



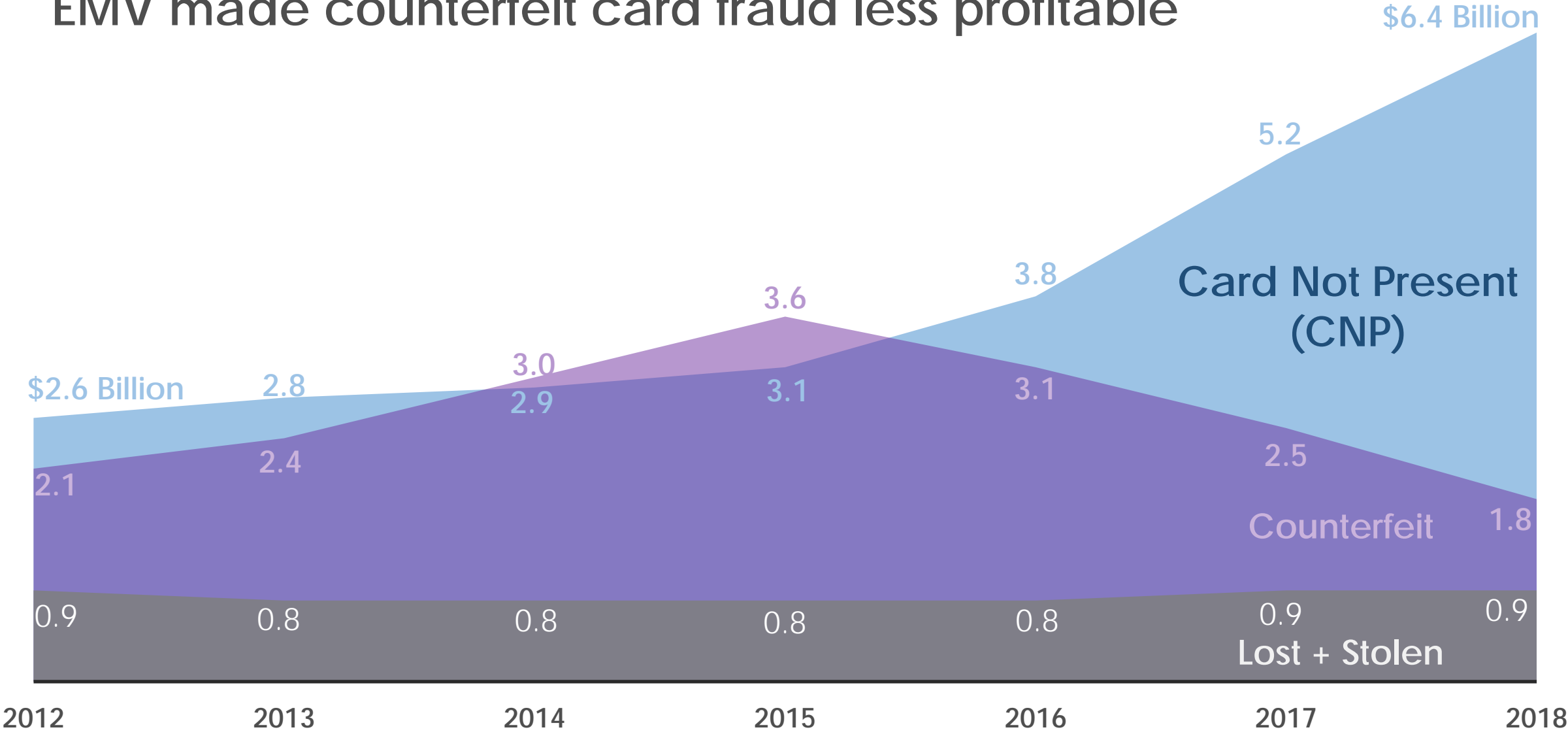
Authentication and Security in the Payments Ecosystem

Amy Zirkle, VP Industry Affairs, Electronic Transactions Association

What is driving Card Not Present fraud?

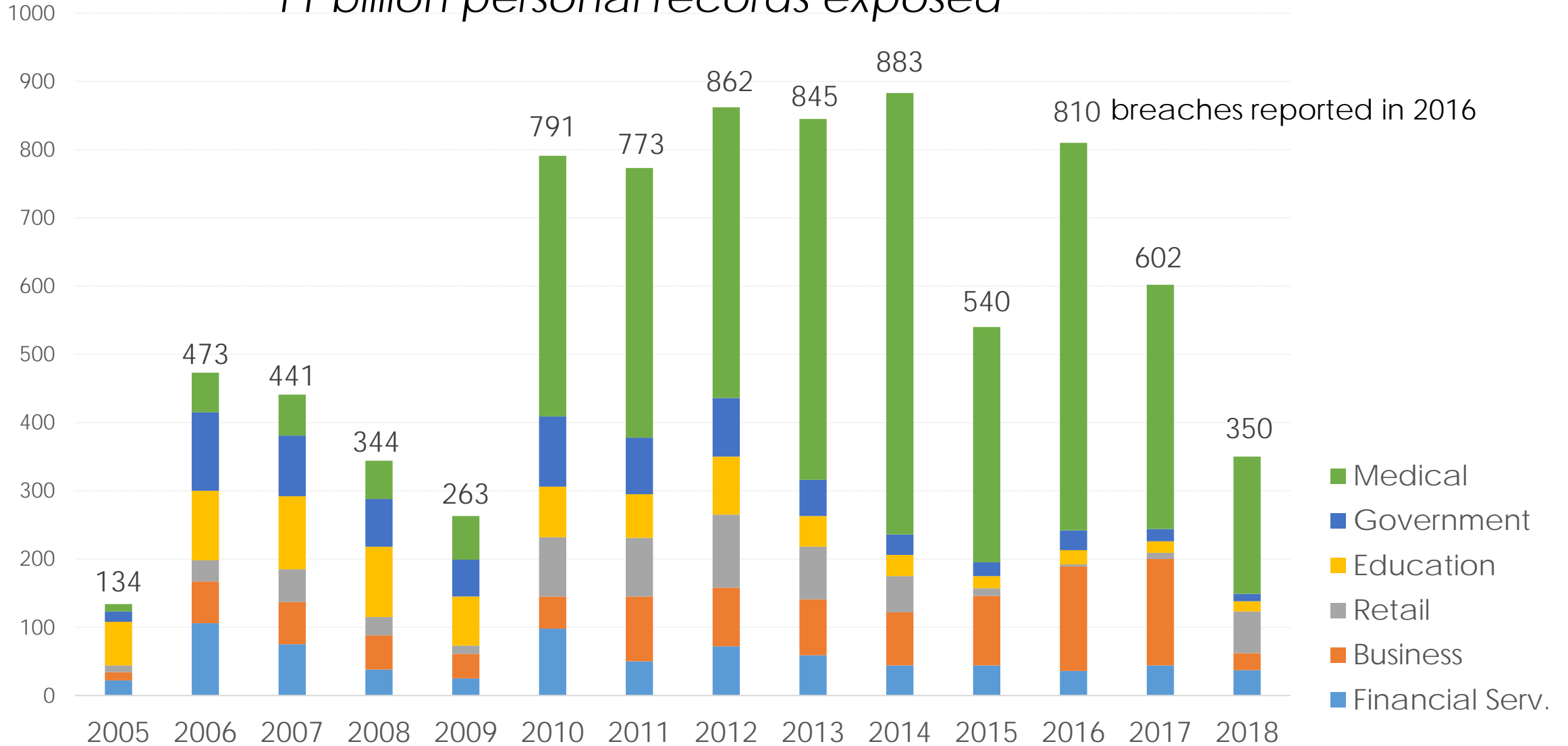
1. EMV made counterfeit card fraud less profitable
2. Data breaches have exposed billions of personal records, including financial data
3. Commerce is increasingly happening online (eCommerce)

