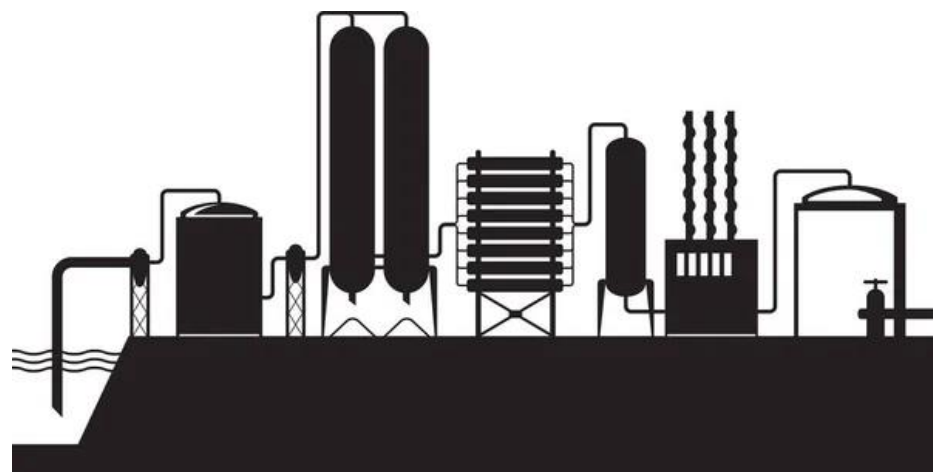


Critical Infrastructure: Can Legacy Apps and Modern MFA Coexist?

