The Future of Authentication
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David Shroyer

Queen CyberSecure

Managing Director

David.Shroyer@queencyber.com

QUEEN ASSOCIATES | QUEEN CYBERSECURE

Agenda

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The Need for Advanced Authentication
How Does it Work?
Benefits
Conclusion

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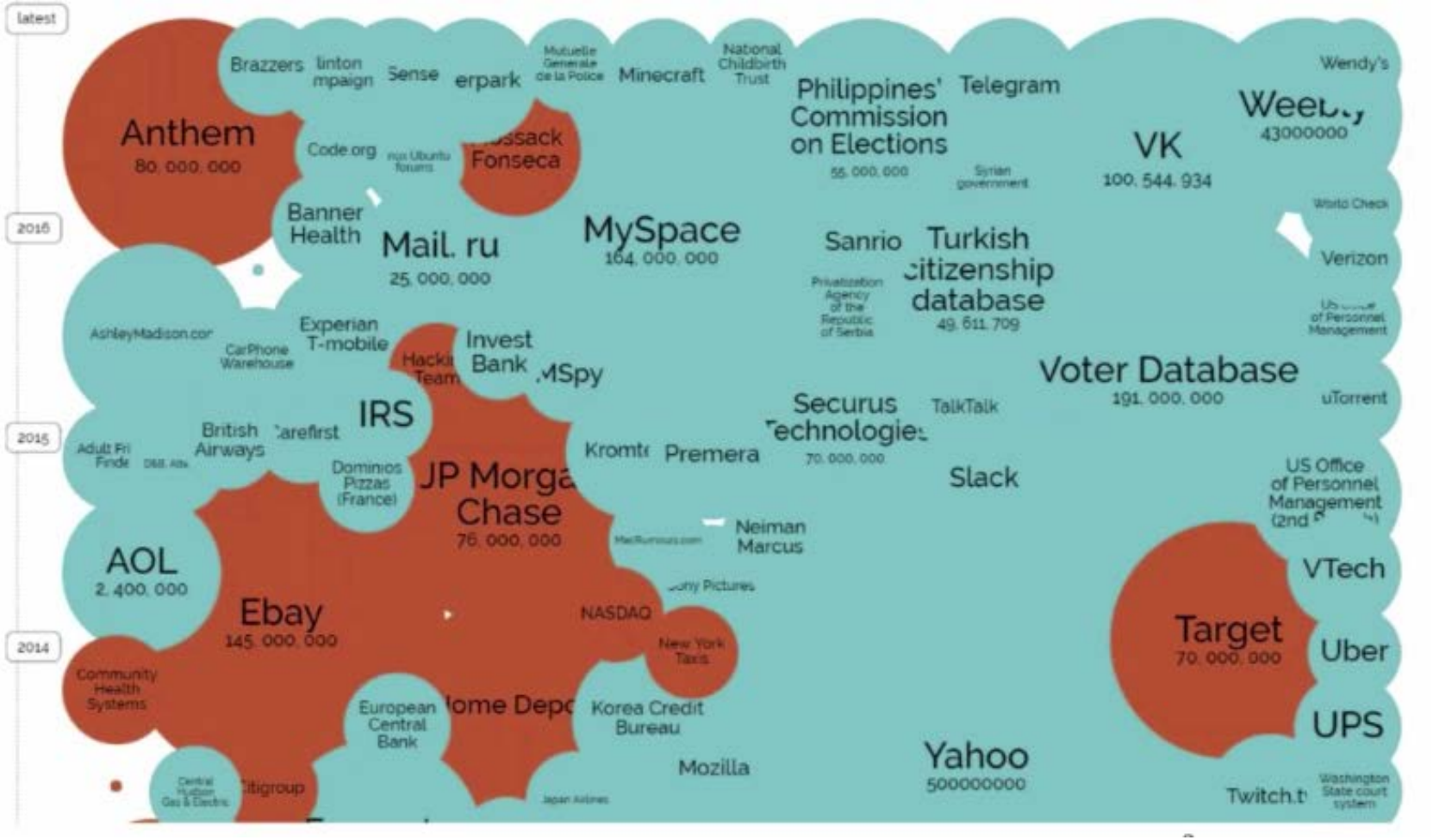
The Need for Advanced Authentication