EMV made counterfeit card fraud less profitable

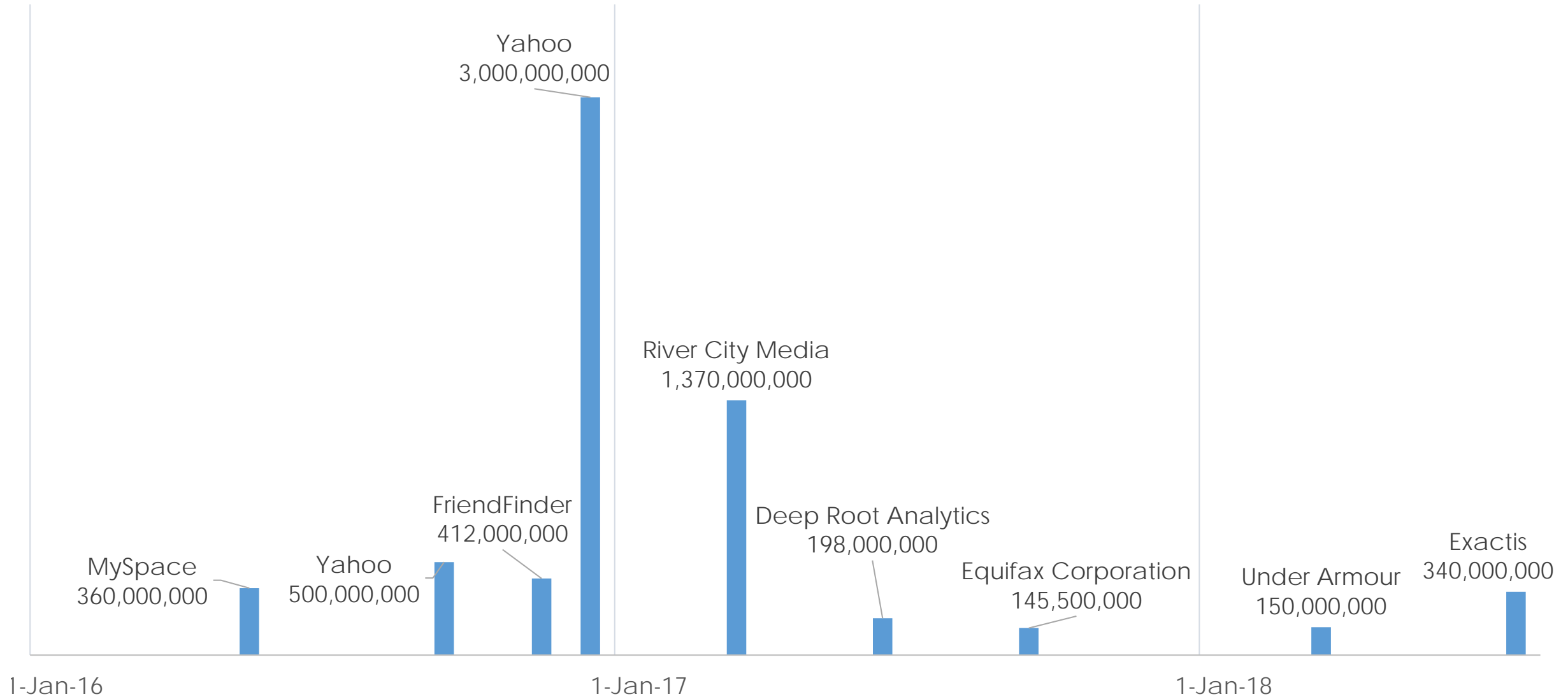


8000+ Data Breaches Reported Since 2005

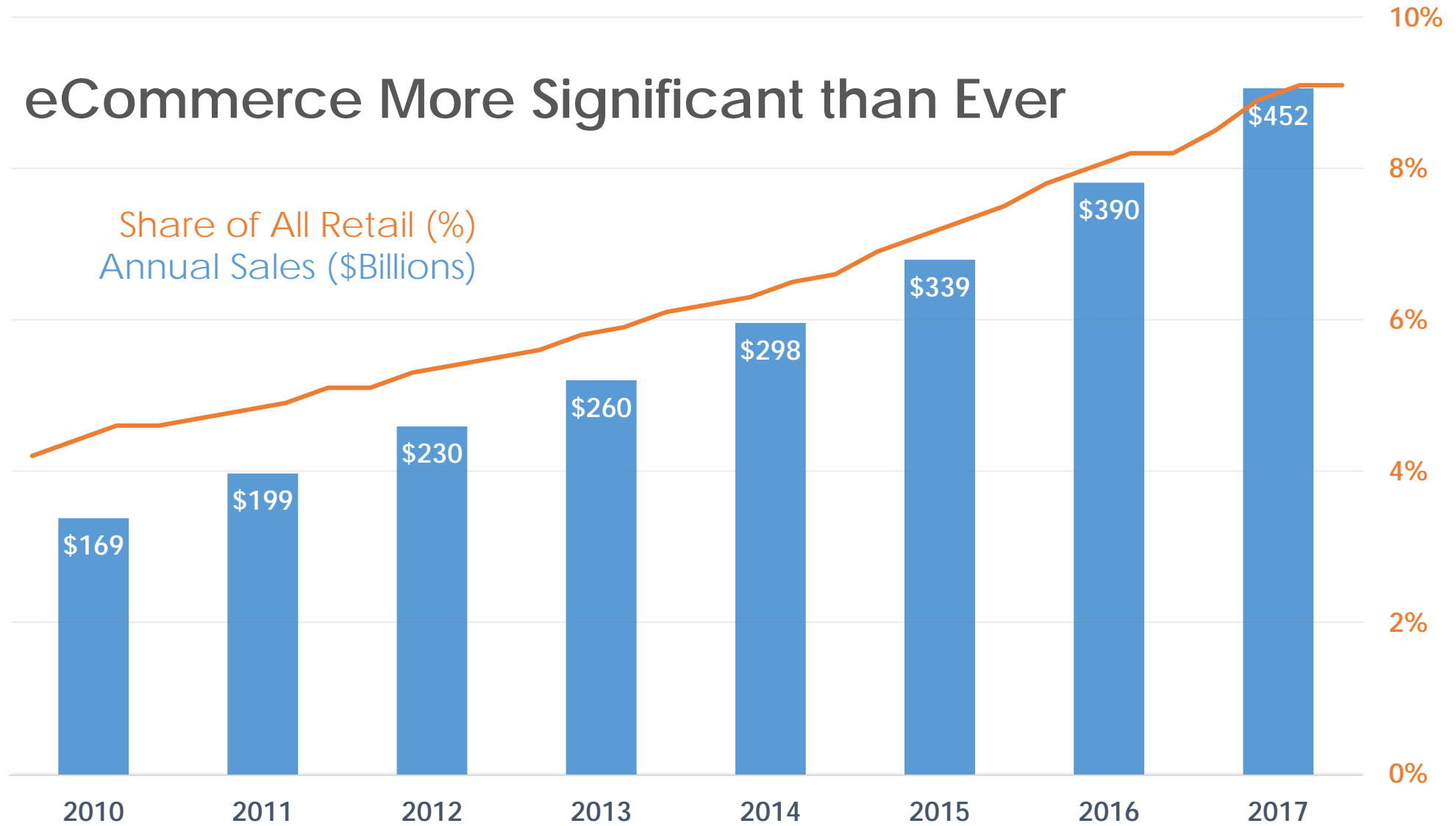
11 billion personal records exposed



These 9 breaches alone have exposed **6.5 Billion** records

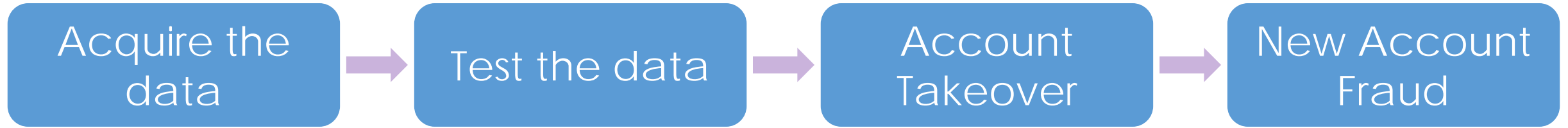


