



EXPERIENCE SIMPLER, STRONGER AUTHENTICATION

Data Breaches are out of control

Anthem now says 78.8M were affected by breach



MORE LIKE THIS

-  Health insurer Anthem discloses customer and employee data breach
-  State-sponsored Chinese hackers suspected in Anthem breach
- U.S. states want Anthem to provide quickly to customers
- on IDG Answers  Mitt Romney thinks we need more... do you agree?

Simplify IT with the Cisco Unified

JPMorgan Chase Hacking Affects 76 Million Households

by JESSICA SILVER-GREENBERG, MATTHEW GOLDSTEIN and NICOLE PERLROTH OCTOBER 2, 2014 12:50 PM
528 Comments



Target Now Says 70 Million People Hit in Data Breach

Neiman Marcus Also Says Its Customer Data Was Hacked

Email Print 72 Comments     

 **ARTICLE FREE PASS**
Enjoy your free sample of exclusive subscriber content. **\$12 FOR 12 WEEKS** **SUBSCRIBE NOW**

By PAUL ZIOBRO And DANNY YADRON 

Updated Jan. 10, 2014 8:38 p.m. ET



IN 2014...

708 data breaches

82 million

personal records stolen

\$3.5 million

average cost per breach



We have a **PASSWORD PROBLEM**

TOO MANY TO REMEMBER,
DIFFICULT TO TYPE,
AND **TOO VULNERABLE**



Re-used



Phished



Keylogged

🔒 Password

Remember me

[Forgot your password?](#)