Data Breaches and Magnitude



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The Need for Advanced Authentication

- Commonly stolen information
  - UID/PW
  - Secret Questions and Answers
  - Credit and Debit Card Numbers
  - CVV Codes
  - Expiration Dates
  - Personal Information (DOB, MMN, DL, Address, SSN)

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The Need for Advanced Authentication

	Data Element	Standalone Rating
Regulatory Component	Credit / Debit Card Number**	HIGH
	Social Security Number (SSN)	HIGH
	Tax ID	HIGH
	HIPAA HealthCare Data*	MED
	Name (Last and First/First Initial)	MED
	Login ID	MED
Contextually Dependent	Password**	MED
	PIN #	MED
	Security Question Response	MED
	Drivers License/State ID Number	MED
	Home Address	MED
	Date of Birth	MED
	Email Address	MED
	Mother's Maiden Name	MED
	Account Number	MED
	Account balance	MED
	Account transaction history/detail	MED
	CVV/Expiration Date (Credit/Debit Card)	MED
	Credit Score (individual)	LOW
	Phone Number	LOW
	Routing Number/Bank Name	LOW
	Salary	LOW

Transactional Capability
Type and extent of transactions performed (Rank 1 – 12)

1=View single user transactional information only (ex. Canceled checks, activity of charges, etc.)
2=View multi user transactional information only (ex. Canceled checks, activity of charges, etc.)
3=View single user account information (ex. Account #, account balances, etc)
4=View multi user account information (ex. Account #, account balances, etc.)
5=View single user privacy information (ex. SSN, address, beneficiaries, credit report, etc.)
6=View multi user privacy information (ex. SSN, address, beneficiaries, credit report, etc.)
7=Update single user account information (ex. Address, password, dependencies, etc.)
8=Update multi user account information (ex. Address, password, dependencies, etc.)
9=Update single user financial information (ex. Transfer funds between accounts, loan orig, etc.)
10=Update multi user financial information (ex. Transfer funds between accounts, loan orig, etc.)
11=Transfer funds between accounts for single user (ex. ACH & Wire transfers, etc.)
12=Transfer funds between accounts for multi users (ex. ACH & Wire transfers, etc.)

Impact of Risk – *Rank Each Category*
(Rank: 1=Low, 2=Medium, 3=High, 4=Critical)

- Legal/Regulatory: Direct legal or regulatory violations
- Financial: Direct financial losses or associated costs
- Reputation: Loss of customer confidence
- Harm: Physical harm to the operations of the business
- Personnel: Direct impact on personnel, work environment, hiring/retention or safety
- Unauthorized Exposure: Release of sensitive, proprietary, or regulated information

Sensitivity of Information Accessed:
(Rank: 1-3)

Data Sensitivity is determined using the matrix that has been developed for other BANK risk assessments like; Data Classification, Operational Risk Reviews, and Third Party Assessment Program. The model is outlined in Appendix B.
1 = Low – Information has a low data sensitivity score
2 = Medium – Information has a moderately high data sensitivity score
3 = High – Information has a high data sensitivity score

Data Risk increases with more data breaches

Transaction Risk Increases with more functionality

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How is Advanced Authentication Being Used?

IDT

- Mule Accounts
- New Credit
- Social Engineering

ATO

- Account Access
- Money Movement
- Credential Change

IT'S TAX SEASON!