eCommerce More Significant than Ever

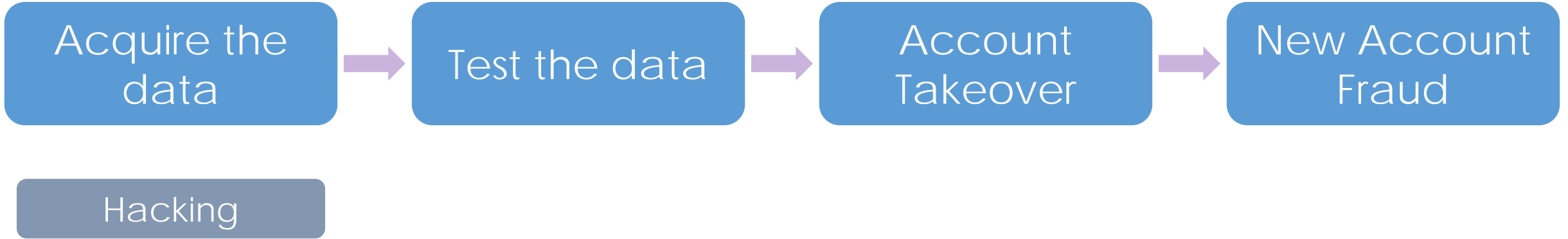


Data from the US Census Bureau and US Department of Commerce

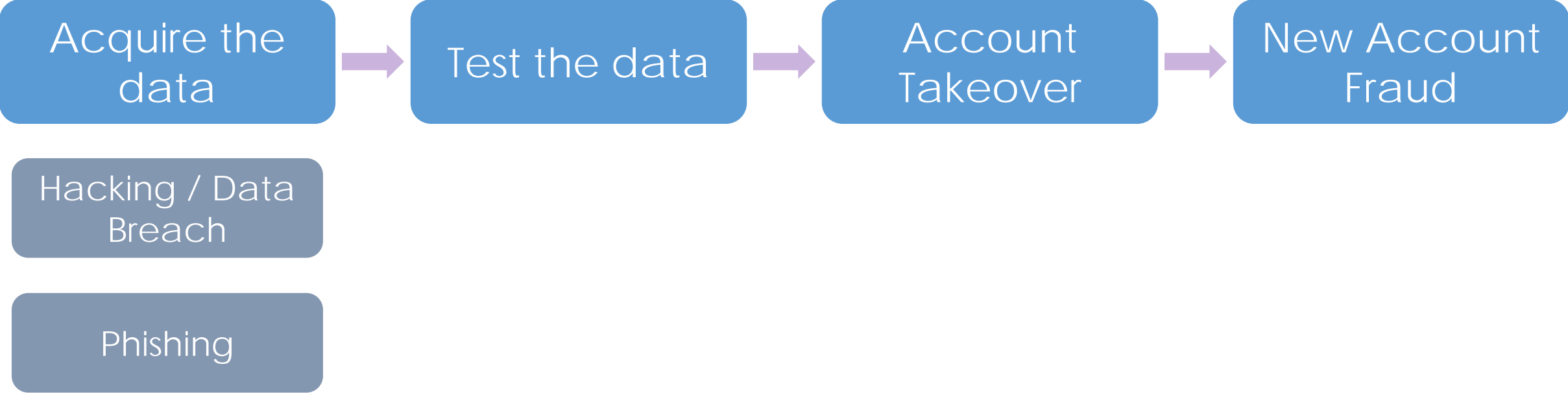
Lifecycle of CNP Fraud



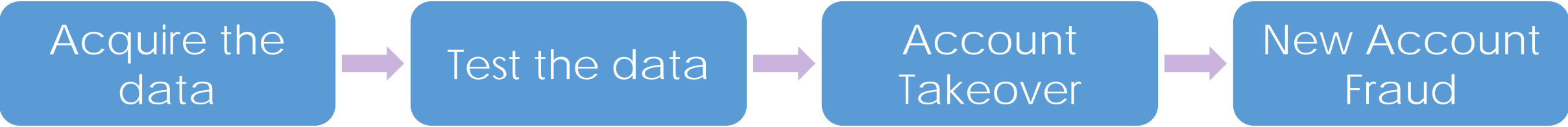
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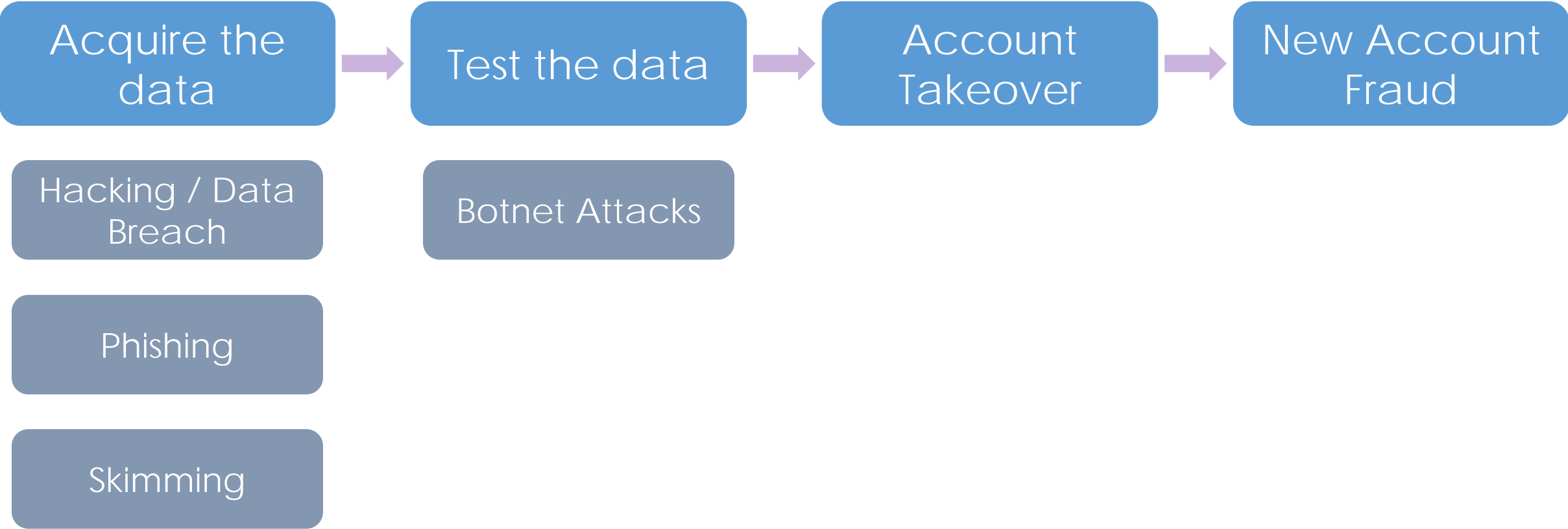


