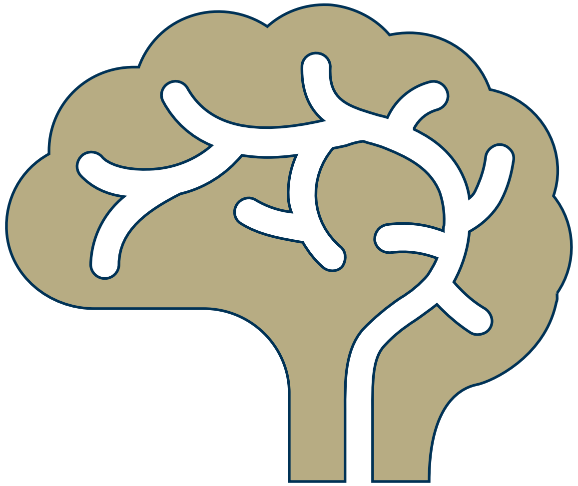
- Engage in "riskless principal transactions", like simultaneous purchase/sale of assets with no net asset risk, with and on behalf of customers.

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

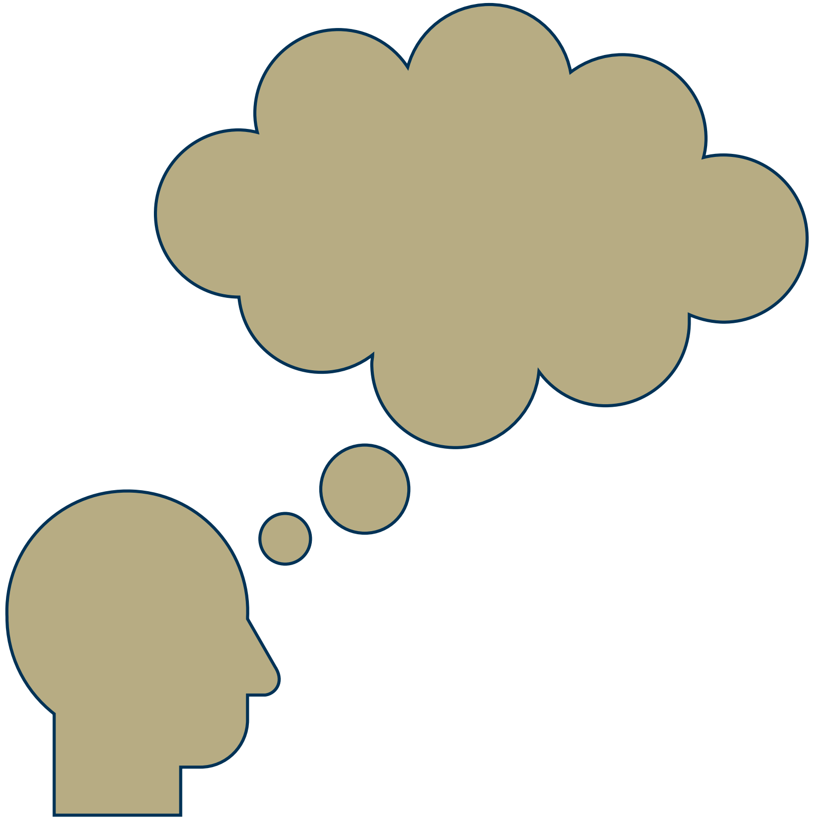
A permitted payment stablecoin issuer (PPSI) shall:

- 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

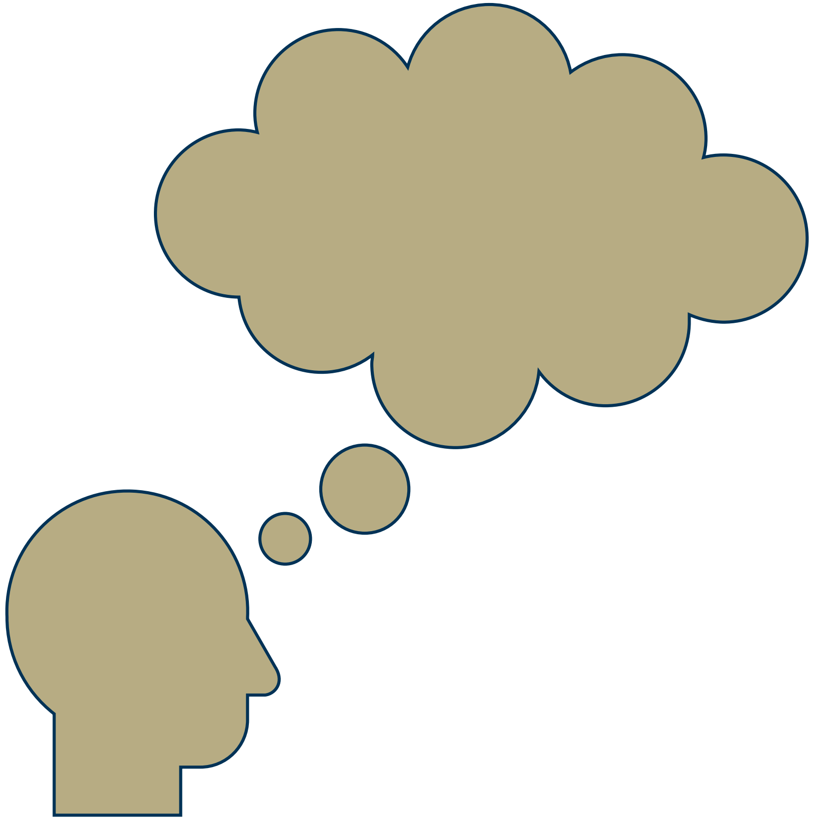
Crypto-Backed Lending

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

Current Events

Agency Rulemaking

- FIL-24-2026 (5/22/26) NPR to Establish BSA and Sanctions Compliance Standards for FDIC-Supervised PPSIs
- FIL-29-2026 (6/18/26) NPR: PPSI Customer Identification Program