- IRS and Tax Services

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The Need for Advanced Authentication

ATO IS ON THE RISE IN MANY MARKETS

Chip Cards Introduced

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Understanding Authentication

- Advanced authentication requires two-factors

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Understanding Advanced Authentication

- Advanced Authentication Attributes

FRICTIONLESS

CONTEXTUAL

ADAPTIVE

Consumers will adopt solutions that ease the burden of remembering passwords or carrying tokens

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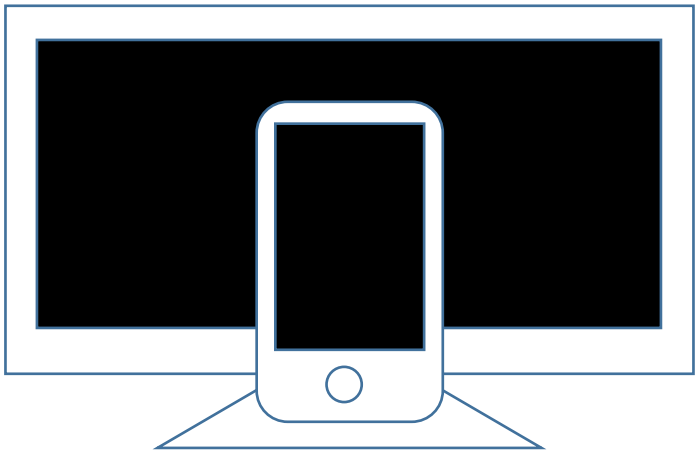
Understanding Advanced Authentication

FRICTIONLESS
INVISIBLE TO THE USER

Is device authorized for this account?

Where is device located?

How many accounts has device accessed?



Is this a person or a bot?

Does device have history of fraud?

Is device hiding from detection?