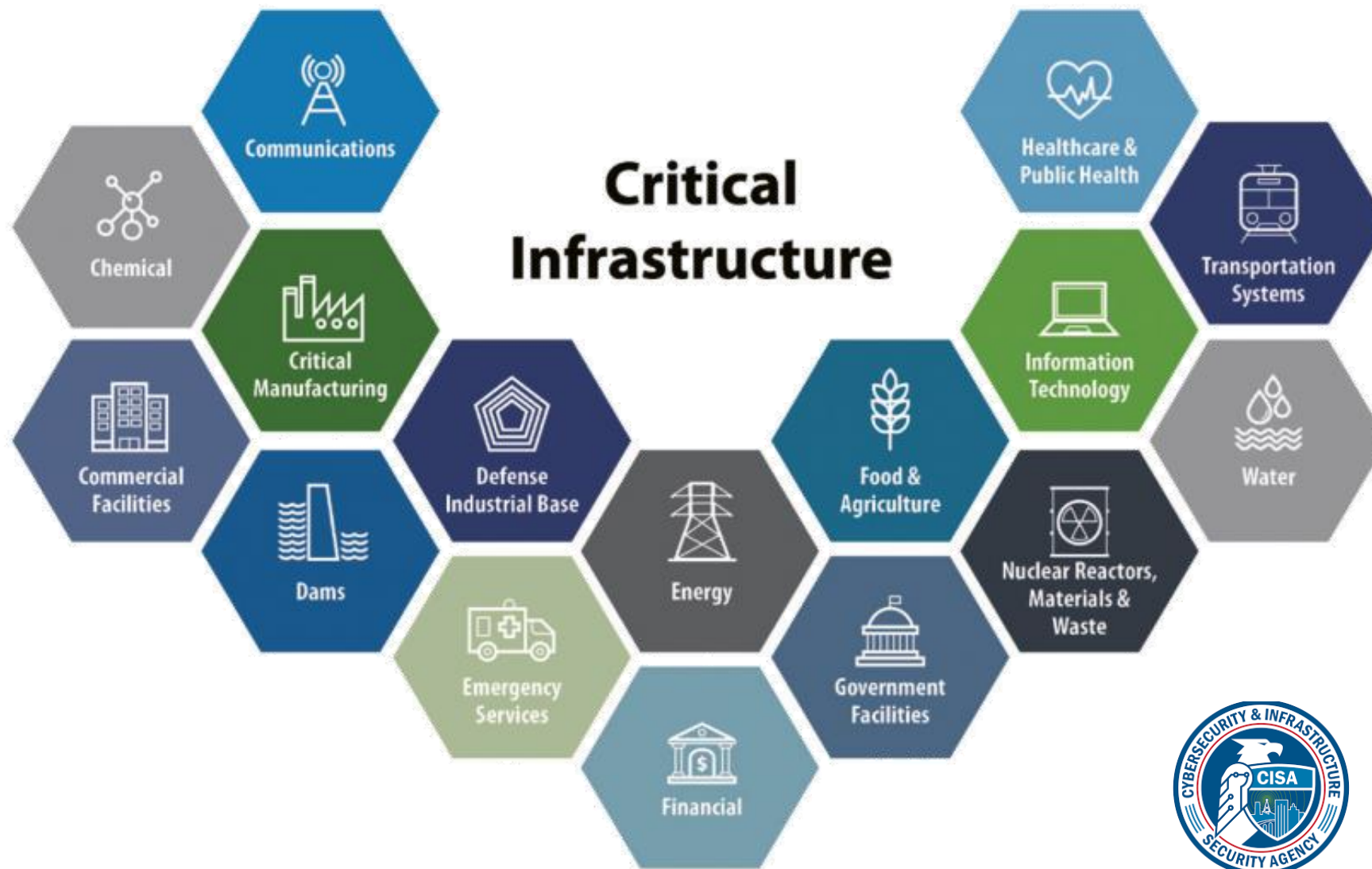




Michael Rothschild

Vice President, Product
HYPR

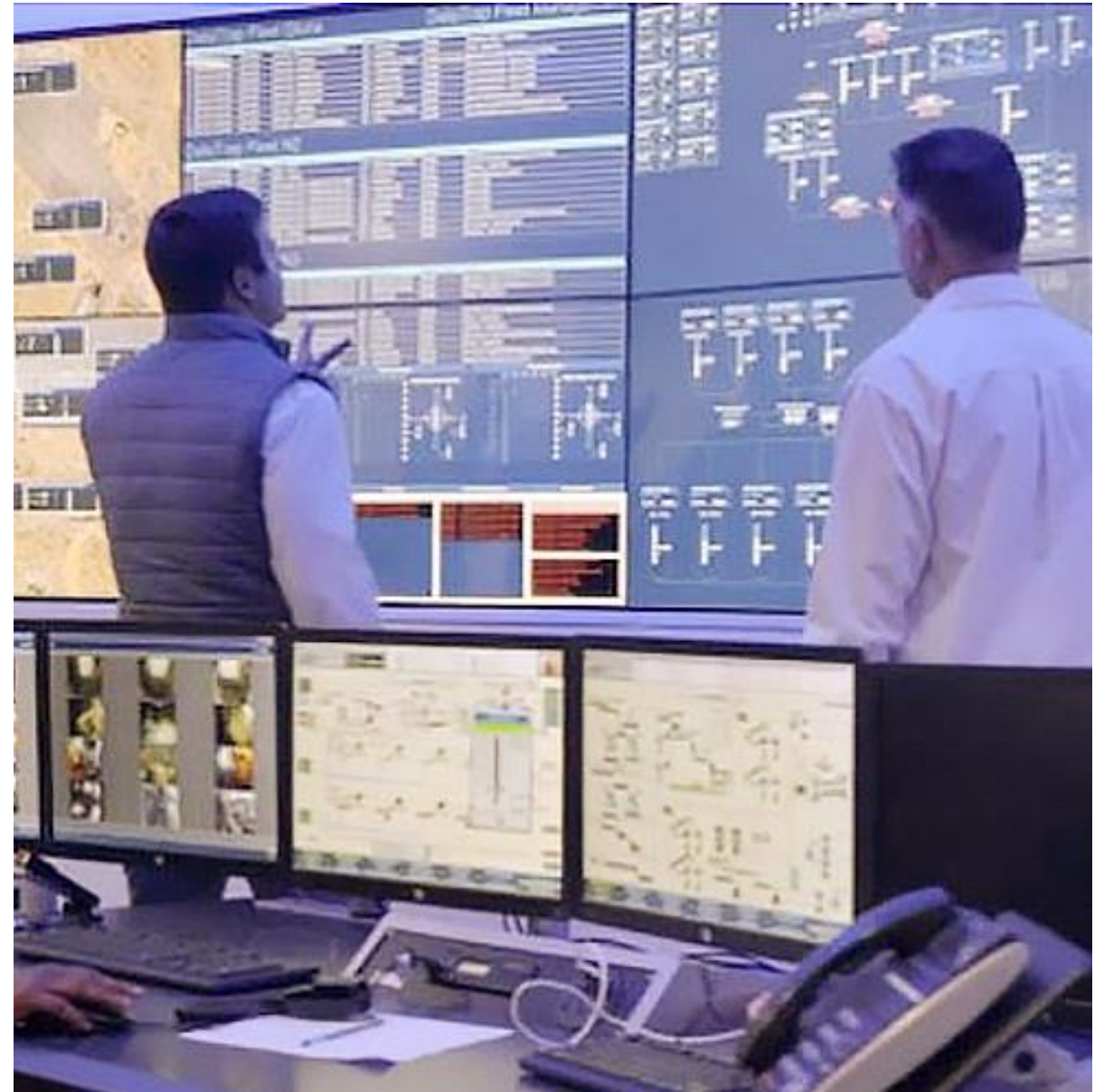




© US Cybersecurity & Infrastructure Security Agency (CISA)