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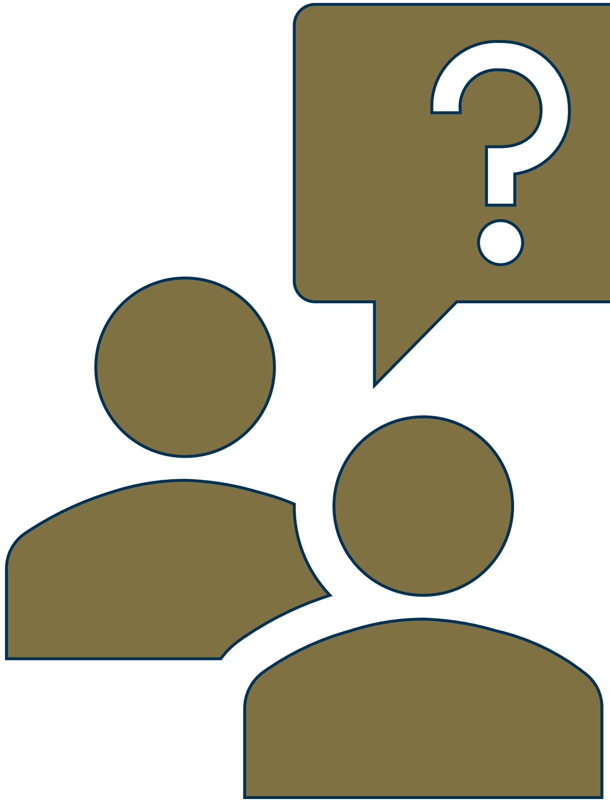
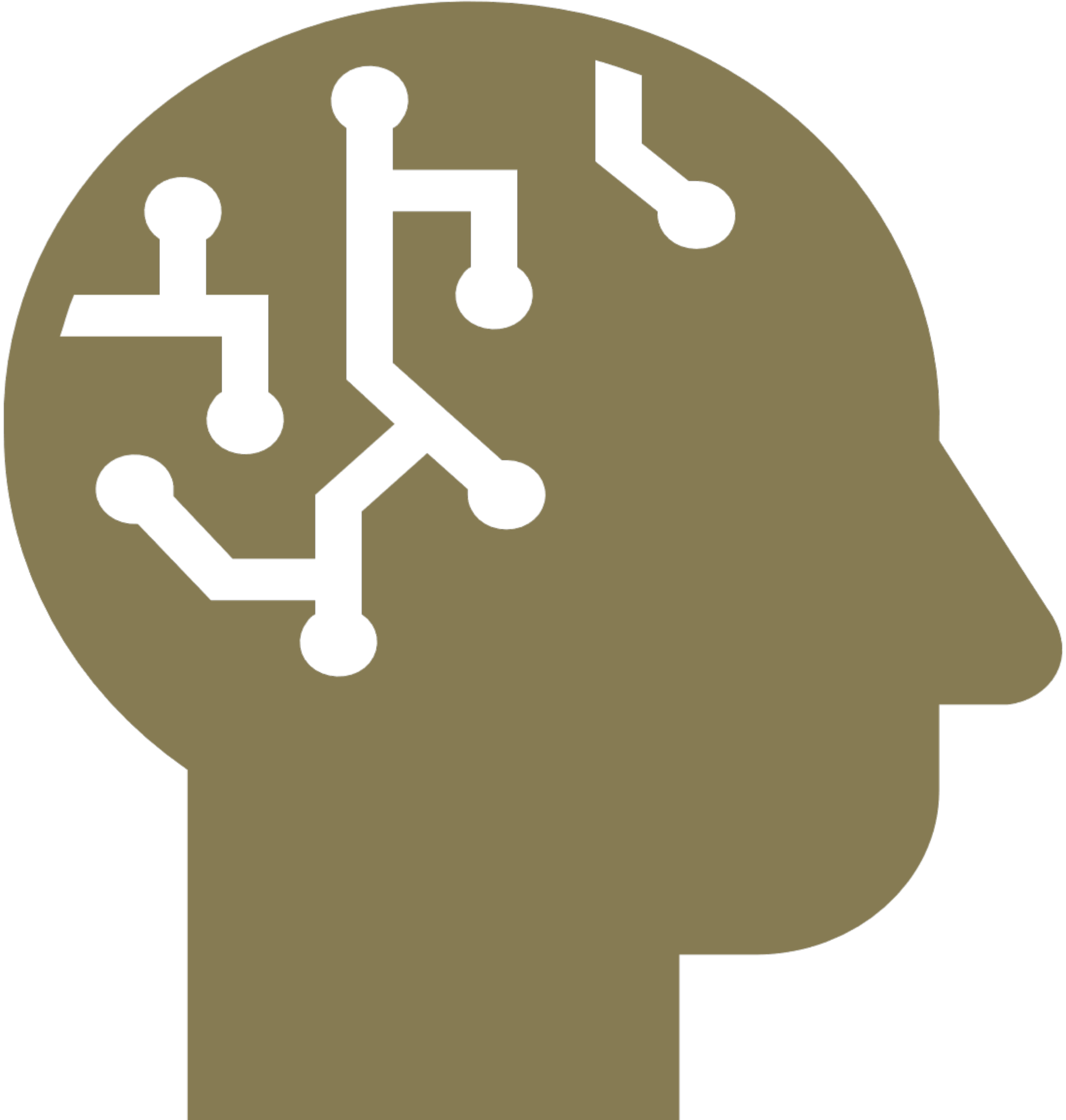
Questions



Artificial Intelligence (AI)