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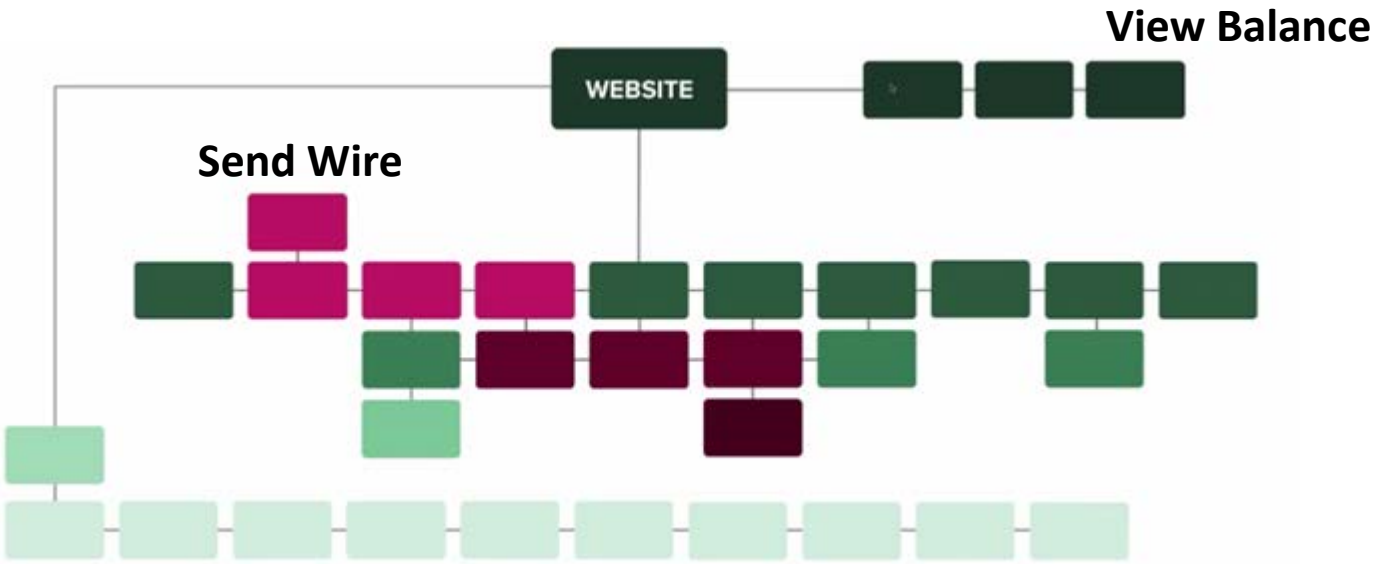
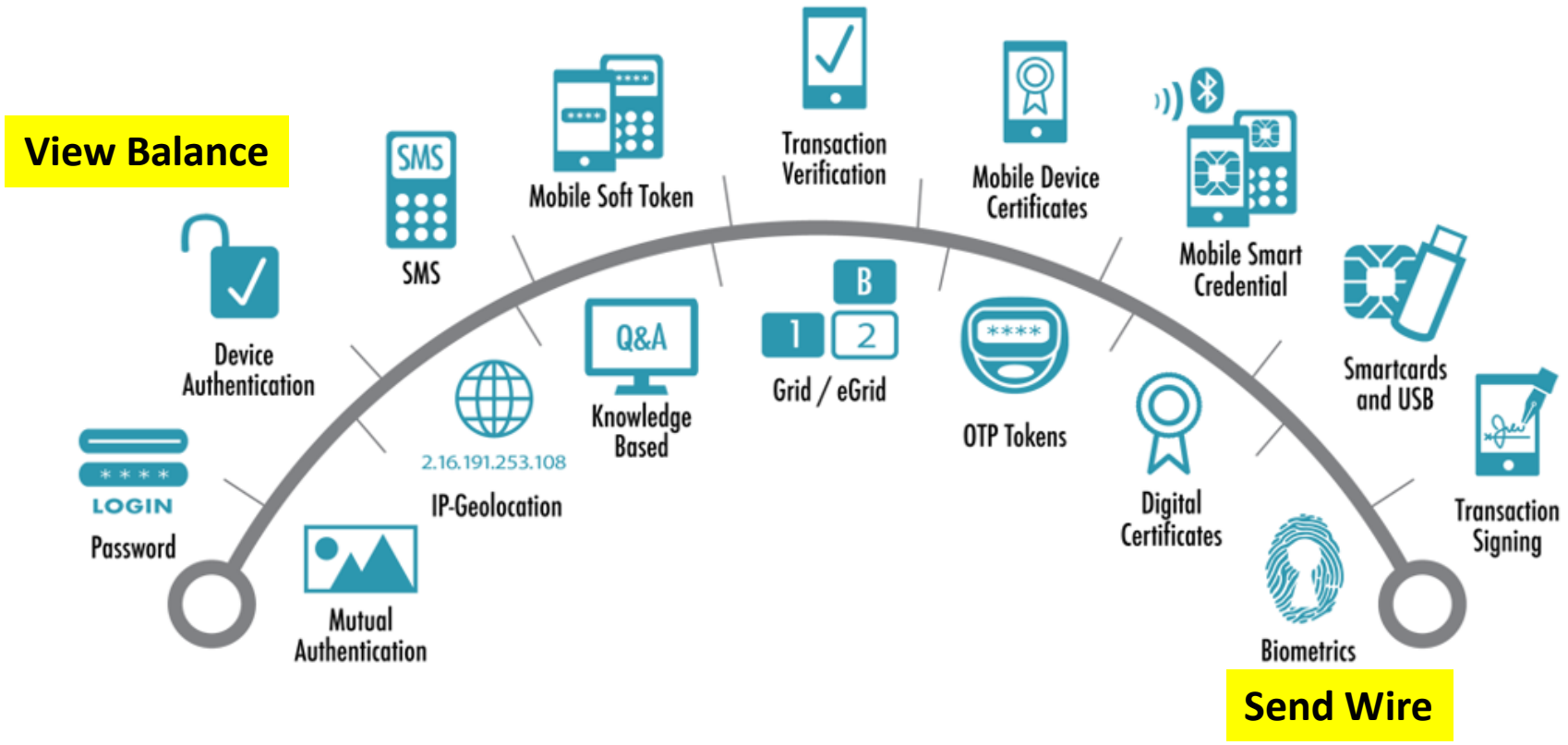
CONTEXTUAL
WHERE IS THE GREATEST RISK?