LOGIN

Adding more authentication
has largely been **rejected by users**



ONE-TIME PASSCODES

Improve security but aren't easy enough



SMS
Reliability




Token
Necklace



Poor User
Experience

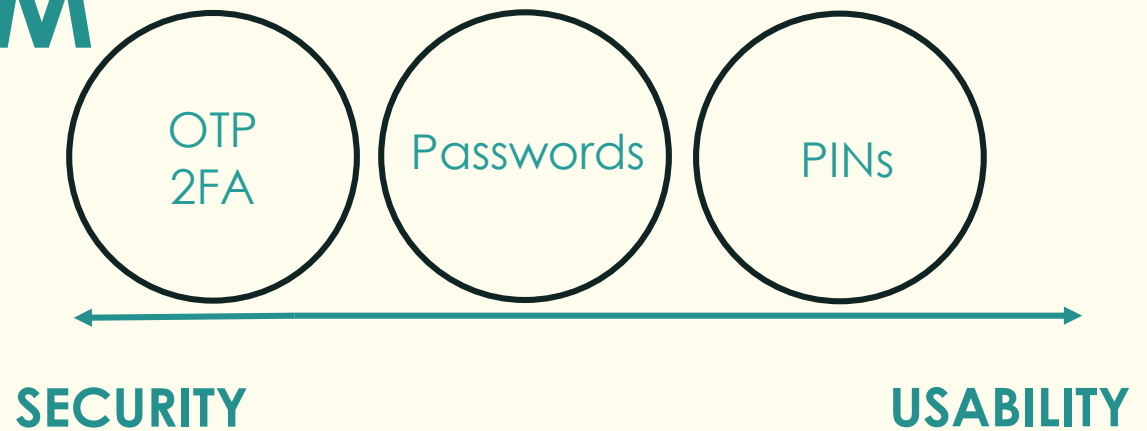


Still
Phishable

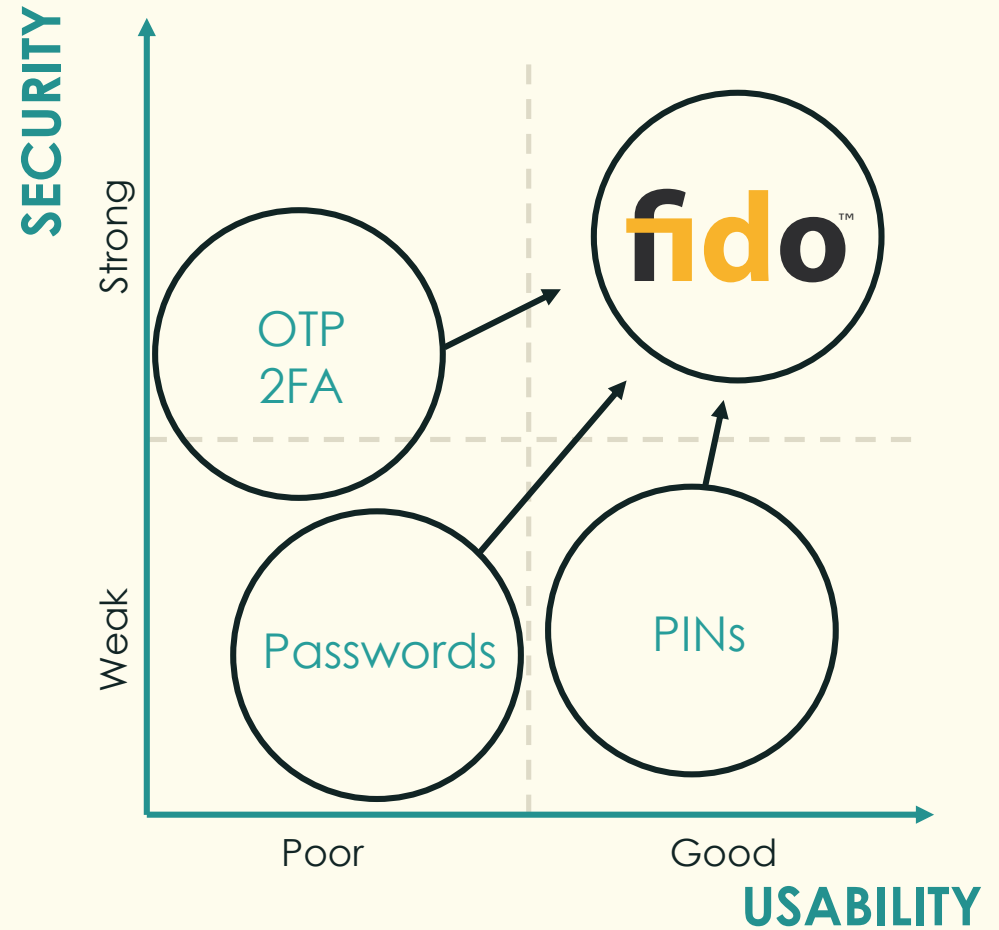


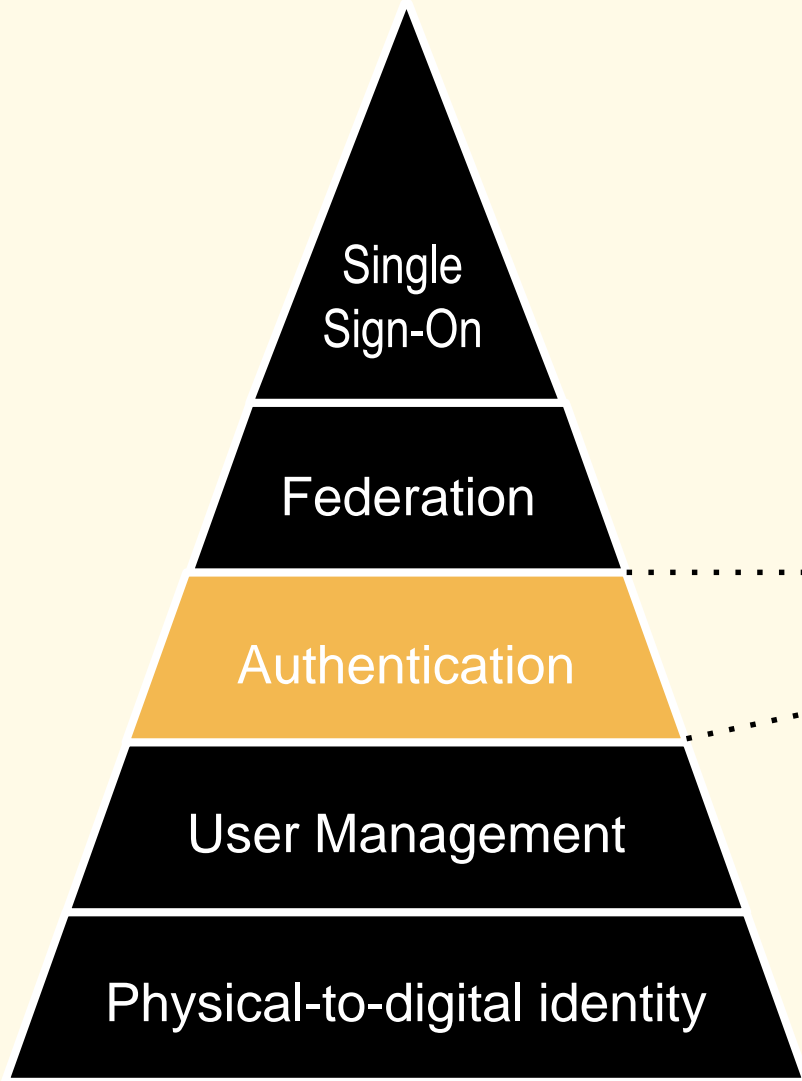
WE NEED A
NEW MODEL