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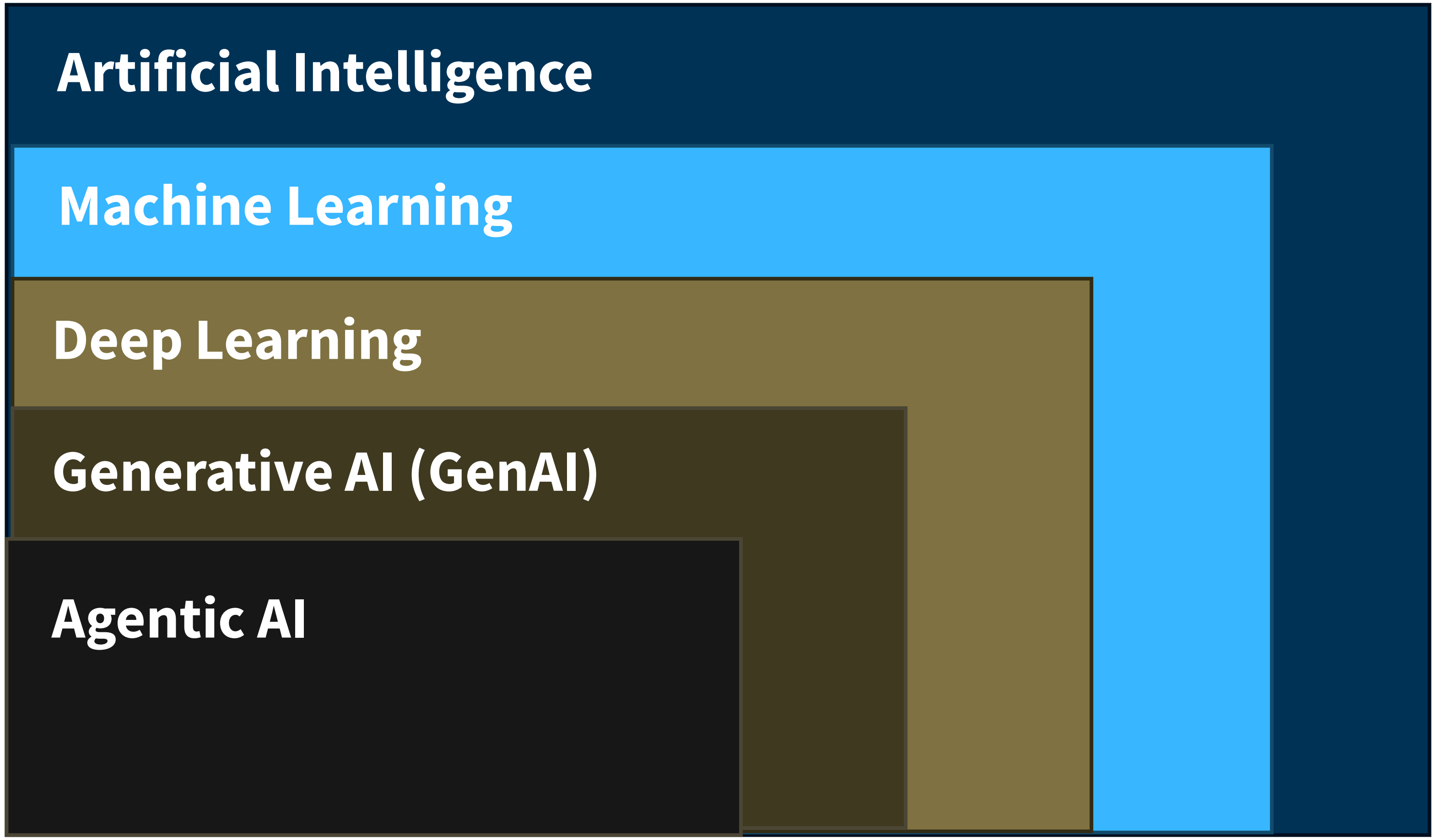
What is AI?


Artificial Intelligence
Machine Learning
Deep Learning
Generative AI (GenAI)
Agentic AI

AI: A Brief History

1941 – Alan Turing uses an analog computer to crack the Enigma cipher during WWII.

1964 – The first “chatbot” ELIZA is developed at MIT to simulate interactions with human therapists.

1997 – IBM’s Deep Blue, a chess playing supercomputer, defeats reigning world chess champion.

2010 – IBM’s Watson AI platform outperforms top Jeopardy contestants.

Today – Self-service tools (e.g. ChatGPT, DALL+E) have given consumers access to basic generative AI capabilities.

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.