Understanding Advanced Authentication

ADAPTIVE
WHAT YOU DO, DICTATES THE AUTH YOU NEED



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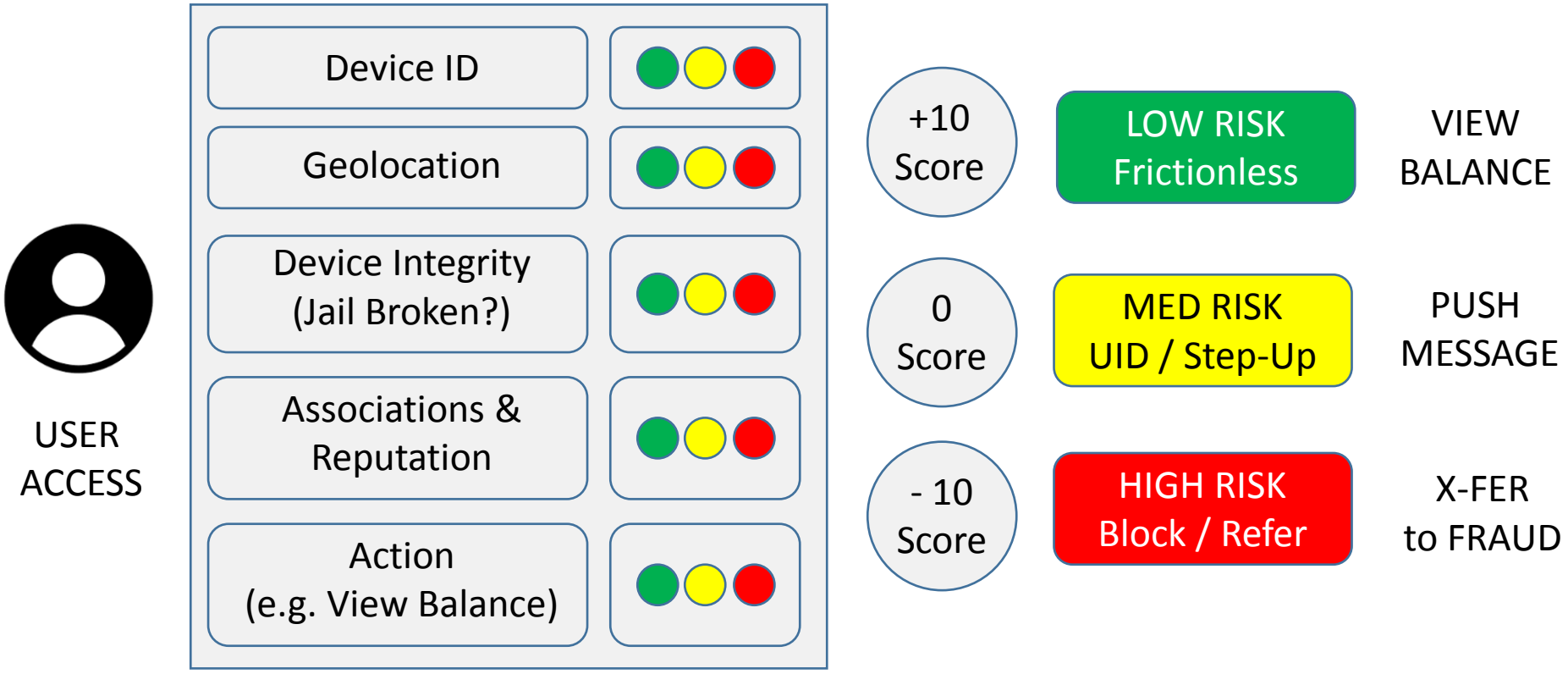
How Advanced Authentication Works