Hacking / Data Breach

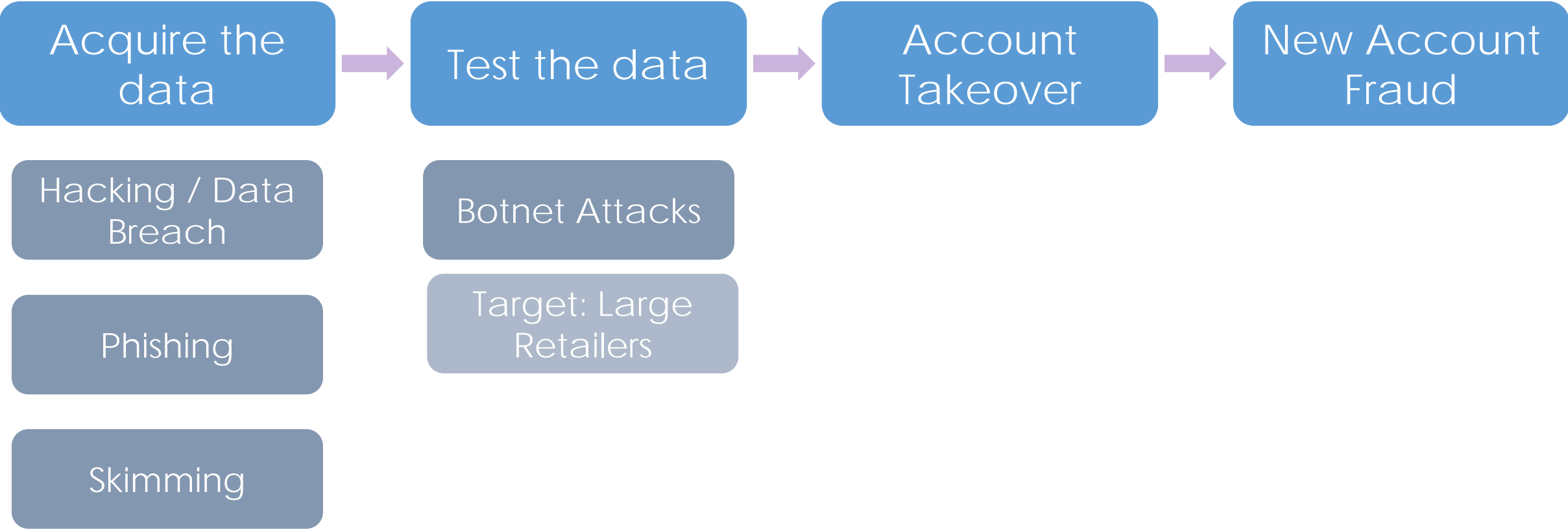
Phishing

Skimming

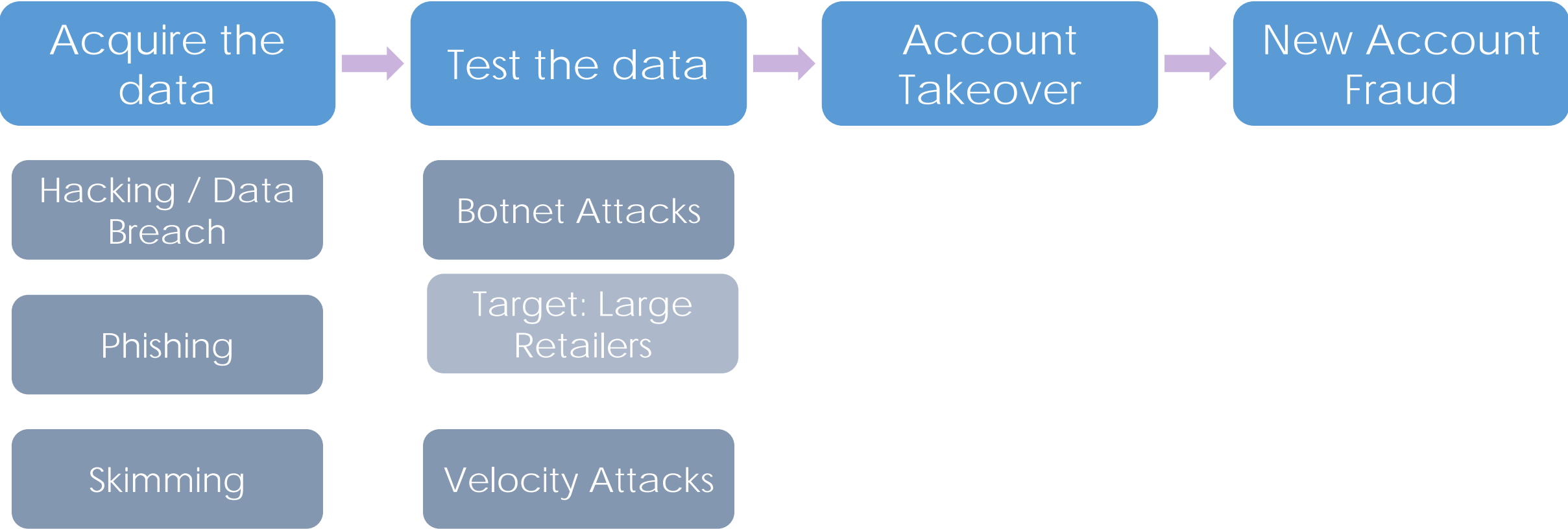
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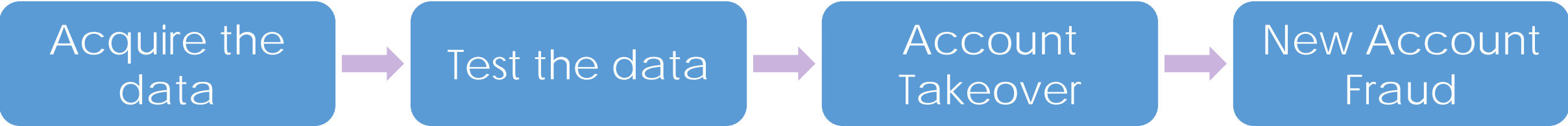
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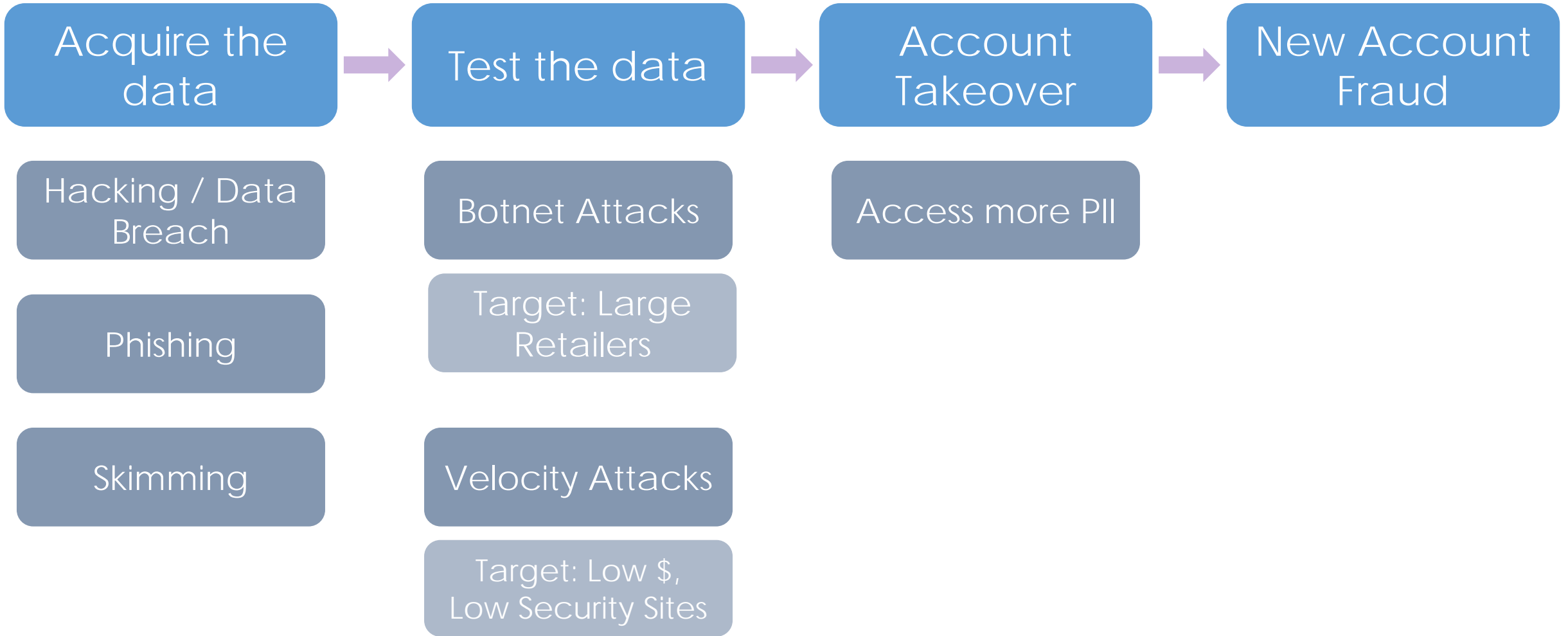
Botnet Attacks