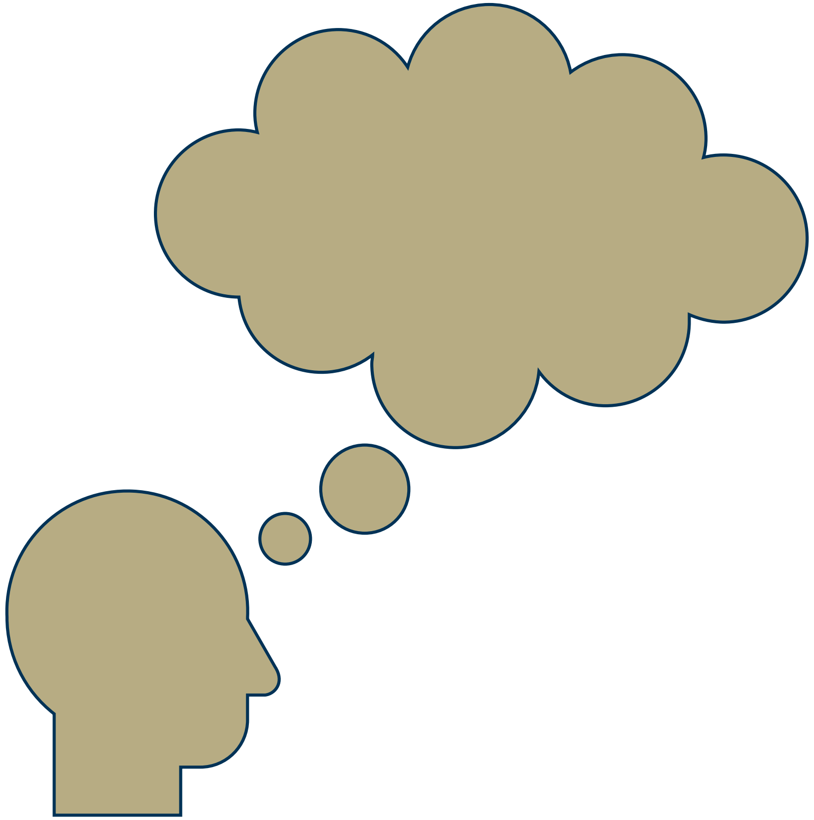
Post-Process Review

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

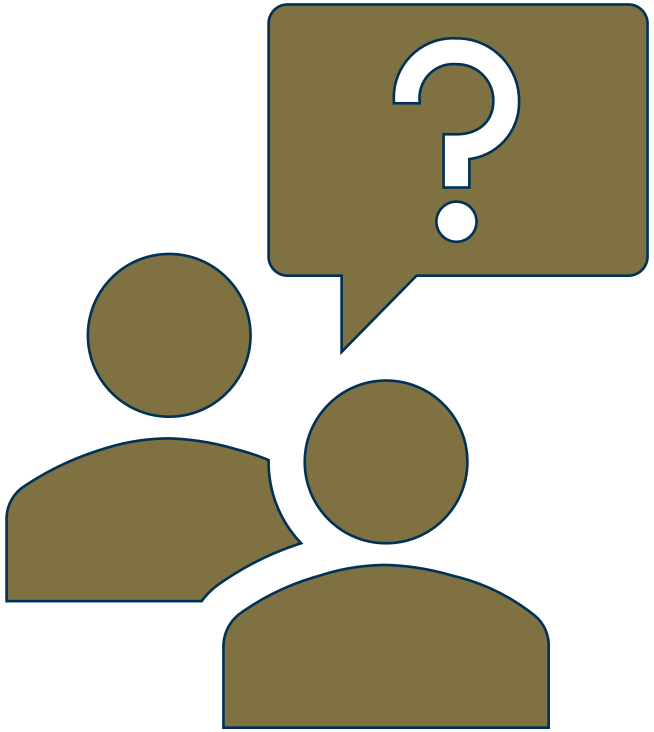


- Governance & Accountability
- Model Risk Management
- Data Privacy
- Change Management
- Information Security
- Third-Party Risk Management

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

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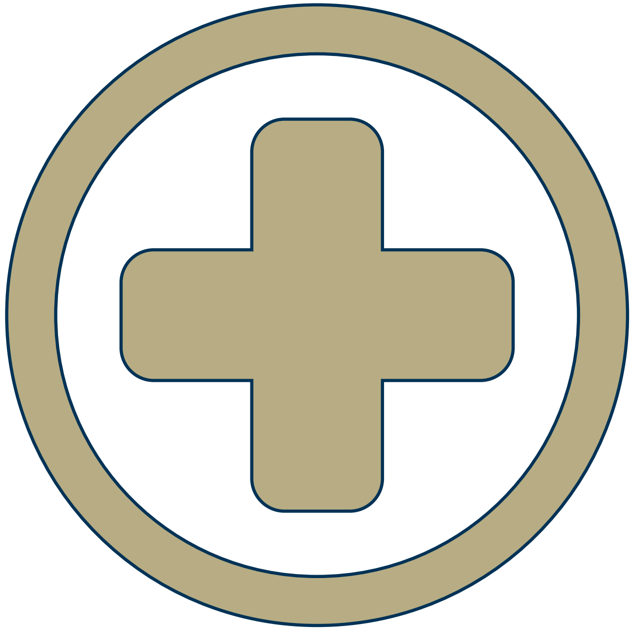
2026 InTREx Core Examination Areas

