



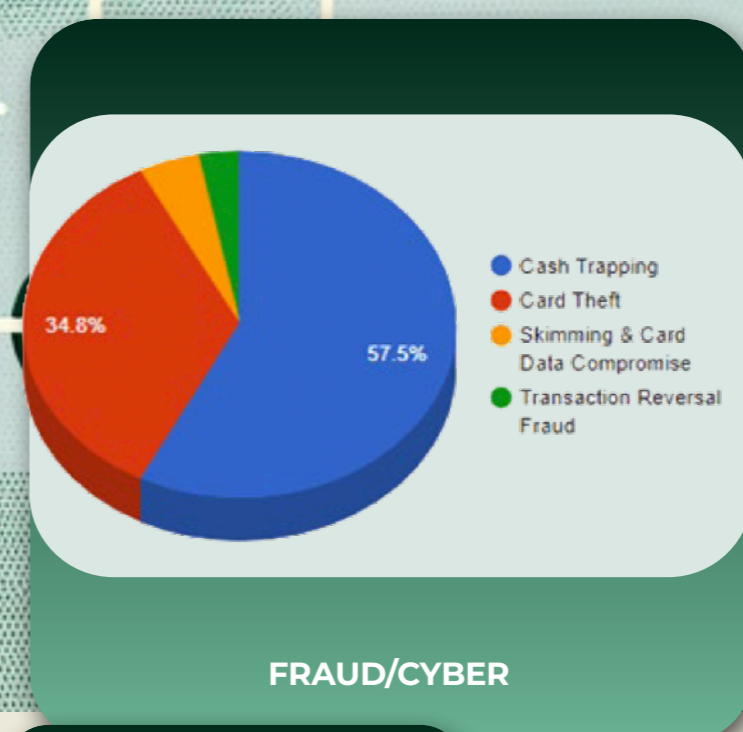
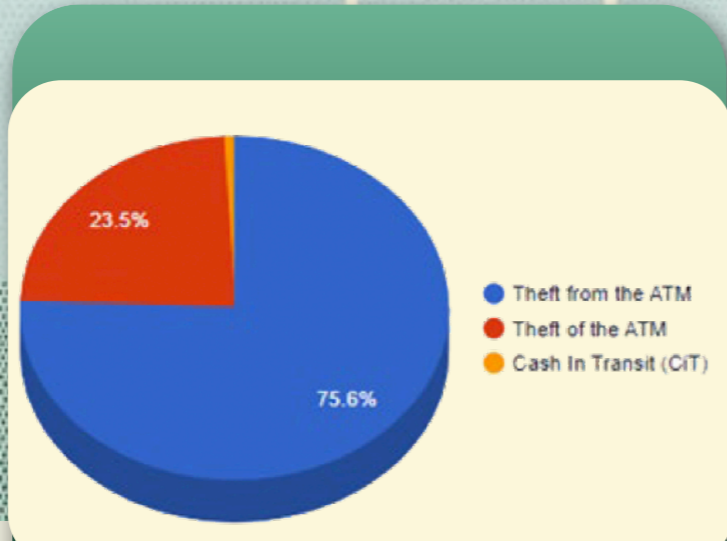
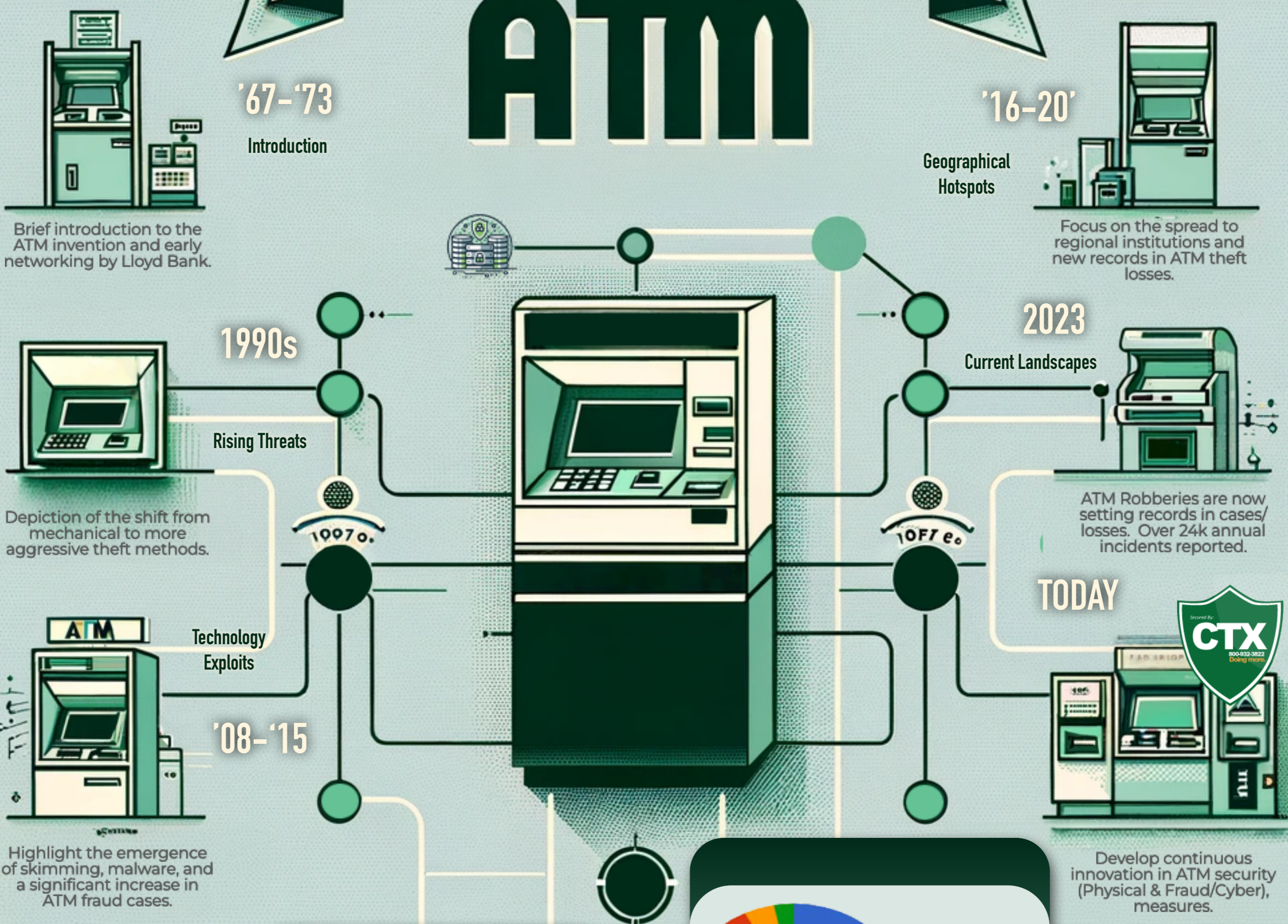
"Studies show that criminals steal 10 times more money in the average ATM robbery than the average bank robbery."