The Commonality Of Recent Attacks



Kudankulam
Nuclear



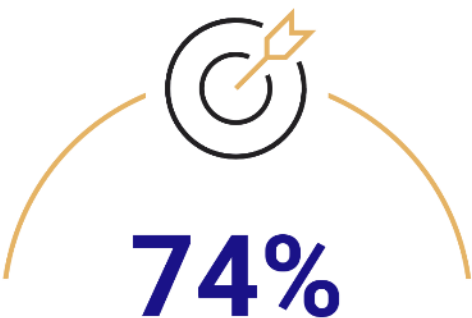
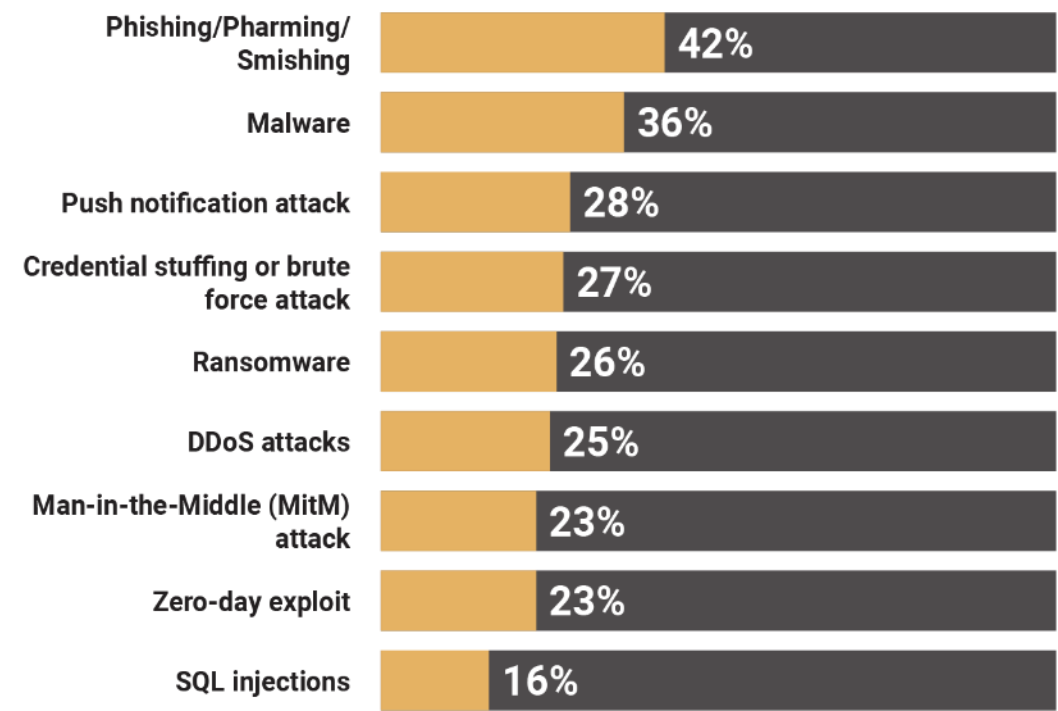
Oldsmar Florida
Water Breach