Target: Large Retailers

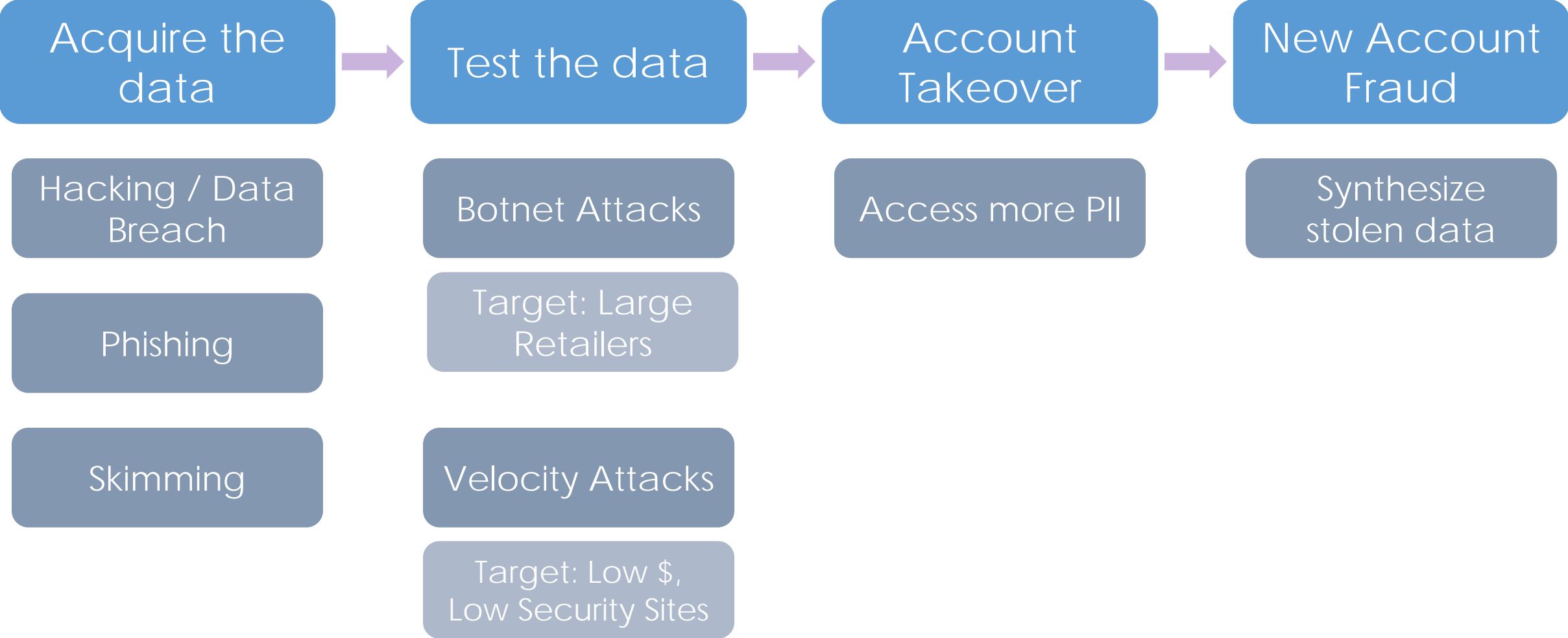
Velocity Attacks

Target: Low \$, Low Security Sites

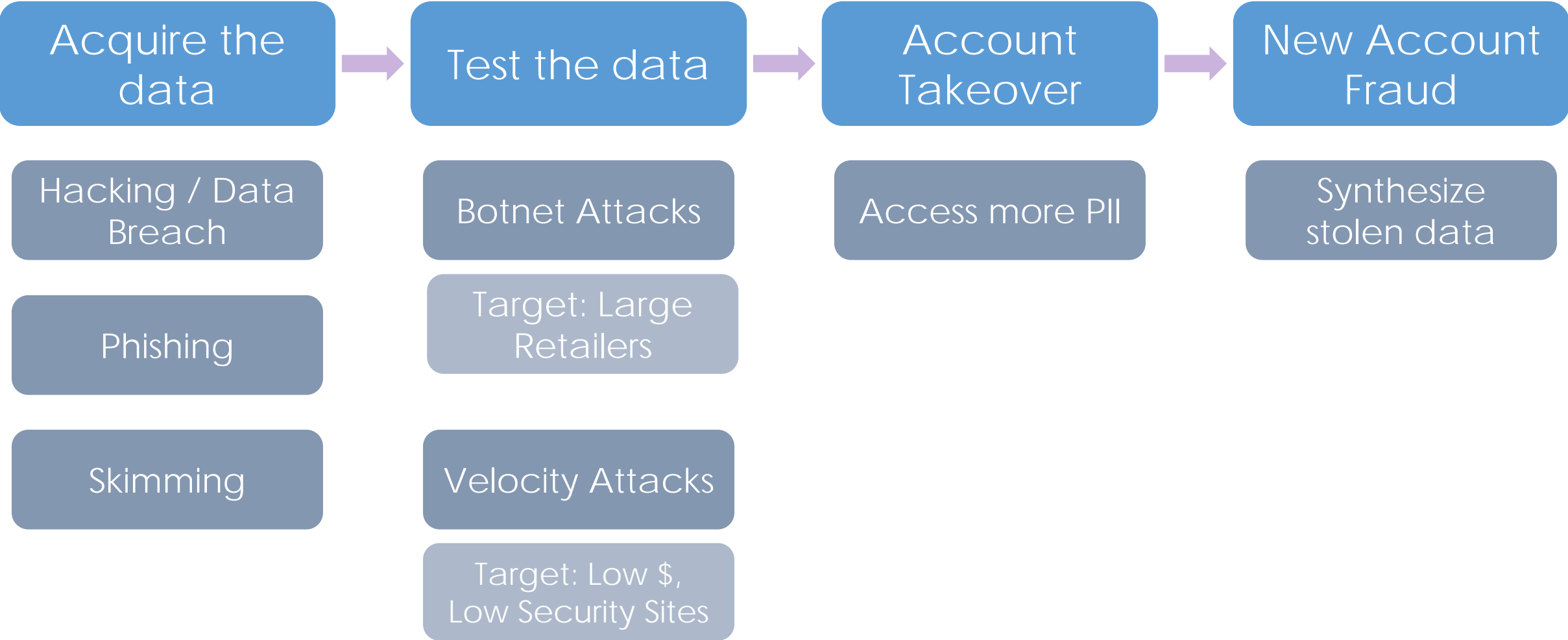
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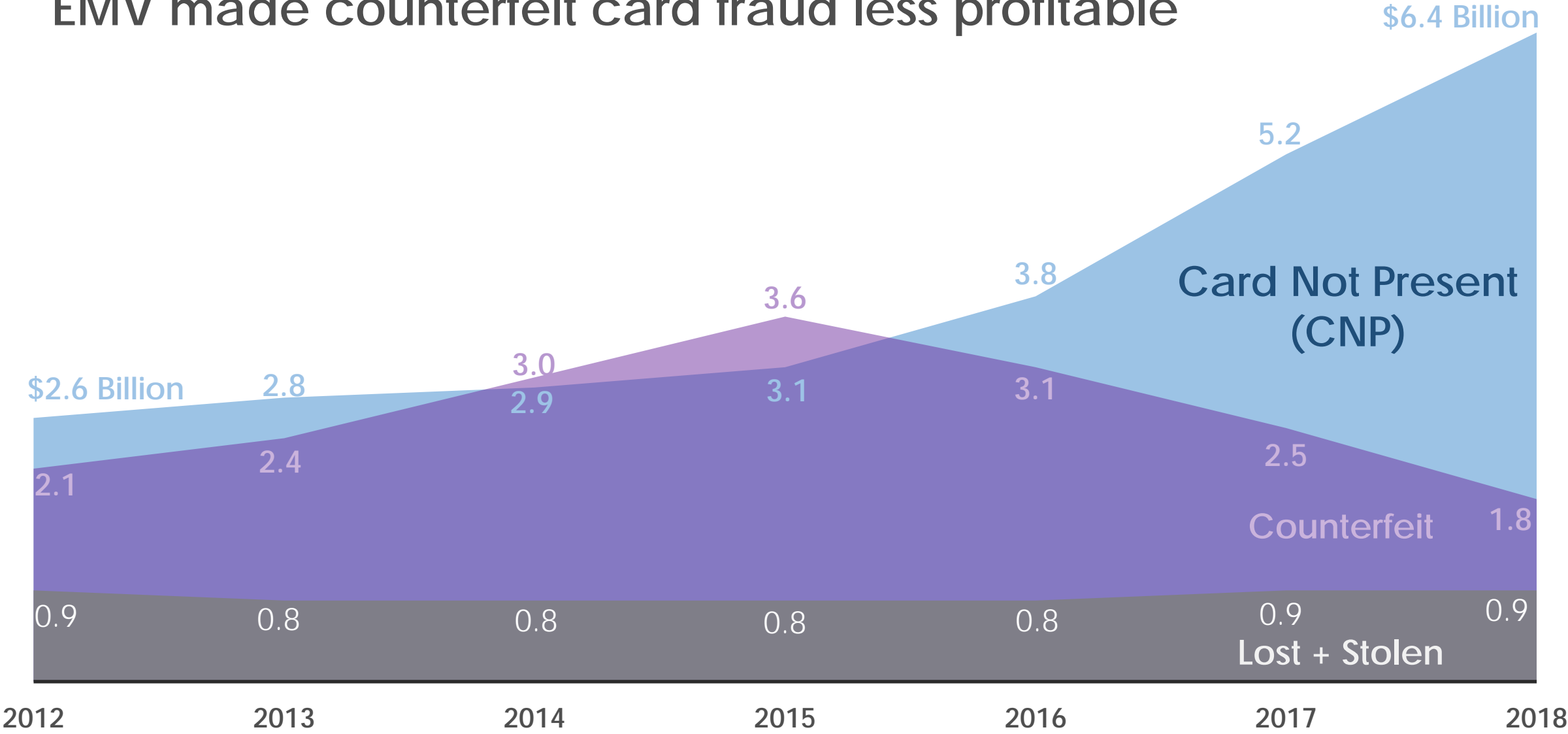
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EMV made counterfeit card fraud less profitable



Fraud Risk in the Payments System

Challenge: how do you prevent criminals from using cards that don't belong to them?