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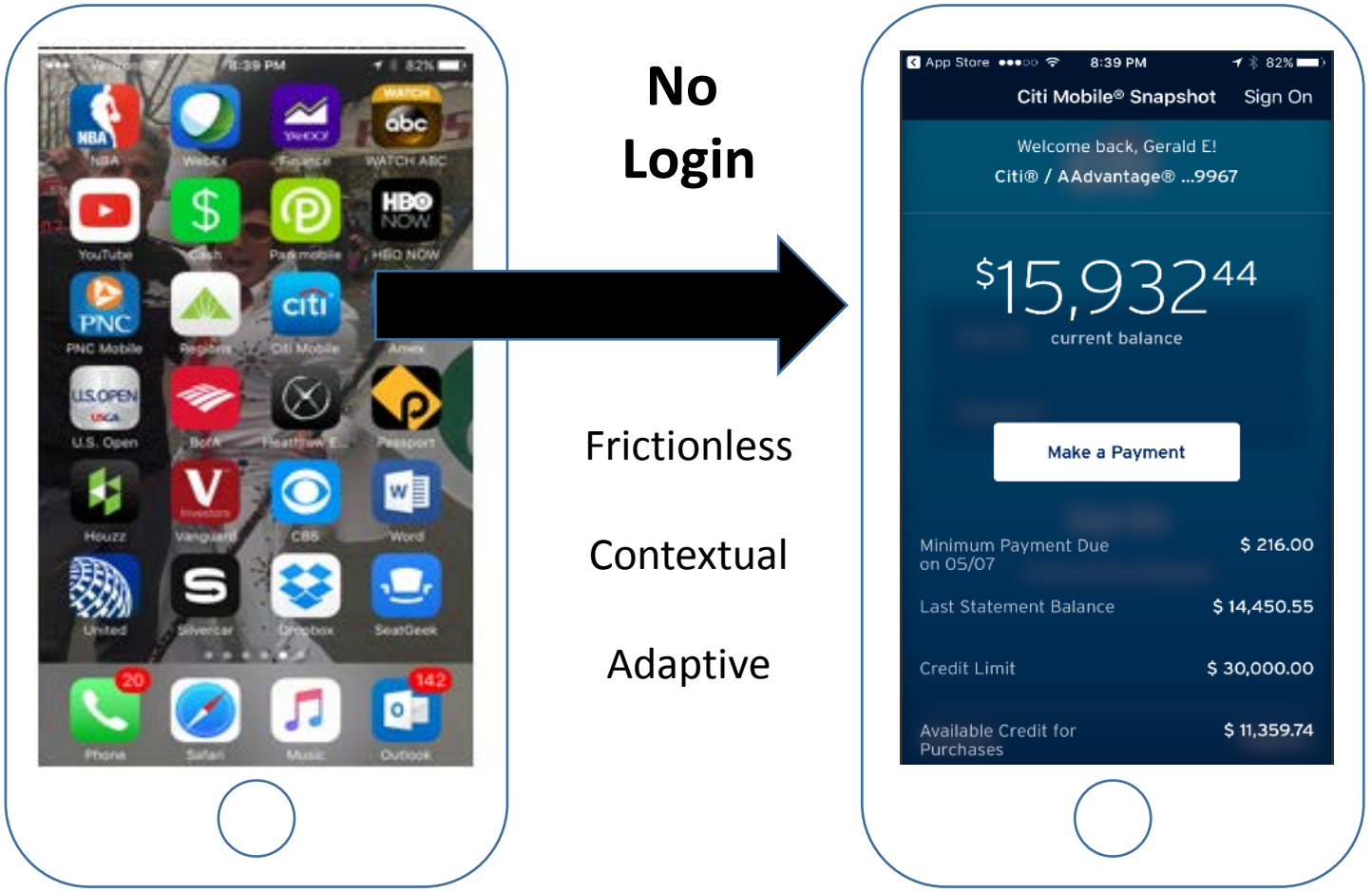
How Advanced Authentication Works