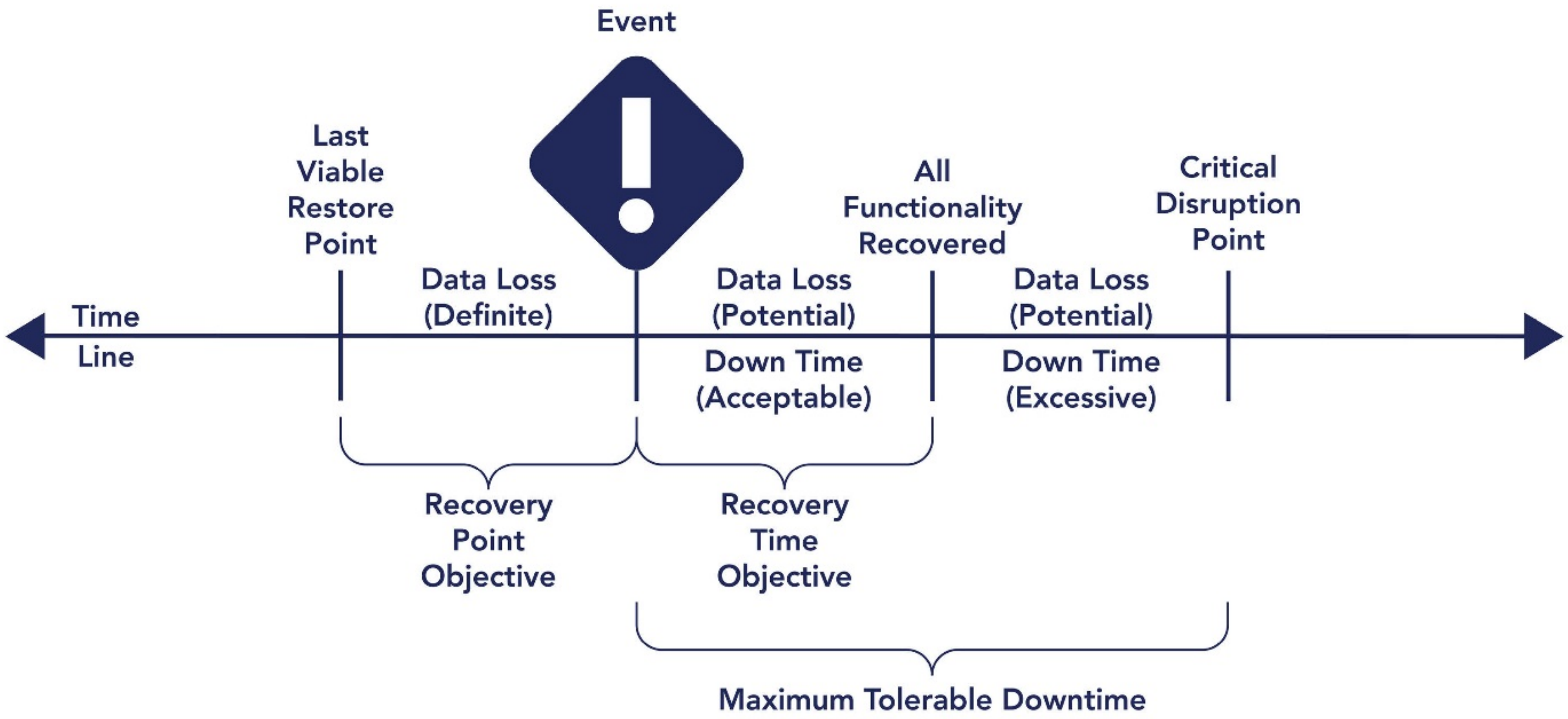
- BOARD AND MANAGEMENT OVERSIGHT
- IT AUDIT
- THIRD-PARTY RISK MANAGEMENT
- BUSINESS CONTINUITY AND DISASTER RECOVERY
- INFORMATION AND CYBER SECURITY

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)