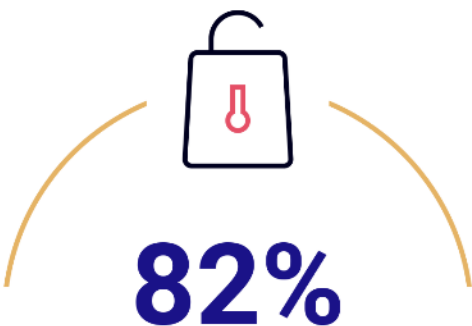
Colonial
Pipeline

Attacks Are Targeting Authentication

Types of Cyberattacks Faced in the Last 12 Months



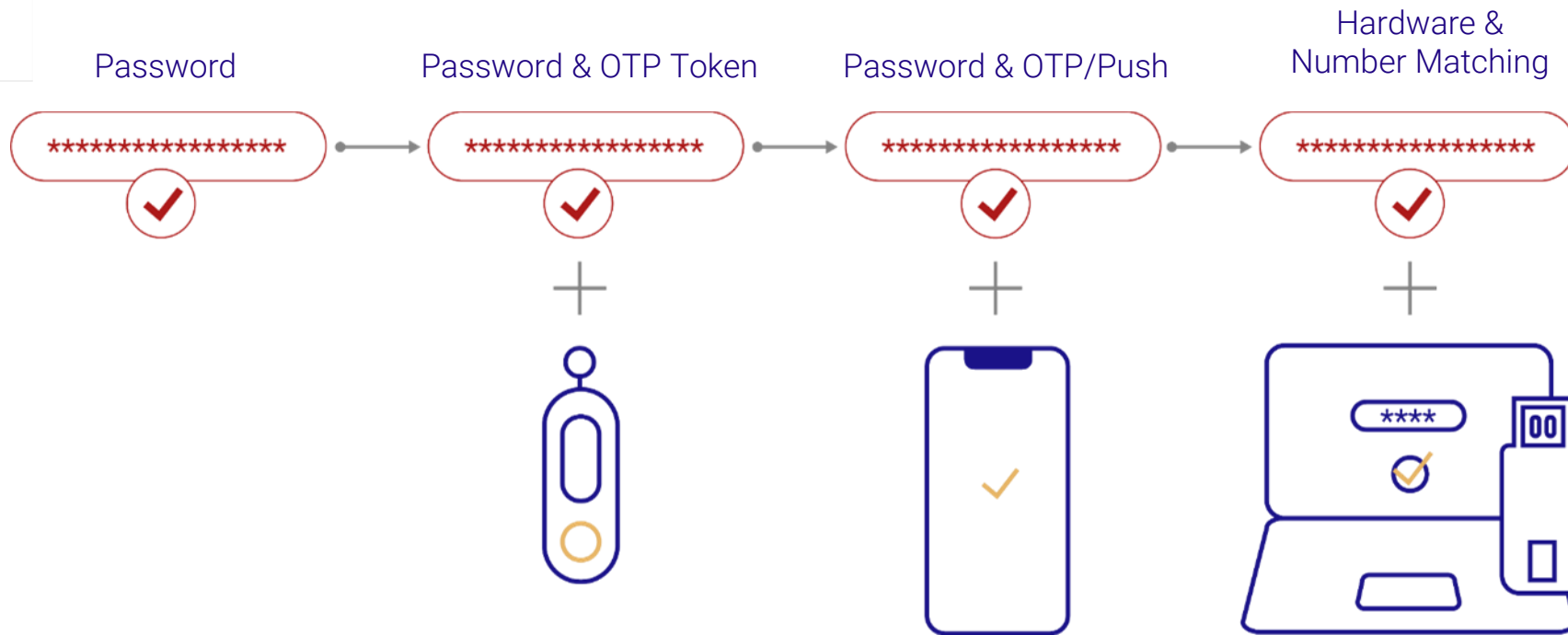
of all organizations report that they experienced a cyber breach in the last 12 months



of those breached organizations attribute credential misuse or authentication weaknesses as a root cause



Adding Complexity To The Password




\$2.95M
average cost of authentication-related
cyber breaches in the last 12 months


3 in 5
organizations were breached due to
credential misuse or authentication
weaknesses

HYPR 2023 State of Passwordless Security Report

Regulation Is Evolving



National

"Multi-factor authentication methods...shall not include telephone or SMS-based authentication methods and must be resistant to phishing attacks"



Federal

"For agency staff, contractors, and partners, phishing-resistant MFA is required"



"FIDO as the gold standard for MFA and the only widely available phishing resistant authentication"



International

"Avoid using SMS and voice calls to provide one-time codes and consider deploying phishing-resistant tokens such as smart cards and FIDO2"

Misperceptions & Complacency

87%

consider their solution to be completely or mostly secure

YET 3% are truly using phishing-resistant MFA

58% did nothing after a breach

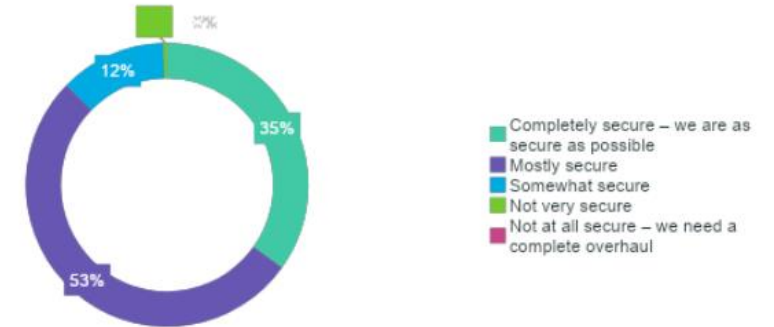


Figure 5: How secure do you consider your organization's approach to authentication to be? [1,000], omitting some answer options