Counterfeit

Card Not
Present (CNP)

Lost / Stolen

Solutions

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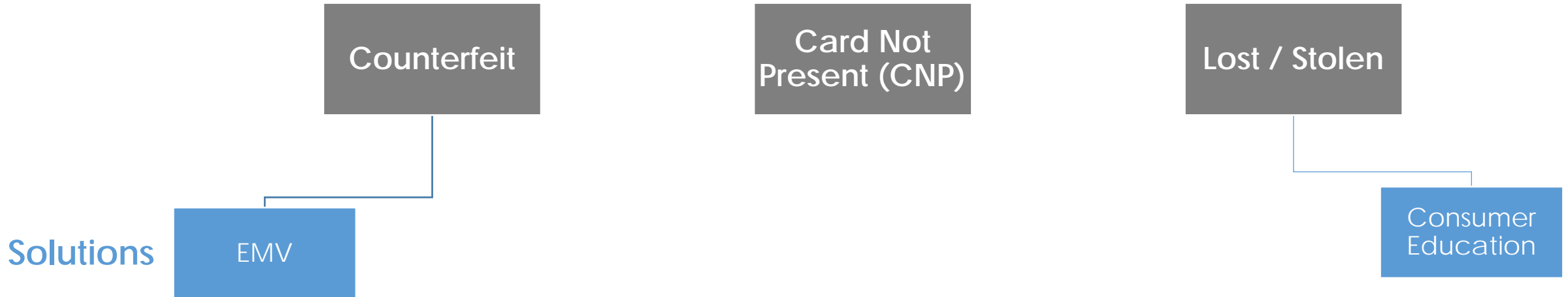
Solutions