Fast **ID**entity **O**nline

THE OLD PARADIGM

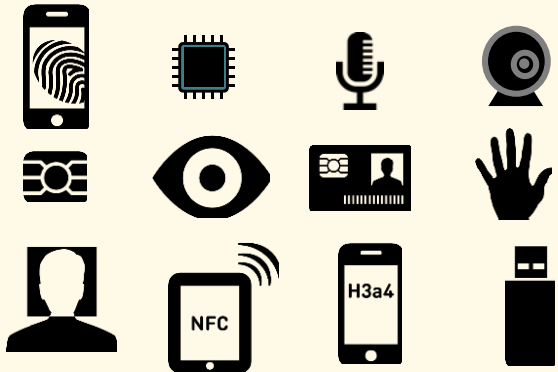


THE FIDO PARADIGM





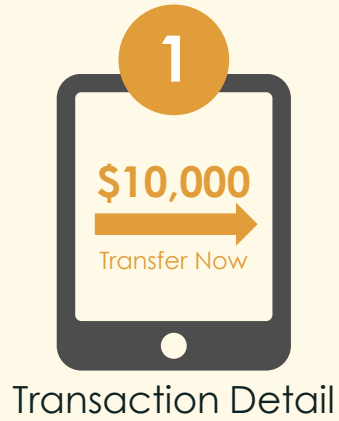
MODERN AUTHENTICATION



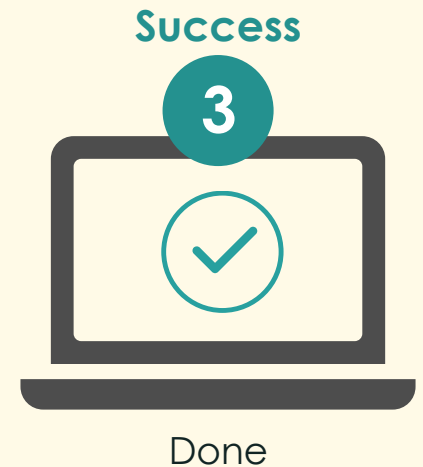
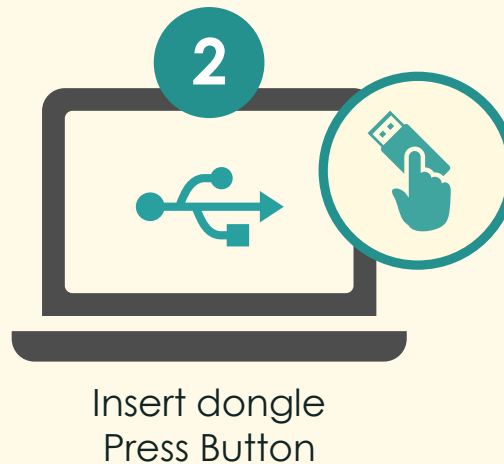
HOW DOES FIDO WORK?



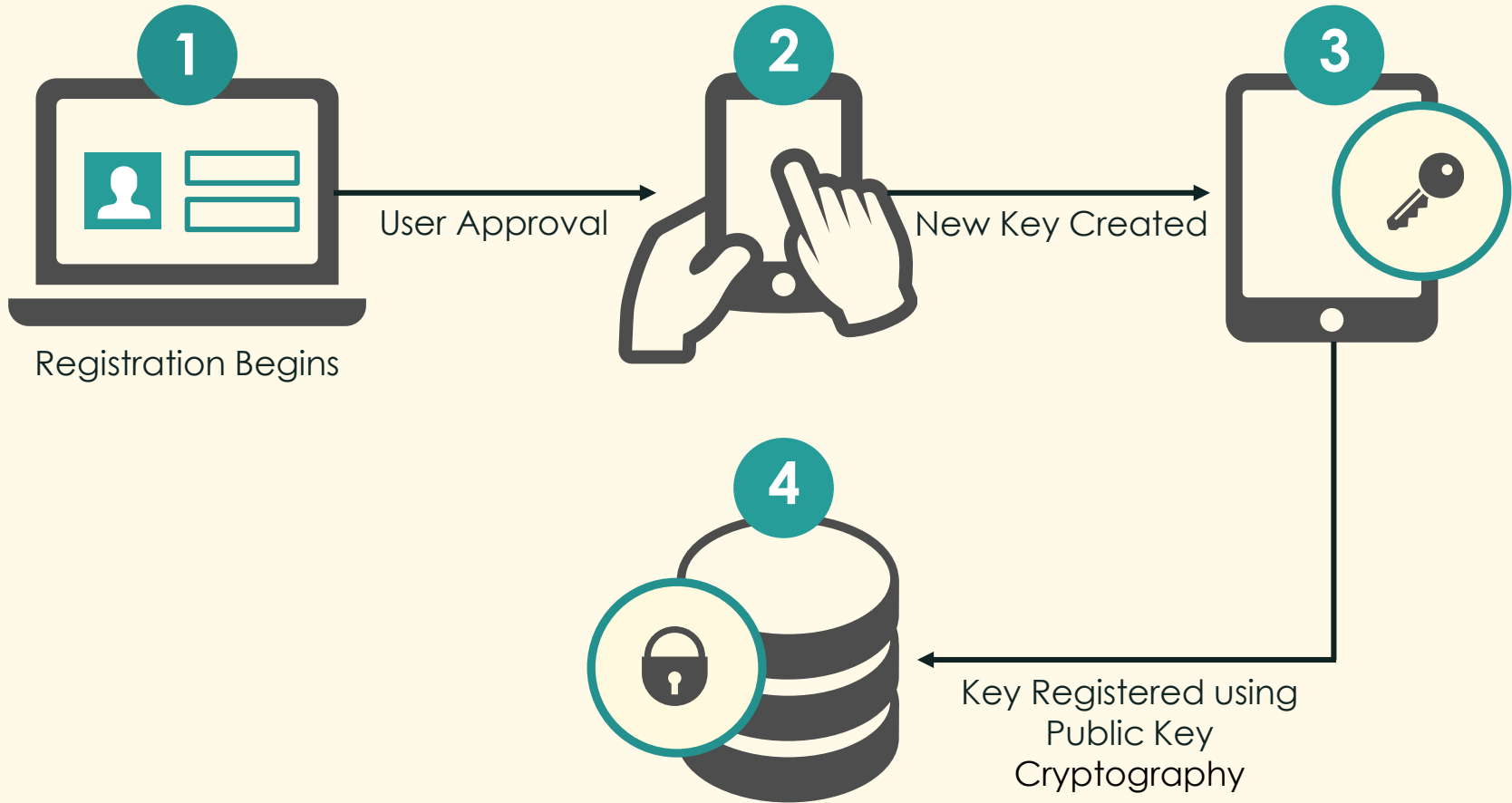
Passwordless Experience (FIDO UAF Standards)