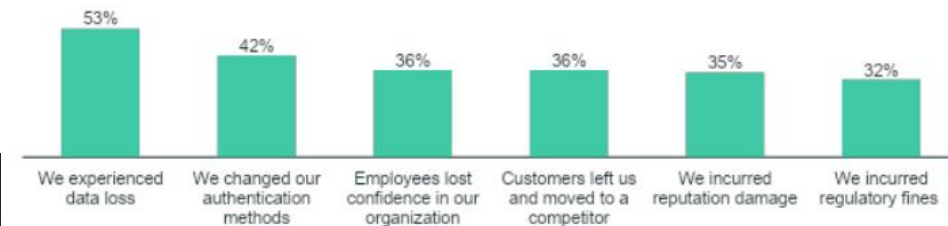
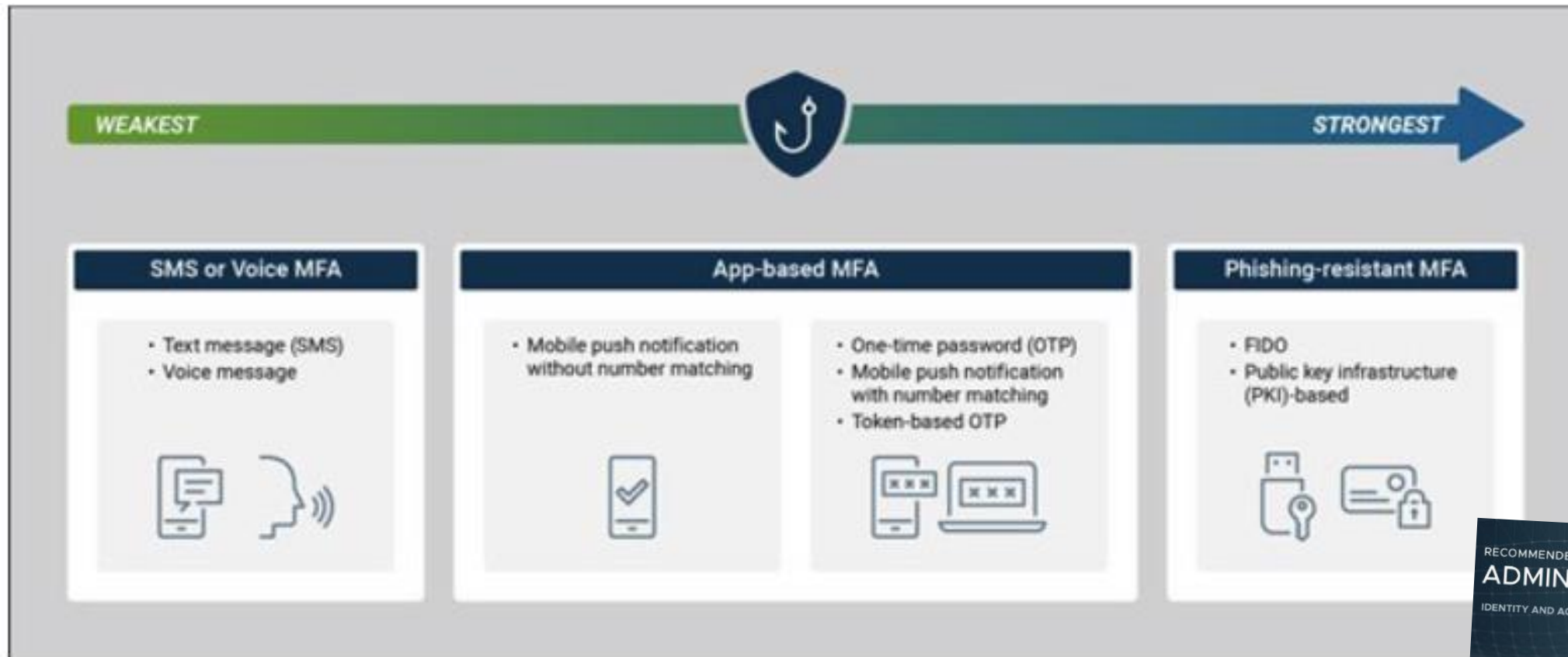


Figure 3: What was the impact of the cyber breach(es) that your organization experienced in the last 12 months? [737] omitting some answer options, only asked to those from organizations that have been a victim of a cyber breach in the last 12 months, omitting some answer options