EMV

```
graph TD; Counterfeit[Counterfeit] --- EMV[EMV];
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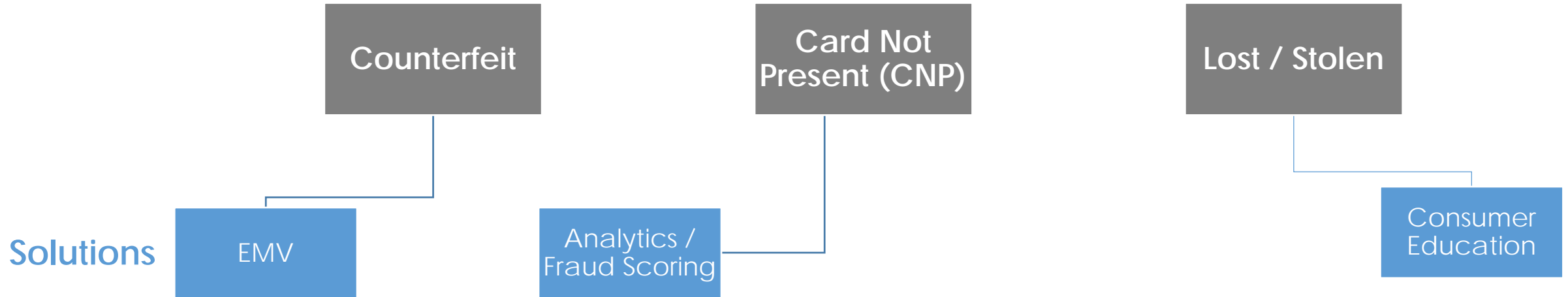
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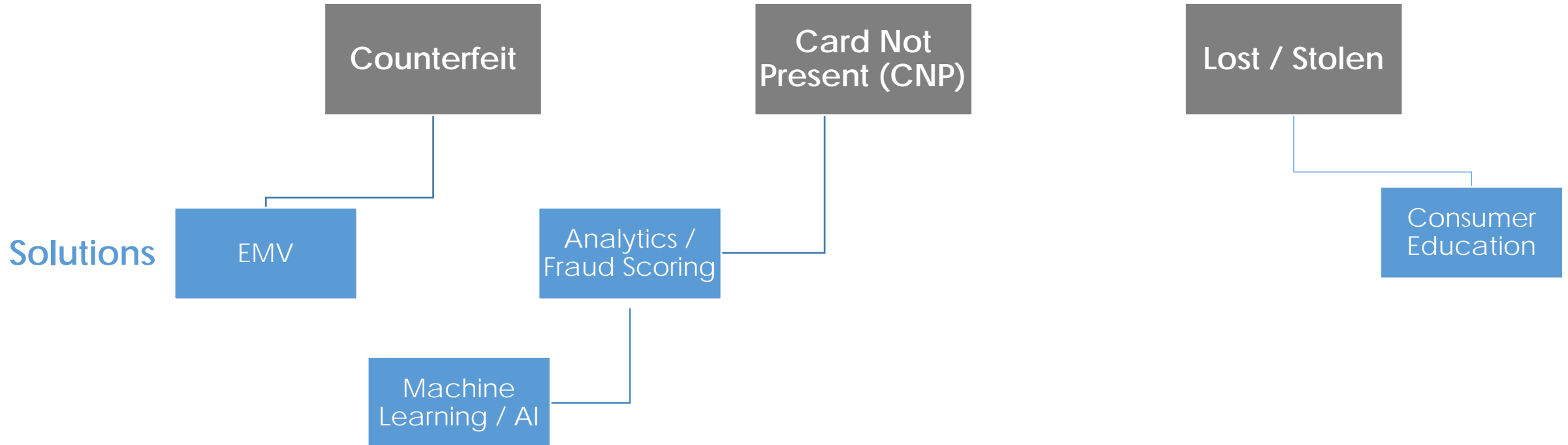
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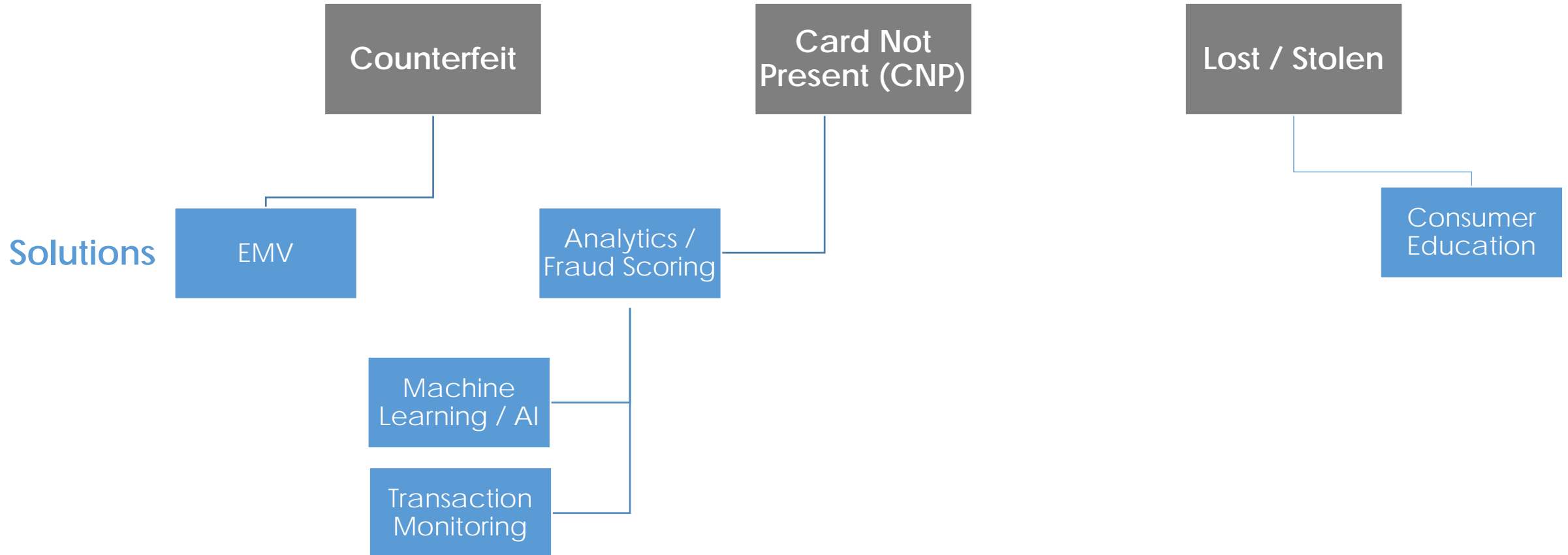
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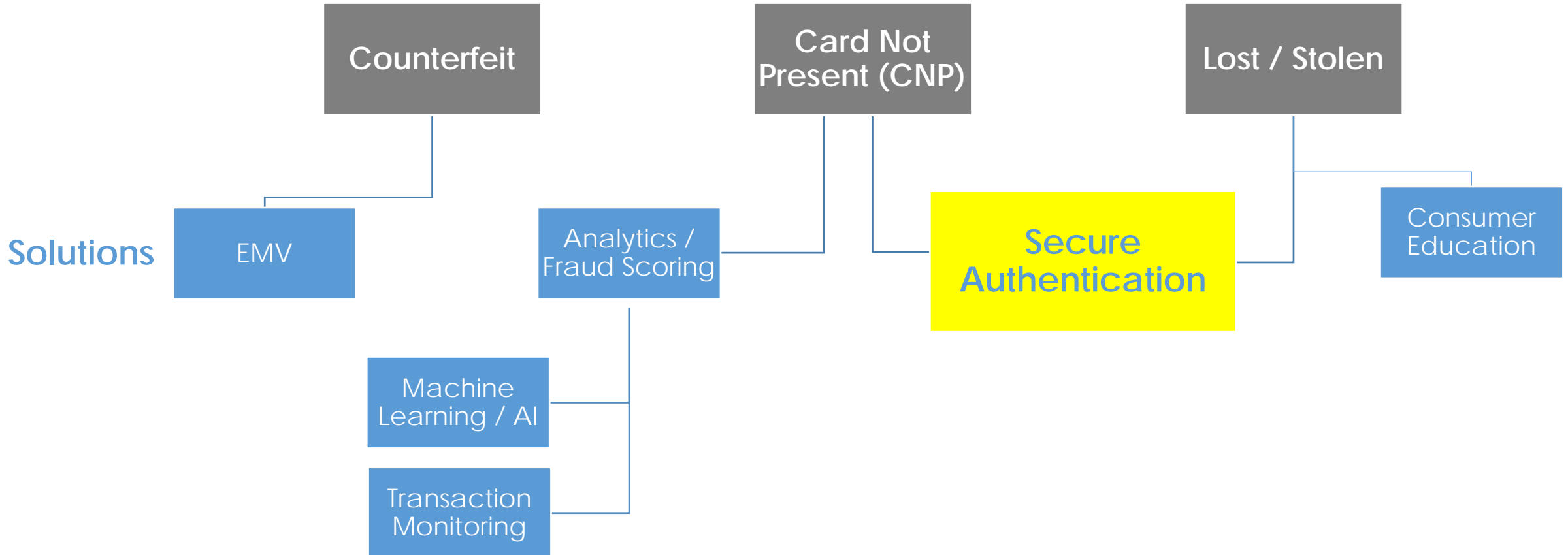
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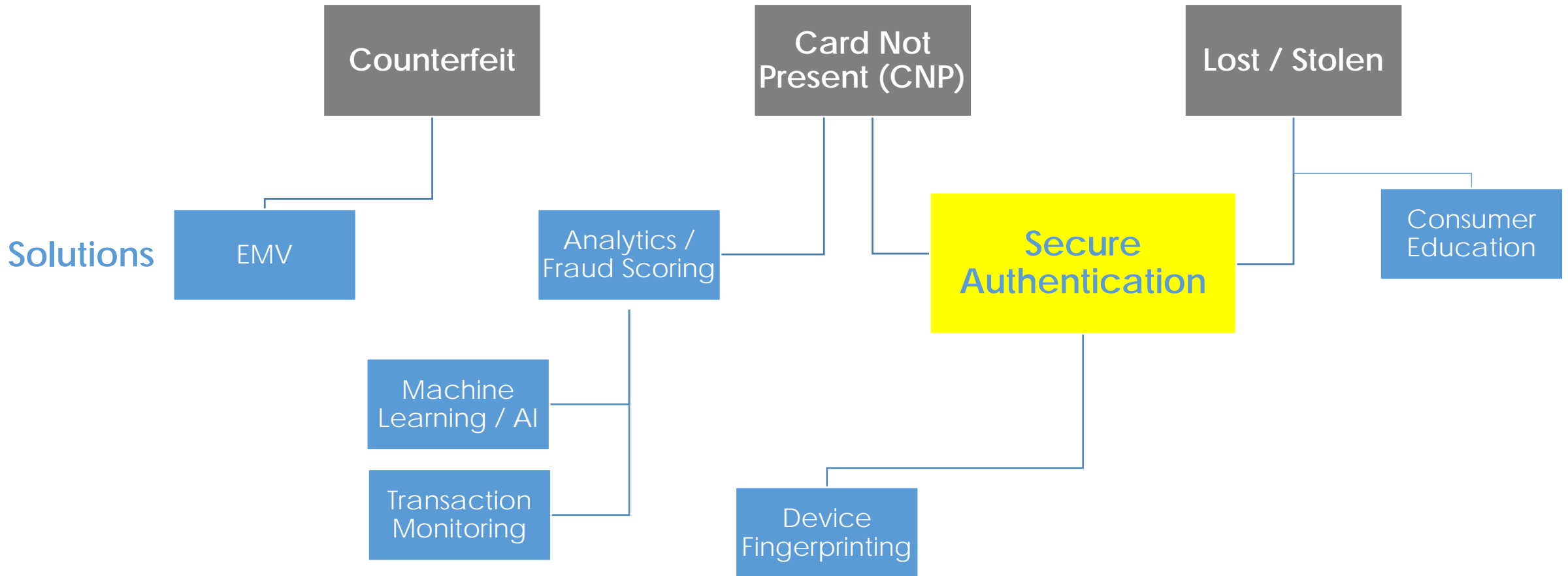
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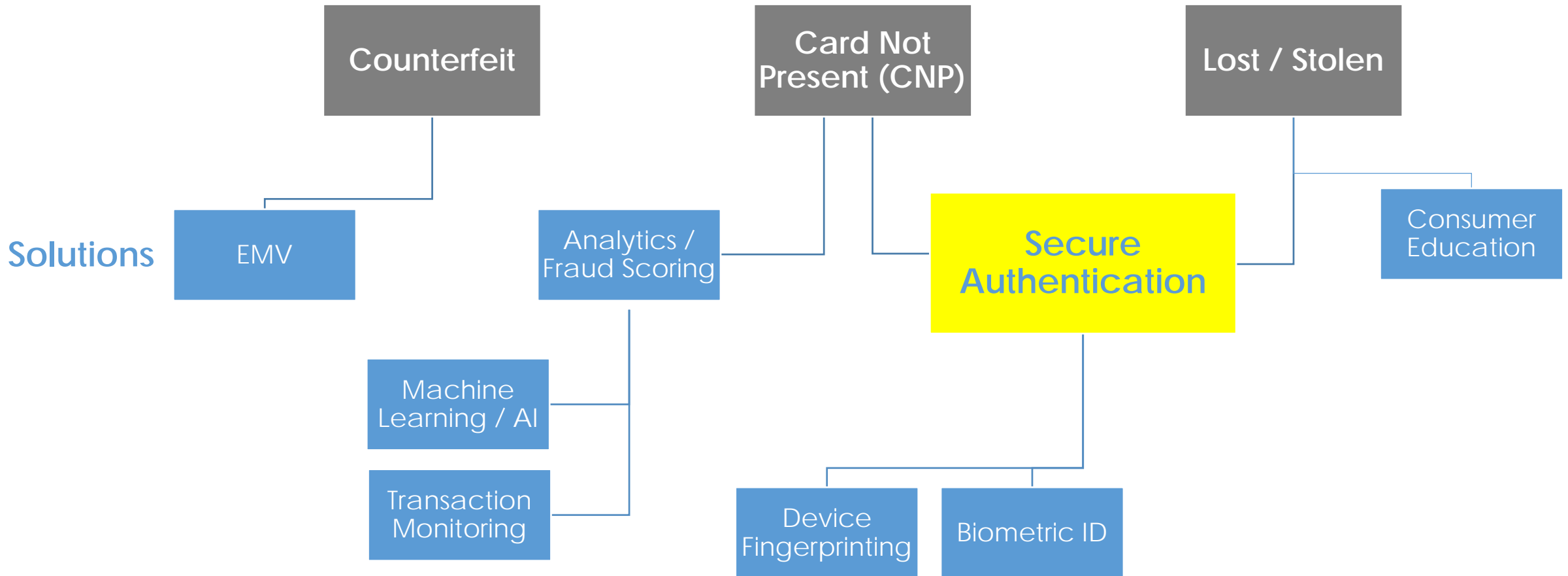
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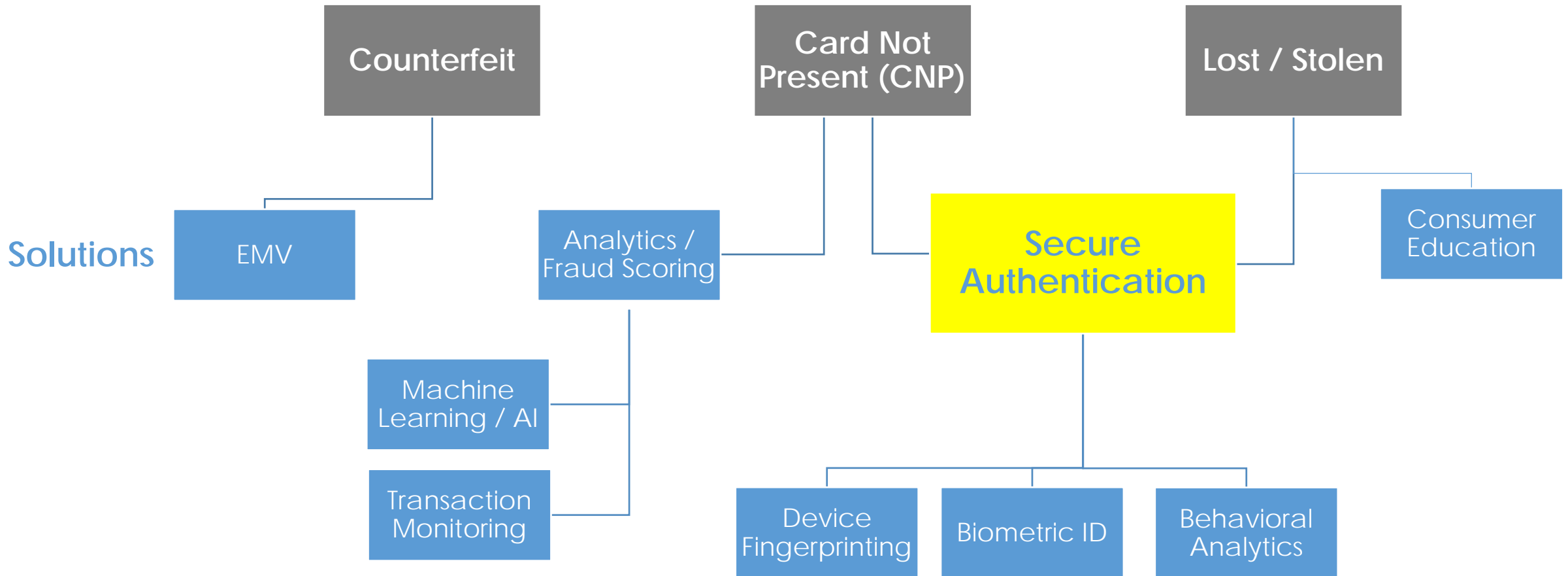
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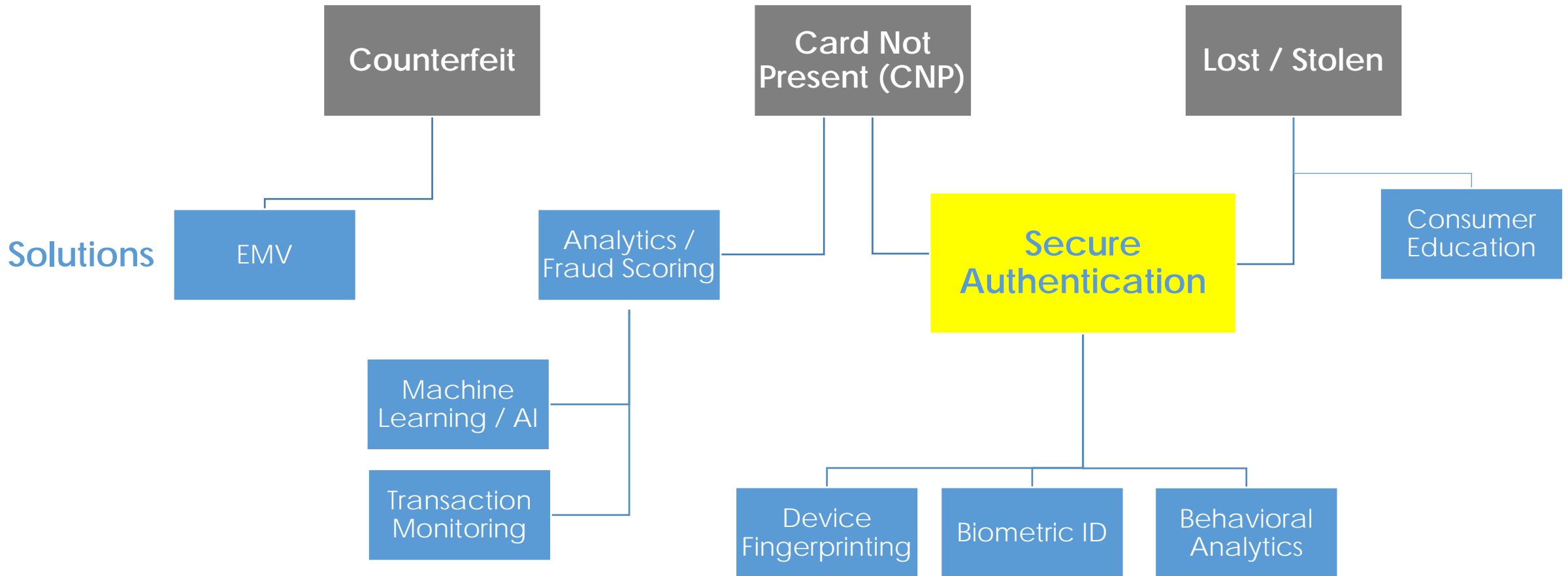
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Friction: Active vs. Passive Authentication

Most active / labor-
intensive on the user's part



Friction: Active vs. Passive Authentication

Most active / labor-intensive on the user's part



One-time tokens,
codes, or passwords
(OTP)

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Security Questions
(Knowledge-Based
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MULTIFACTOR AUTHENTICATION