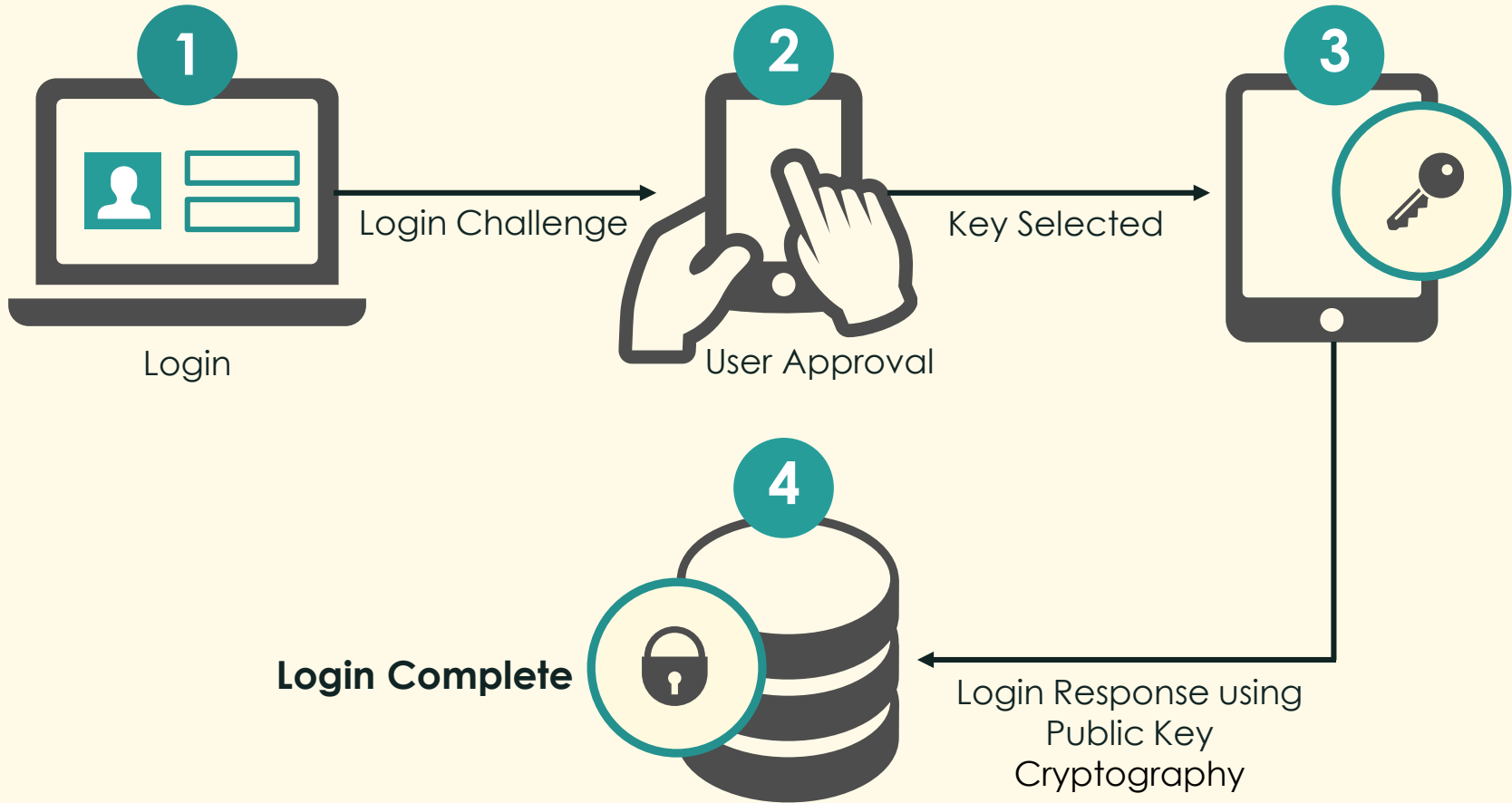
Second Factor Experience (FIDO U2F Standards)



Fido Registration



Fido Login

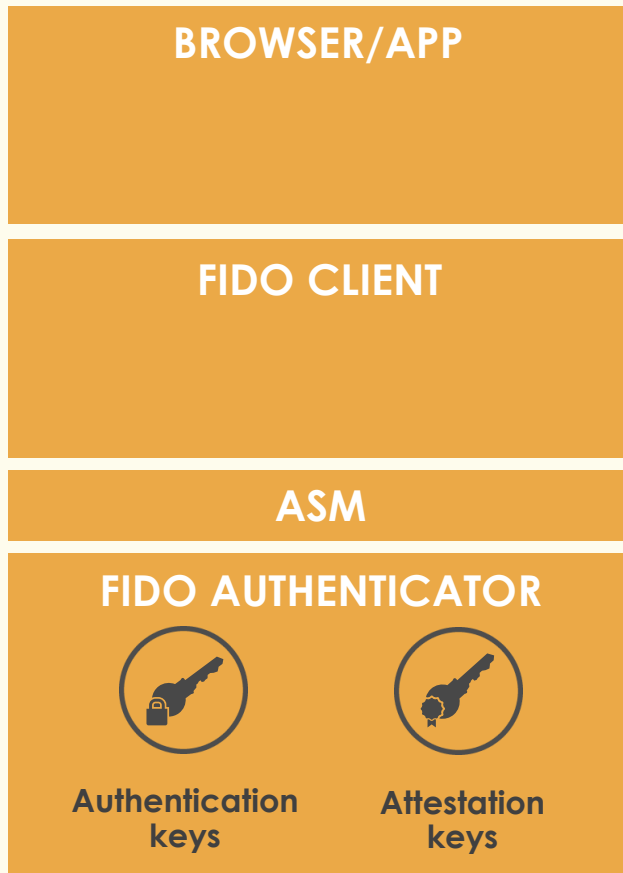




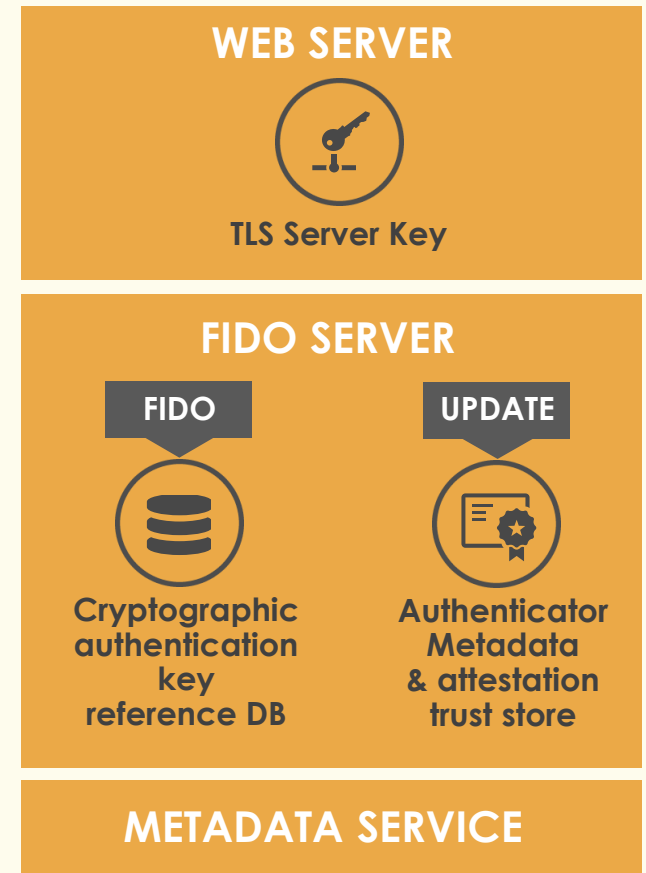
online authentication using
public key cryptography