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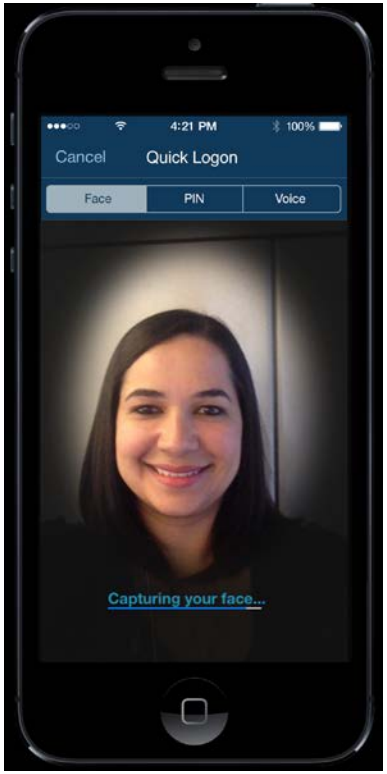
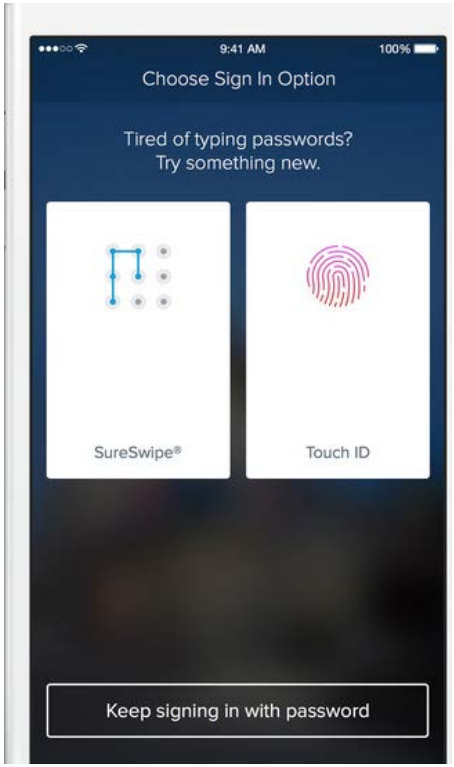
How Advanced Authentication Works

- A Mobile Example





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How Advanced Authentication Works

- Next Gen concept announced yesterday by MasterCard

MasterCard debuts a credit card with a fingerprint sensor to fight fraud

April 20, 2017

http://www.zdnet.com/article/mastercard-debuts-credit-card-with-a-fingerprint-sensor/

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How Advanced Authentication Works

Cross Channel Awareness

	IVR	CALL CENTER	WEB	APP
Low Risk	ANI + Anti Spoofing	ANI + Anti-Spoofing	UID + Device ID + Context	Device ID + Context
Action	Hear Balance	Hear Balance	View Balance	View Balance
Med Risk	+ Debit PIN	+ Push OTP to App	+ Push OTP to App	+ Touch ID
Action	Bill Pay	Bill Pay	Bill Pay	Bill Pay
High Risk	+ Voice Print	+ Push OTP to App	+ Push OPT to App	+ Touch ID
Action	Change PII	Change PII	Change PII	Change PII

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Benefits of Advanced Authentication

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Conclusion

- A Four-Step Plan to Evaluate Customer Authentication for your Sites:

1. For brand managers, product owners, or web experience managers, understand where the greatest risk is on your site;

2. Understand what benefits would be realized if your customers experience less friction;

3. Assess the impact of a frictionless, contextual and adaptive approach to your current authentication methods; and

4. Create your plan to retire passwords and secret questions.

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Questions?

David Shroyer

Queen CyberSecure

Managing Director

David.Shroyer@queencyber.com

(980) 253-3525

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