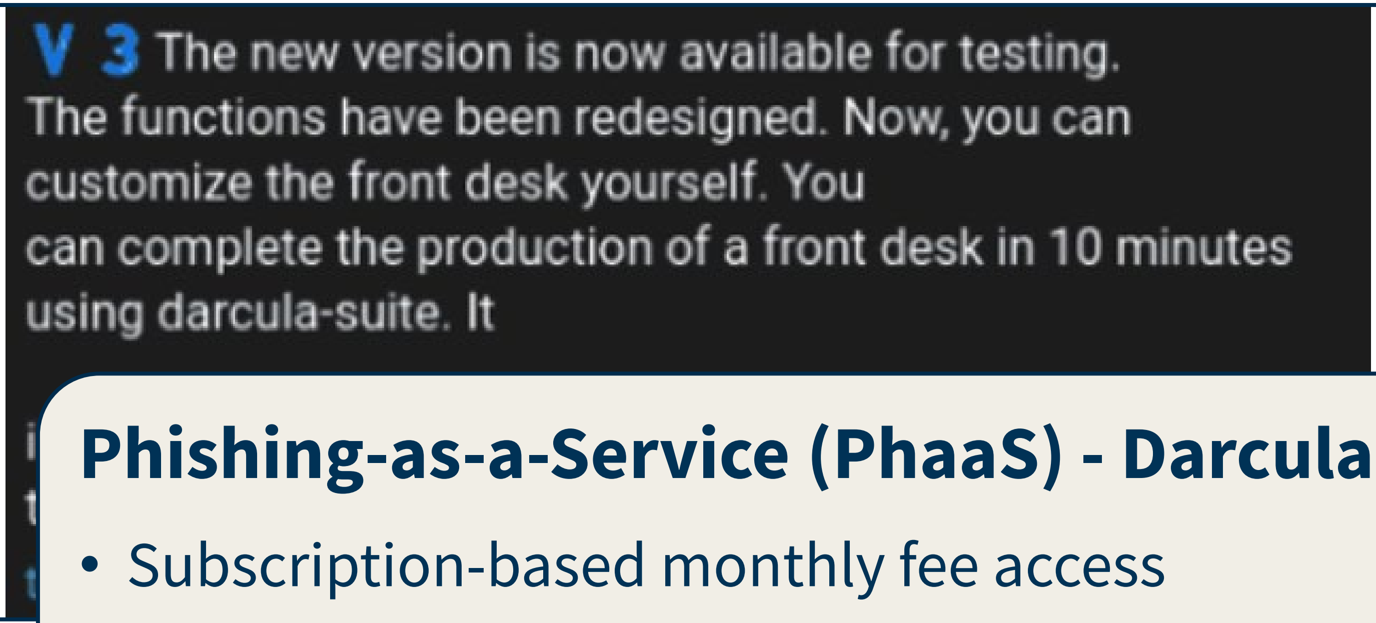
- Groups develop platforms to sell/rent to others who perform the actual attacks
- Providers behave like software development houses, with systems development life cycles, product roadmaps, even marketing
- Allows larger pool of lesser skilled people to initiate attacks
- Darkside (RaaS), Darcula (PhaaS)

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



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

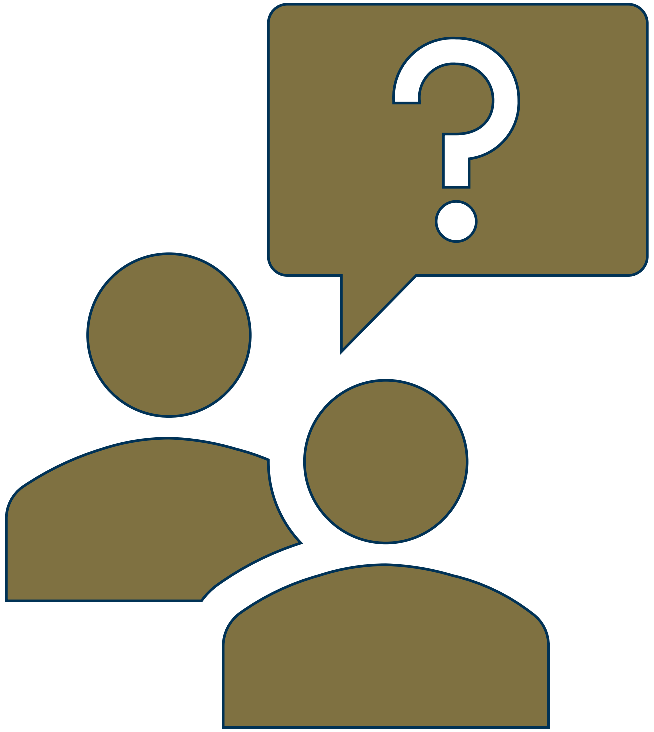
Evolving Threats…and Solutions

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.