THE BUILDING BLOCKS

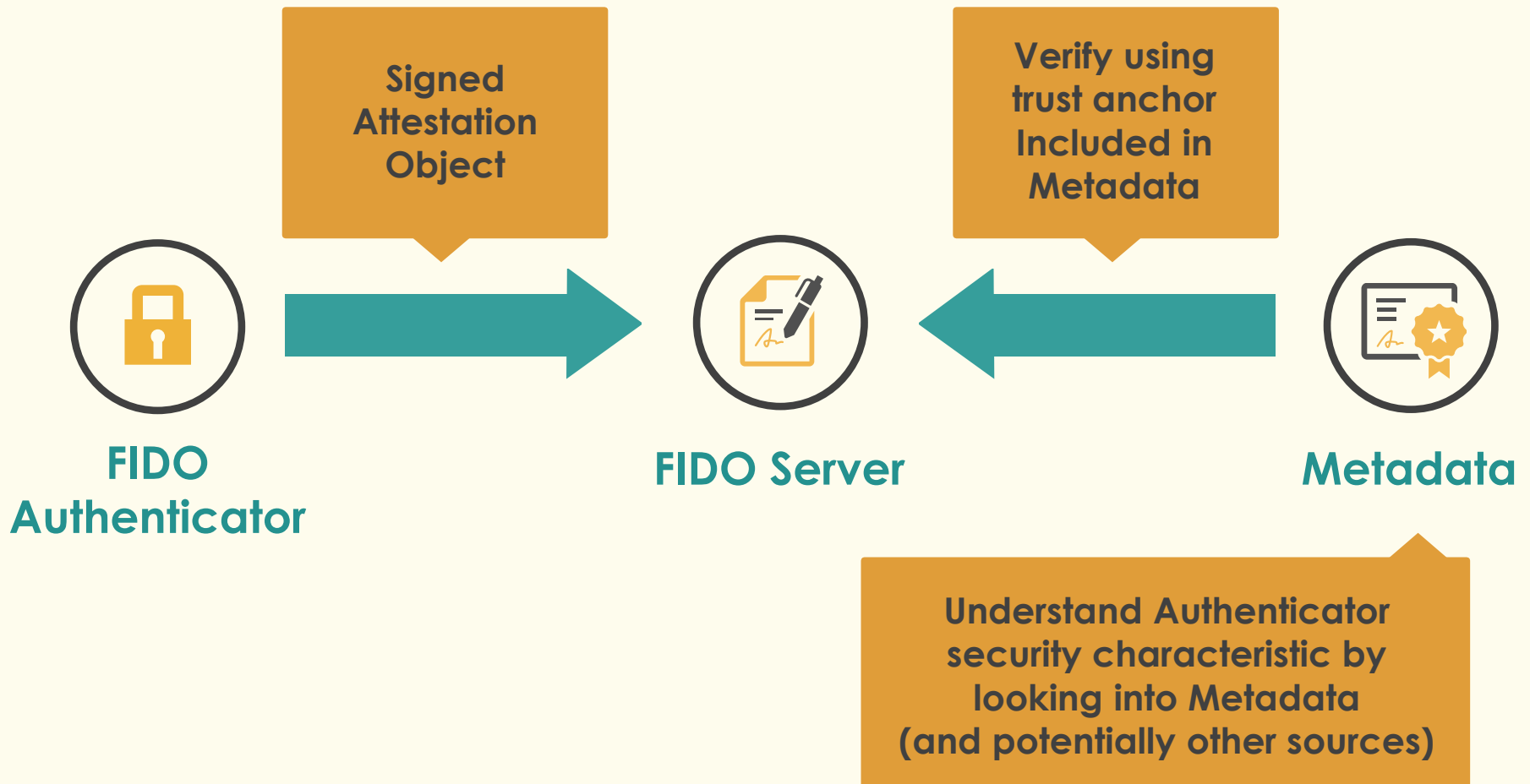
FIDO USER DEVICE



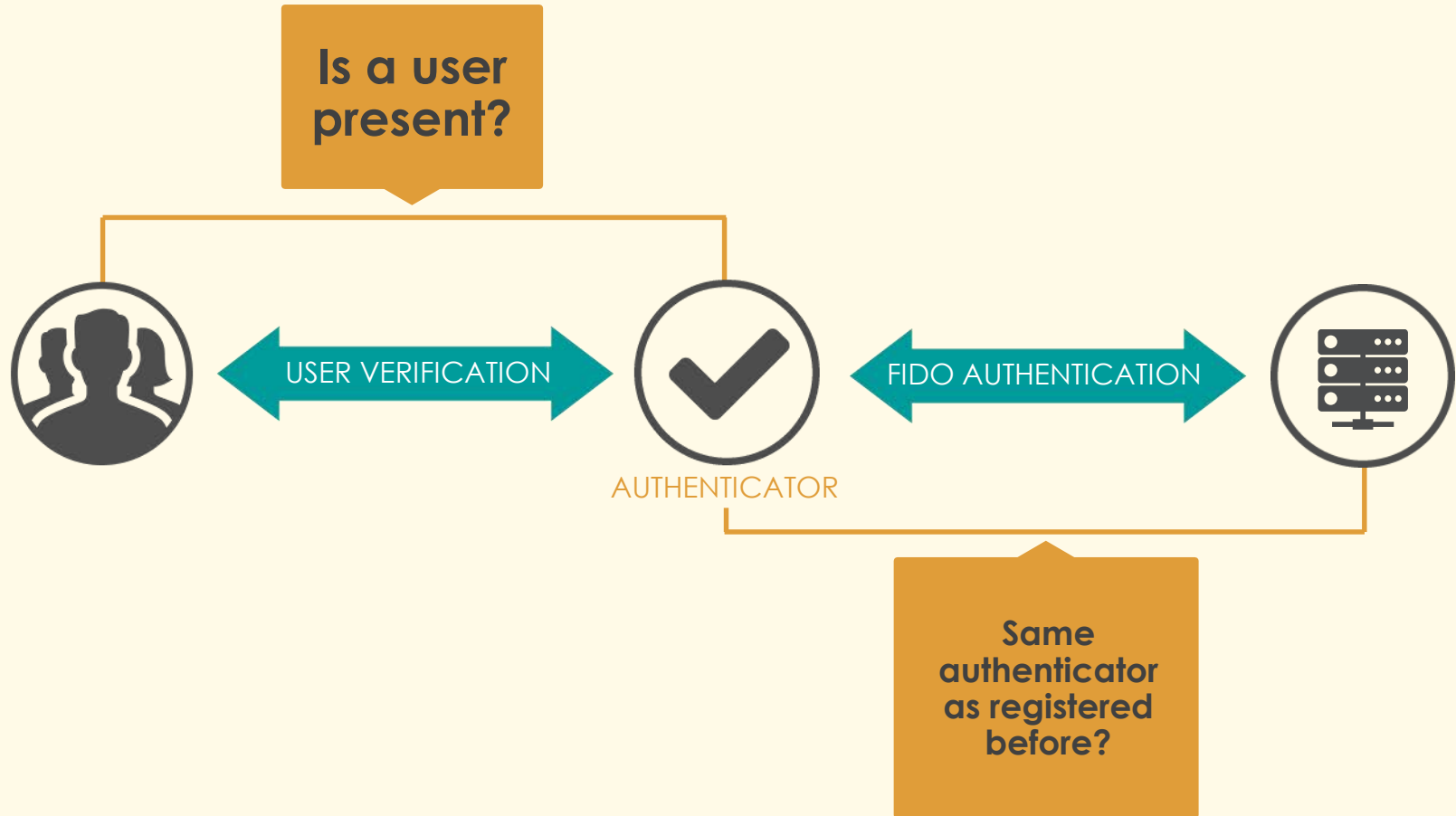
RELYING PARTY



ATTESTATION & METADATA

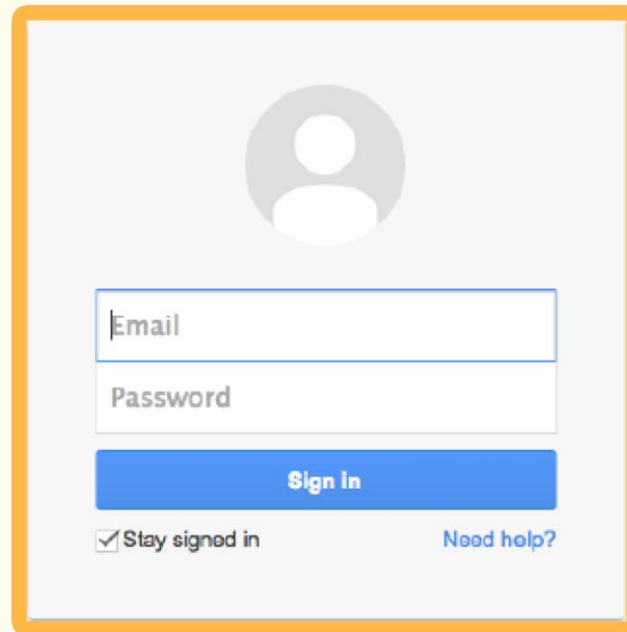


FIDO UNIVERSAL 2ND FACTOR



Step 1

U2F AUTHENTICATION DEMO EXAMPLE



A login form with a light blue background and an orange border. At the top center is a gray circular icon representing a user profile. Below the icon are two input fields: the first is labeled "Email" and the second is labeled "Password". Below the input fields is a blue button with the text "Sign In". At the bottom left, there is a checked checkbox followed by the text "Stay signed in". At the bottom right, there is a link that says "Need help?".

Step 2

U2F AUTHENTICATION DEMO EXAMPLE



Step 3

U2F AUTHENTICATION DEMO EXAMPLE

2-Step Verification

Tip: You may need to tap or re-insert your security key.