~ Doug Johnson, Senior Vice President for the ABA.



### THE EVOLUTION OF ATM THREATS

# ATM



- smash & grab**: Valuable media and/or components are stolen from the ATM.
- ATM theft**: The ATM is physically stolen, removed from its location.
- CIT attacks**: ATM service-related attacks on CIT or Service Staff.
- cash trapping**: Tools and techniques used to physically jam cash dispensed without the victim receiving or observing the cash.
- card theft**: The physical theft of a genuine card at an ATM, aka "card trapping".
- skimming & card data compromise**: The compromise and theft of card data.
- transaction reversal fraud**: The fraudulent theft of cash from an ATM during a transaction. The account is not debited but reversed in such a way that the account is not depleted.
- jackpotting**: Cash is forced to be fraudulently dispensed by the ATM without any account being debited.
- cash out**: Withdrawal limits are eliminated or inflated to remove limits on how much cash can be withdrawn.

Source: ATMA / ATM security association "Crime Trends"

**RECOGNIZE THREATS**

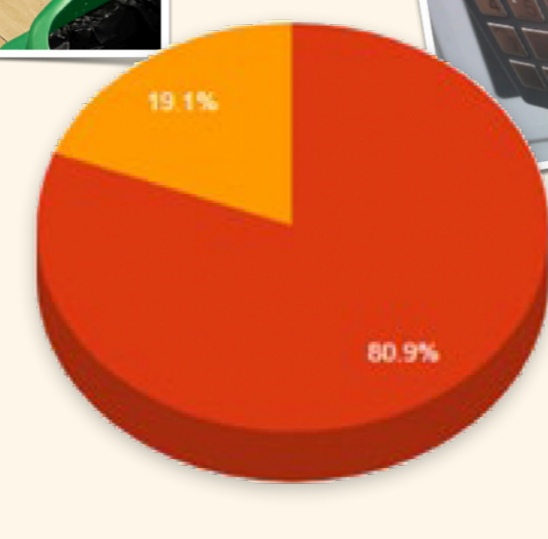
**ASSESS YOUR FLEET**

**PLAN YOUR SECURITY REQUIREMENTS**

**MONITOR & TEST**

**DEVELOP YOUR RESPONSE PLAN**

**RAPID Response MANAGED SERVICES**



## MY CHECKLIST

- ADD ADDITIONAL SECURITY BY CHANGING THE STANDARD MFG LOCKS TO A UNIQUE INSTITUTIONAL LOCK.
- SECURE SENSITIVE AREAS WITH ADD'L ALARM CONTACTS AND KEYPADS FOR AUTHORIZED PERSONNEL.
- IMPLEMENT SUSPICIOUS ACTIVITY PROTOCOLS ON YOUR IP CAMERA NETWORK & TEST!
- TIE ALARM & CAMERA ALERTS TO A PHYSICAL "ON PREMISE" SIREN / STROBE
- CONSIDER ENHANCED NFC & OTC ELECTRONIC LOCKS THAT YOU CAN USE TO TRACK DETAILED USER ACTIVITY.
- BASED ON YOUR PHYSICAL ENVIRONMENT CONSIDER ADD'L BARRIER SOLUTIONS, (BOLLARDS, SECURITY GATES, PLANTERS)
- DEVELOP DAILY/WEEKLY/MONTHLY AUDIT PROCEDURES.
  - CARD READER INSPECTIONS FOR SUSPICIOUS SKIMMER DEVICES.
  - PENETRATION TESTING
  - PATCH REPORTS
  - SOCIAL ENGINEERING
  - SECURITY LOGS
  - SUSPICIOUS ACTIVITY JOURNAL (CAMERA TEST)
- SECURE YOUR BIOS
  - ONLY ALLOW BOOT FROM THE PRIMARY HARD DISK
  - EDITING OF BIOS SETTINGS MUST BE PASSWORD PROTECTED
- IMPLEMENT USER ACCESS CONTROLS
  - ESTABLISH CENTRAL POLICY MGT W/ ACCESS CONTROLS & MONITOR
  - HAVE AN OPERATIONAL PASSWORD POLICY FOR ALL DEVICES
- ENSURE TLS ENCRYPTED COMMUNICATIONS IS ENABLED
  - FROM THE NETWORK
  - TO THE ATM
- ESTABLISH & TEST SECURE FIREWALL CONNECTIONS
  - ATM FIREWALL MUST BE CONFIGURED TO ONLY ALLOW KNOWN AUTHORIZED INCOMING AND OUTGOING CONNECTIONS NECESSARY FOR YOUR ATM ENVIRONMENT
- REMOVE UNUSED SERVICES & APPLICATIONS FROM YOUR OPERATING ENVIRONMENT.
  - IMPLEMENT ZERO-DAY PROTECTION FOR MALICIOUS ATTACKS.
  - ENSURE APPLICATIONS RUN IN A LOCKED DOWN ACCOUNT W/ MINIMUM PRIVILEGES.
  - DISABLE AUTO PLAY
  - REQUEST/GENERATE SECURITY LOGS
- DEPLOY NETWORK AUTHENTICATION BASED HDD ENCRYPTION
  - ENSURE ATM CORE HAS TPM MODULE - WOULD NEED TO BE PHYSICALLY VERIFIED. THE TPM STORES ENCRYPTION CODES BETWEEN ATM OS & XFS LAYERS
  - LOCK DOWN USB PORT ACCESS
- DISABLE EMV FALLBACK TO MAGSTRIPE FROM NETWORK.
  - CONSIDER EFT FRAUD LIMITS (EX. 3 CARD ATTEMPTS THEN DE-ACTIVATE CARD)
- ESTABLISH A CONSISTENT OS PATCHING PROCESS
  - KEEP ATM SOFTWARE & FIRMWARE UP TO DATE WITH THE LATEST "TESTED" PATCHES AND UPDATES. REGULARLY MONITOR FOR SECURITY ADVISORIES AND APPLY PATCHES TO MITIGATE RISKS.

"99% of all cyber threats can simply be mitigated through effective patch management."  
~ Safe Systems