Zero Trust Approach & CISA Guidance

	Identity	Device	Network / Environment	Application Workload	Data
Traditional	<ul style="list-style-type: none"> Password or multifactor authentication (MFA) Limited risk assessment 	<ul style="list-style-type: none"> Limited visibility into compliance Simple inventory 	<ul style="list-style-type: none"> Large macro-segmentation Minimal internal or external traffic encryption 	<ul style="list-style-type: none"> Access based on local authorization Minimal integration with workflow Some cloud accessibility 	<ul style="list-style-type: none"> Not well inventoried Static control Unencrypted
	<div> <div>←</div> <div>Visibility and Analytics</div> <div>Automation and Orchestration</div> <div>Governance</div> <div>→</div> </div>				
Advanced	<ul style="list-style-type: none"> MFA Some identity federation with cloud and on-premises systems 	<ul style="list-style-type: none"> Compliance enforcement employed Data access depends on device posture on first access 	<ul style="list-style-type: none"> Defined by ingress/egress micro-perimeters Basic analytics 	<ul style="list-style-type: none"> Access based on centralized authentication Basic integration into application workflow 	<ul style="list-style-type: none"> Least privilege controls Data stored in cloud or remote environments are encrypted at rest
	<div> <div>←</div> <div>Visibility and Analytics</div> <div>Automation and Orchestration</div> <div>Governance</div> <div>→</div> </div>				
Optimal	<ul style="list-style-type: none"> Continuous validation Real time machine learning analysis 	<ul style="list-style-type: none"> Constant device security monitor and validation Data access depends on real-time risk analytics 	<ul style="list-style-type: none"> Fully distributed ingress/egress micro-perimeters Machine learning-based threat protection All traffic is encrypted 	<ul style="list-style-type: none"> Access is authorized continuously Strong integration into application workflow 	<ul style="list-style-type: none"> Dynamic support All data is encrypted
	<div> <div>←</div> <div>Visibility and Analytics</div> <div>Automation and Orchestration</div> <div>Governance</div> <div>→</div> </div>				