Confirm using your security key



Use a verification code instead

Don't ask for my security key again on this computer



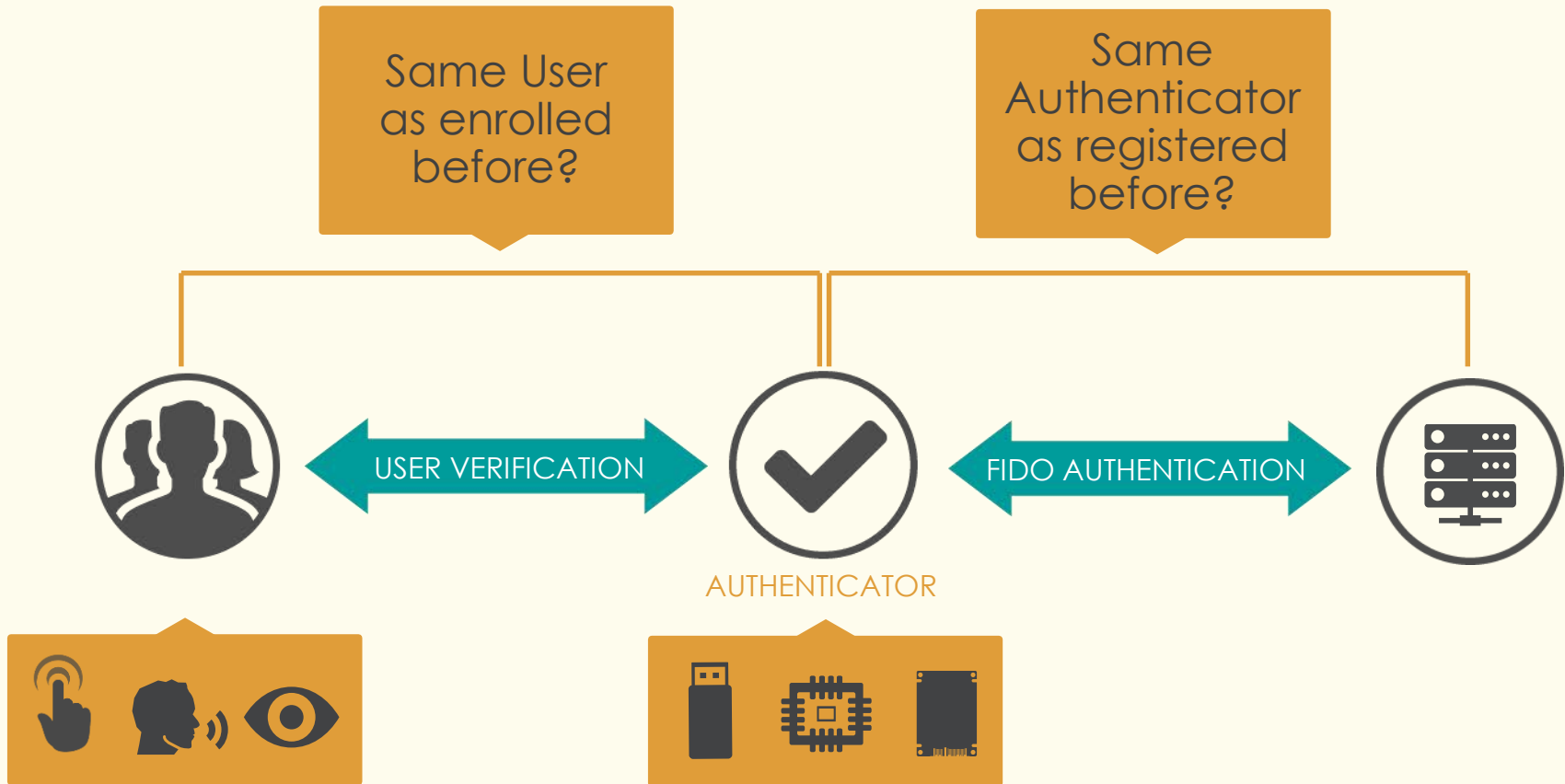
Step 4

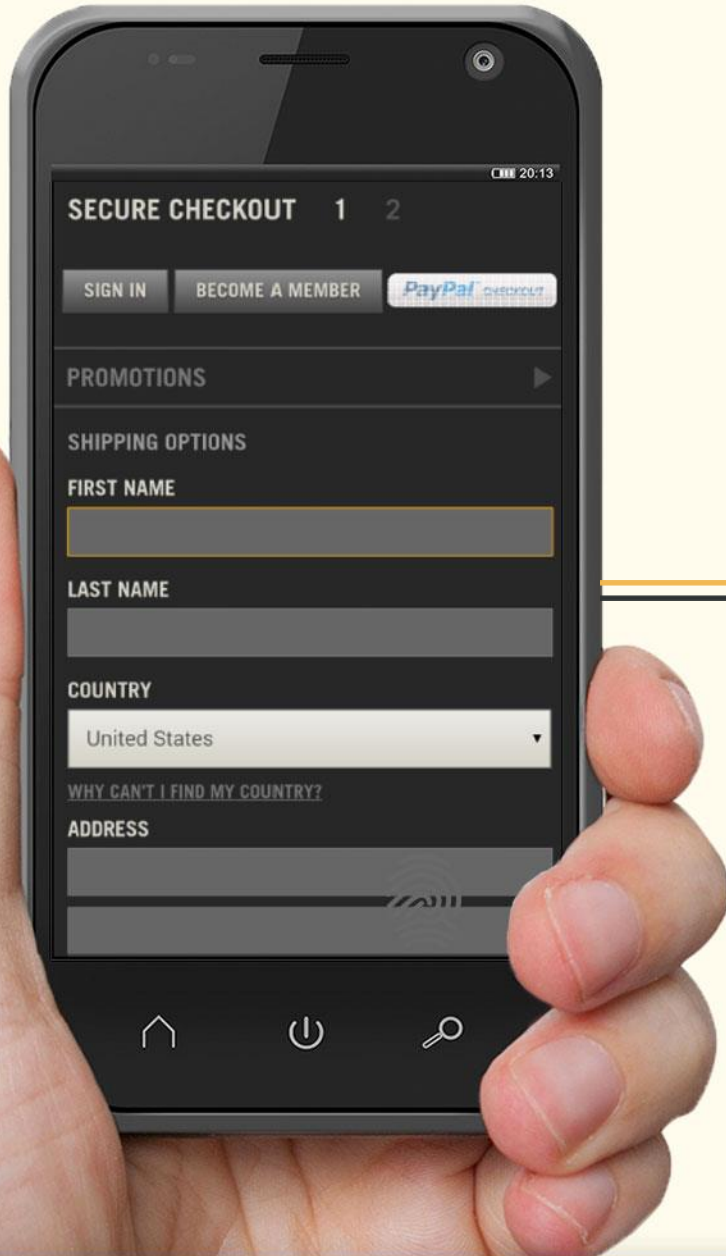
U2F AUTHENTICATION DEMO EXAMPLE

The screenshot shows the Gmail interface with the 'Gmail' logo highlighted in a red box. The main content area displays an inbox with several emails. The 'Compose' button is visible in the top left. The interface includes a search bar, navigation icons, and a sidebar with folders like 'Inbox', 'Starred', 'Sent Mail', 'Drafts', 'All Mail', 'Circles', and 'More'. The email list includes messages from 'Joss & Main', 'Petco', 'PetSmart', 'GameStop PowerUp Rewards', 'Groupon', 'ModCloth.com', 'David's Bridal', 'Kohl's', 'Victoria's Secret', and 'MTSU Alumni Association'. An advertisement for 'ladyprinting.com' is visible on the right side. The bottom of the page shows storage usage (3 GB of 15 GB used), copyright information (©2014 Google), and account activity details.

Sender	Subject	Time
Joss & Main	Clocks, mirrors & wall shelves Bedding under \$100 Storage for every space - Accents with feminine appeal. Furniture in soothing blues & whites. Farmhouse-inspired	10:55 am
Petco	This offer expires at midnight! - Don't miss your chance to save \$30! View as a web page. Petco Dog Cat Fish Sale Sale ends at	10:41 am
PetSmart	#BOGOFavorites - BOGO sale on favorite items! View in browser PetPerks @ Rewards [sign up] [log in] PetSmart SHOP DOG	10:34 am
GameStop PowerUp Rewards	Jump into spring at GameStop with Special Financing - Score double points on a new PS4. GameStop PowerUp Rewards POWER UP REWARDS™ MEMBERSHIP points as of	9:41 am
Groupon	Airport Parking - Valer's Nashville Deals March 3, 2015 Featured Deal Airport Parking Flight Park 98% of 4292	8:49 am
ModCloth.com	Get excited for St. Patty's with some glam green style! - FREE Shipping on Orders \$50+ FREE Exchanges & Easy Returns DRESSES NEW ARRIVALS SALE The	8:11 am
David's Bridal	Last Day! Last Day! Last Day! - Wedding Dress Sale Ends Today. View this email on a web browser. David's Bridal Make an	6:36 am
Kohl's	This is just 2 good... - Clearance on now--up to 70% off View this email in a browser. KOHL'S ENROLL TODAY! FREE	6:27 am
Victoria's Secret	The must-have beach tote - FREE! - Free Limited Edition Tote with a \$75 purchase! Starts tomorrow. View text browser Victoria's	Mar 2
MTSU Alumni Association	[MTSU] The Middle Minute - View this email in a web page The Middle Minute was created to provide timely information on events	Mar 2

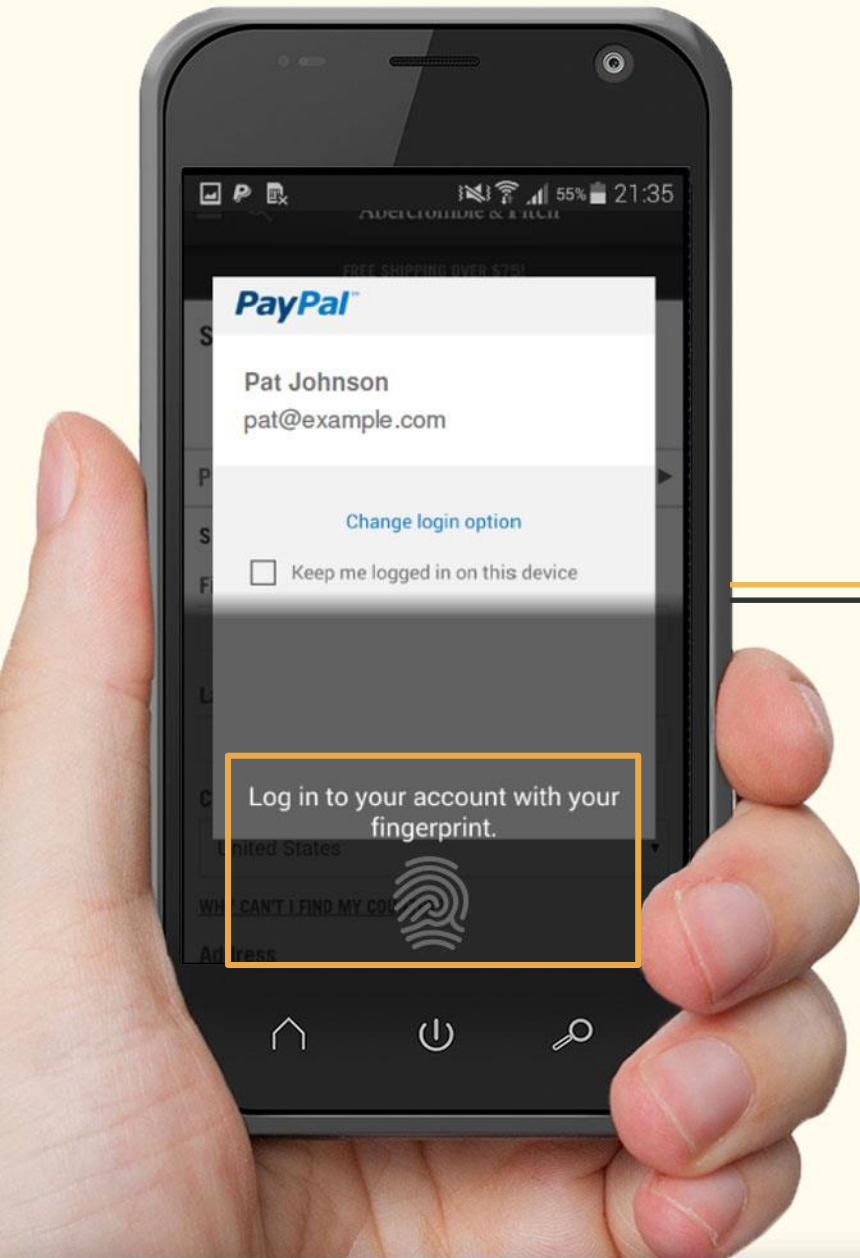
FIDO UNIVERSAL AUTHENTICATION FRAMEWORK UAF