A close-up photograph of a person's hands holding a silver smartphone. The person has pink nail polish and is wearing a gold ring on their left hand. The phone is held over a laptop keyboard. In the background, another person's hands are visible, one with a gold ring and pink nail polish, resting on a wooden desk. The overall scene suggests a secure digital transaction or login process.

MULTIFACTOR AUTHENTICATION

Passwords

Knowledge-Based
Authentication

Something
you know

Something
you have

Time zone

Geolocation

Device
fingerprinting

MULTIFACTOR AUTHENTICATION

One-Time
Codes

Passwords

Knowledge-Based
Authentication

Something
you know



MULTIFACTOR AUTHENTICATION

Something you have

Time zone

Behavioral Analytics

Voice Recognition

Iris Scanning

Something you are

Device fingerprinting

Facial Recognition

One-Time Codes

Fingerprint Scanning

Passwords

Knowledge-Based Authentication

Something you know



MULTIFACTOR AUTHENTICATION

Something you have

Time zone

Behavioral Analytics

Voice Recognition

Iris Scanning

Something you are

Device fingerprinting

Facial Recognition

One-Time Codes

Fingerprint Scanning

Passwords

Knowledge-Based Authentication

Something you know

Enhanced Authentication: 3D Secure



Thank you

- Don't forget to submit your session evaluation!

Amy Zirkle, VP Industry Affairs
Electronic Transactions Association

 @ElecTranAssoc

electran.org