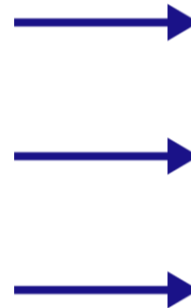
Change The Economics Of An Attack

The Vulnerability of Legacy Authentication

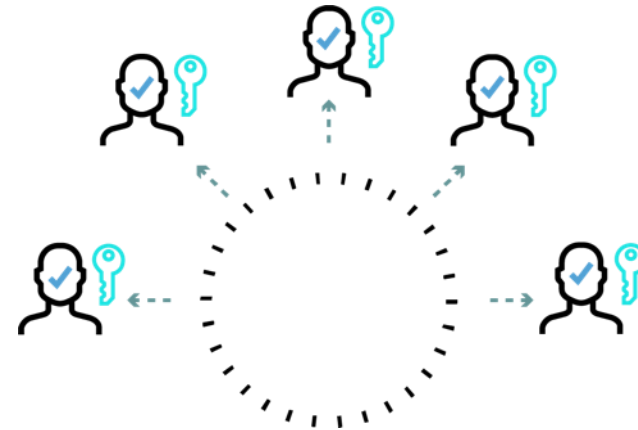


Centralized Password DB

- Security must always be right
- The hacker only needs to be right once



Phishing-Resistant Passwordless MFA



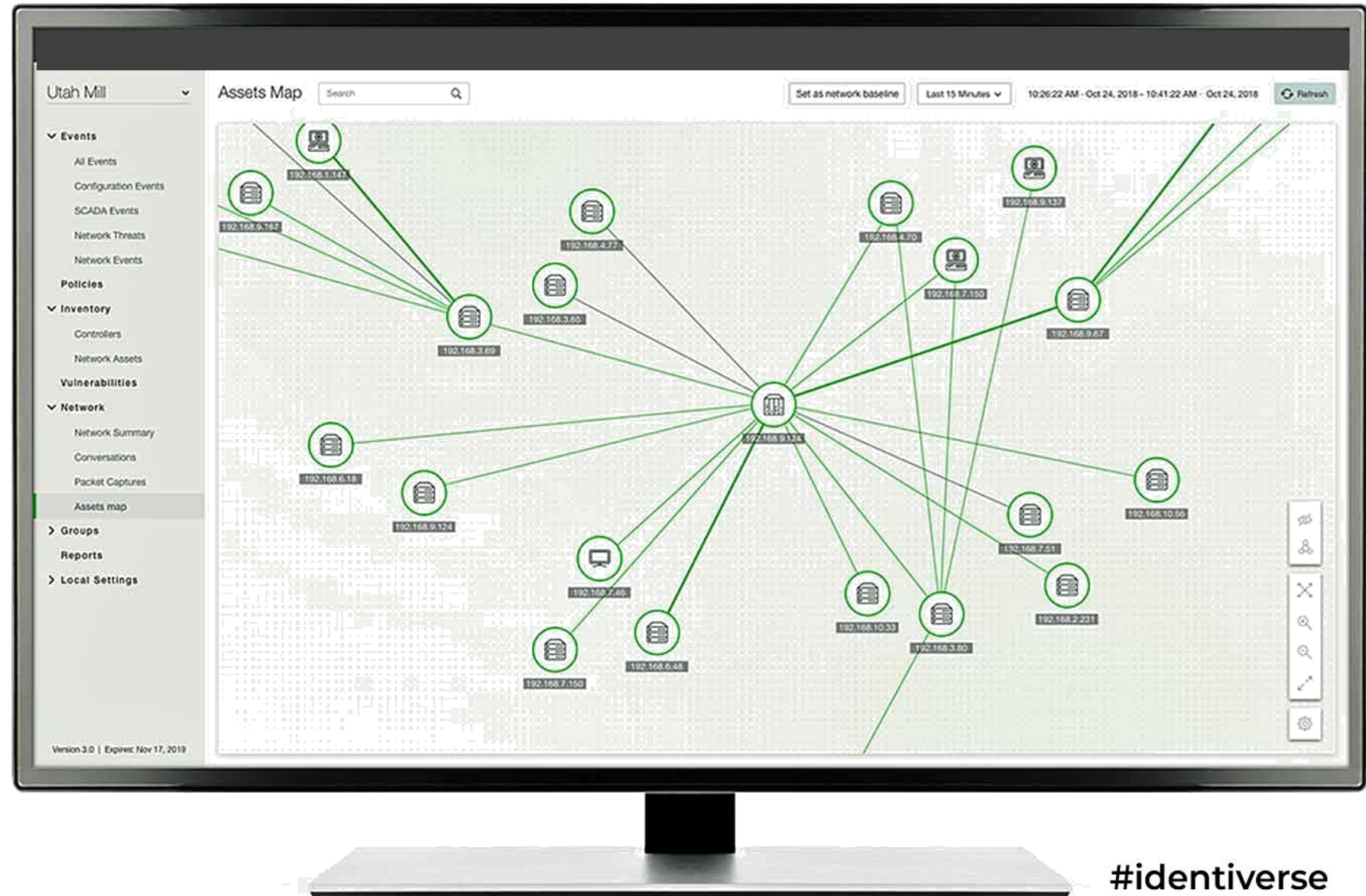
No Password DB

- The hacker must locate and defeat **every** individual's FIDO device
- Not economically feasible for the hacker

“Hands Off My OT!”