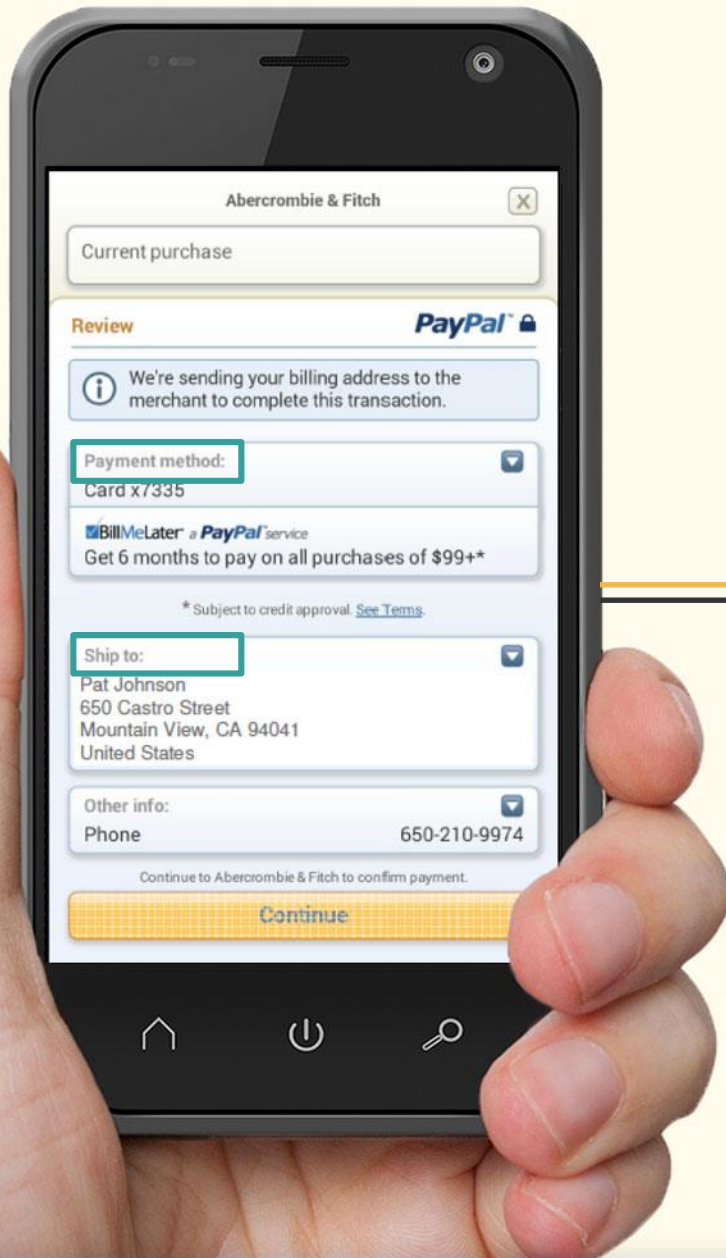
STEP 1

UAF AUTHENTICATION DEMO EXAMPLE



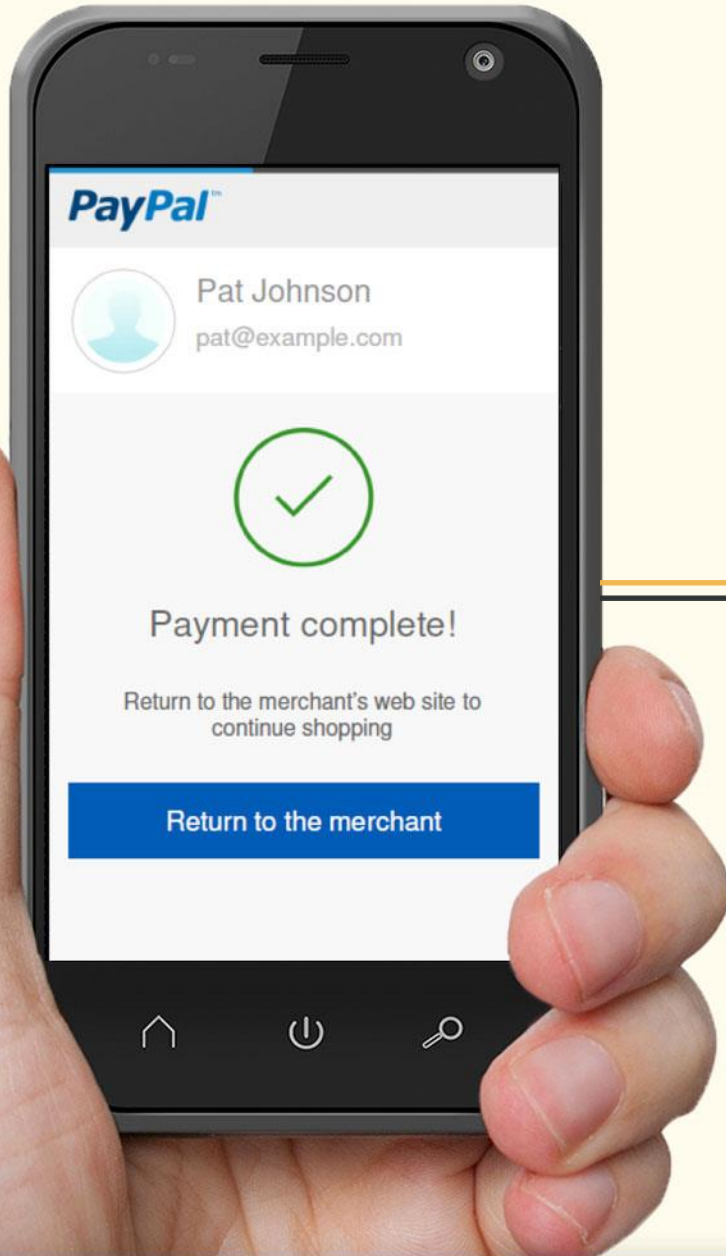
STEP 2

UAF AUTHENTICATION DEMO EXAMPLE



STEP 3

UAF AUTHENTICATION DEMO EXAMPLE



STEP 4

UAF AUTHENTICATION DEMO EXAMPLE



USABILITY, SECURITY
and
PRIVACY



No 3rd Party in the Protocol



No Secrets on the Server side



Biometric data (if used) never leaves device



No link-ability between Services or Accounts

- 
- A man in a server room looking at a server rack. The room is dimly lit with blue and orange lights. The man is wearing glasses and a plaid shirt. He is looking at a server rack on the right side of the frame. The background is a long aisle of server racks.
- Better Security for **online services**
 - Reduced cost for the **enterprise**
 - Simple & Safe for **consumers**

A group of four business professionals (three men and one woman) are seated around a conference table in a meeting. They are dressed in business attire (suits and blouses). The man on the right is speaking and gesturing with his hand. The woman on the left is listening intently. The man in the center is also listening. The woman on the far left is looking towards the man on the right. There are papers, glasses of water, and a smartphone on the table.