Up to 50% of what is in
an OT environment is IT

An accurate and up to
date asset inventory is
crucial

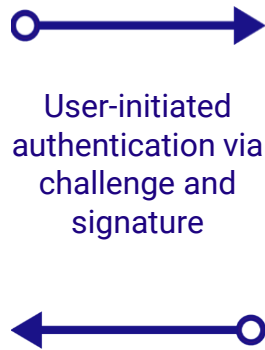


1 - Phishing-Resistant MFA, Everywhere

On all devices, on all applications, on all platforms



Private key stored on device



User-initiated authentication via challenge and signature



Public key stored in HYPR cloud

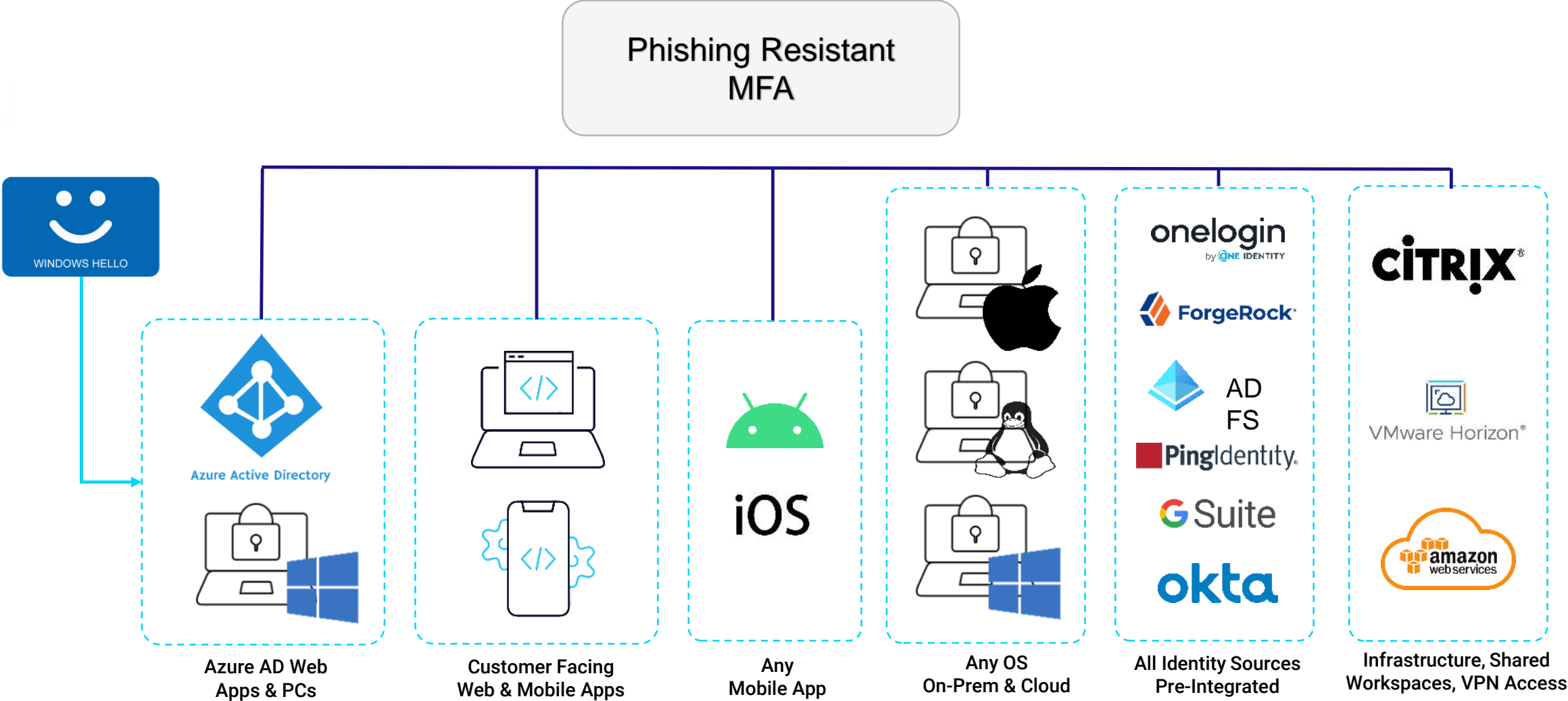


Passwordless MFA into desktops and SSO

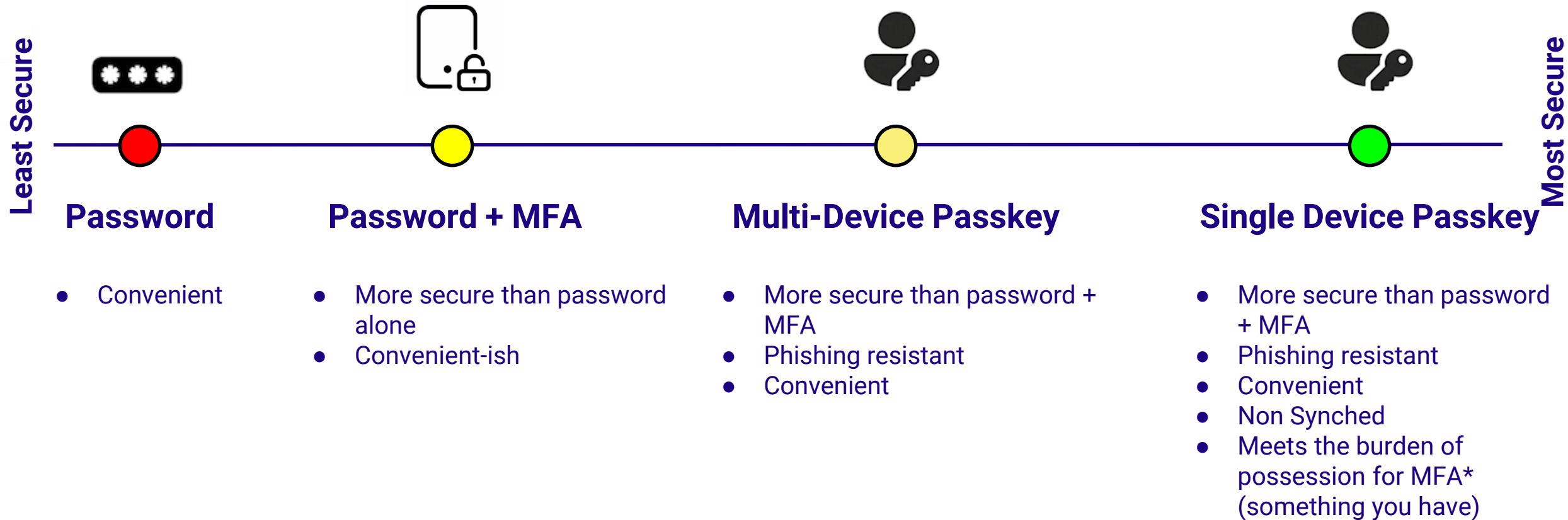
2 – Follow “The Standards



3 – Silos Are For Grain– Partial Security Is No Security



What About Passkeys?





Phishing-Resistant
MFA



Intuitive, Simple
Experience



Proven Passwordless
Deployments

THANK YOU!