The FIDO Alliance is an open association of more than 180 diverse **member organizations**

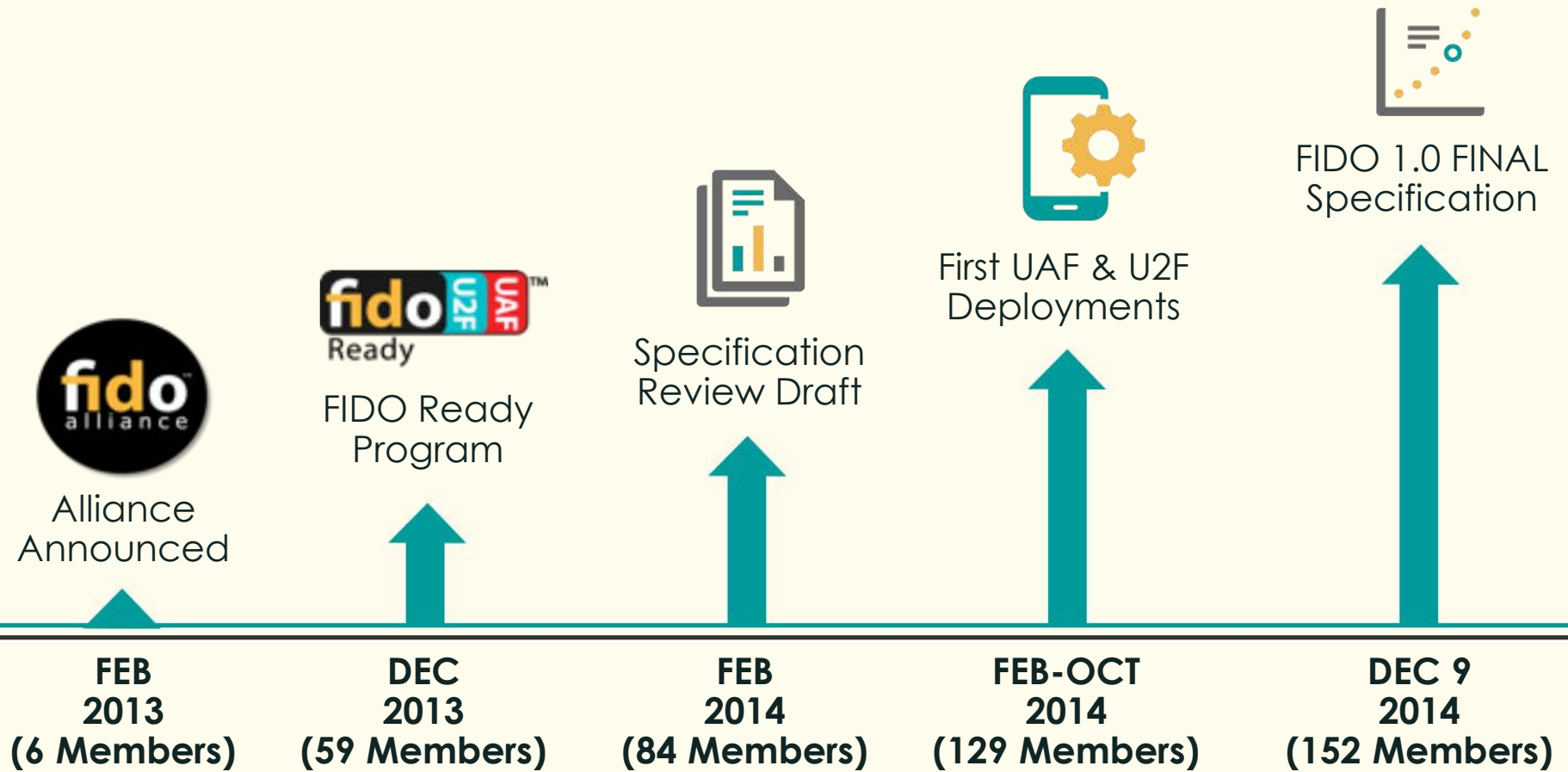
- ✓ Online Services
- ✓ Chip Providers
- ✓ Device Providers
- ✓ Biometrics Vendors
- ✓ Enterprise Servers
- ✓ Platform Providers



Board Members



FIDO TIMELINE





News from the front

The significance of early 2015 announcements

- ✓ Windows used by 1.5 billion users
- ✓ Windows 10 in 190 countries by Q3
- ✓ Free upgrade



FIDO in Windows 10

THE VERGE TRENDING NOW
NASA's wild experimental plane wing has 18 propellers attached to it

LOG IN | SIGN UP LONGFORM VIDEO REVIEWS TECH SCIENCE ENTERTAINMENT DESIGN BUSINESS US & WORLD F

PREVIOUS STORY
FCC chairman tries to convince Congress that Obama doesn't have a secret plan...

NEXT STORY
US scientists can soon run experiments on marijuana

MICROSOFT TECH

Windows Hello lets you sign into Windows 10 devices with your face or finger

By Tom Warren on March 17, 2015 12:00 pm @tomwarren

Windows

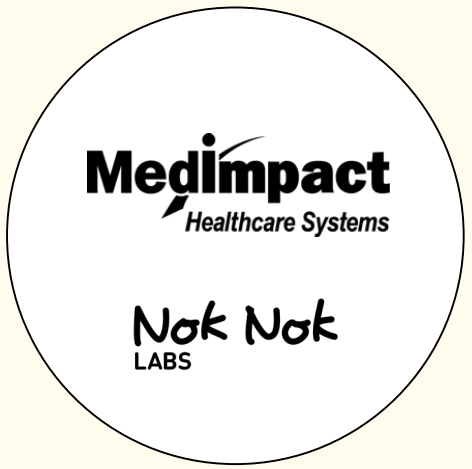
HOME BLOGS VIDEOS WINDOWS.COM NEWSROOM

Windows For Your Business

Microsoft Announces FIDO Support Coming to Windows 10

February 13, 2015 by Dustin Ingalls // PC // 6 Comments

- ✓ First healthcare deployment
- ✓ Physician access to health records up to 50 million Healthcare users



FIDO in Healthcare

CNN Money Business Markets Tech Personal Finance Small Business Luxury stock tickers

FIDO Alliance Members MedImpact and Nok Nok Labs to Deliver FIDO Authentication to Physicians, an Industry First for Healthcare

March 23, 2015: 10:00 AM ET

The FIDO (Fast Identity Online) Alliance (<https://www.fidoalliance.org/>), an industry consortium launched in 2013 to revolutionize online security with open standards for simpler, more secure authentication systems and Nok Nok Labs, a leading provider of FIDO authentication solutions, who need FIDO authentication for FIDO authentication. The FIDO Alliance members, MedImpact and Nok Nok Labs, announced today that they have entered into a strategic partnership to deliver FIDO authentication to physicians, an industry first for healthcare.

MedImpact

MedImpact Direct Client Member PBM

Home PBM Solutions Market Solutions Company **Newsroom**

Newsroom

Press Releases

Events

Publications

Experts

Industry Resources

Multimedia

Press Releases

View new and archived corporate press releases.

← **MedImpact First in Healthcare to Deploy FIDO Authentication, with Nok Nok Labs Enabling Physician Access Portal**

National PBM to Provide FIDO Authentication for up to 50 Million Healthcare Consumers

San Diego—March 23, 2015

MARKETWIRED

tems and Nok enable who need DO

Alliance of FIDO yments of

ustry and in Treiman, rtal with

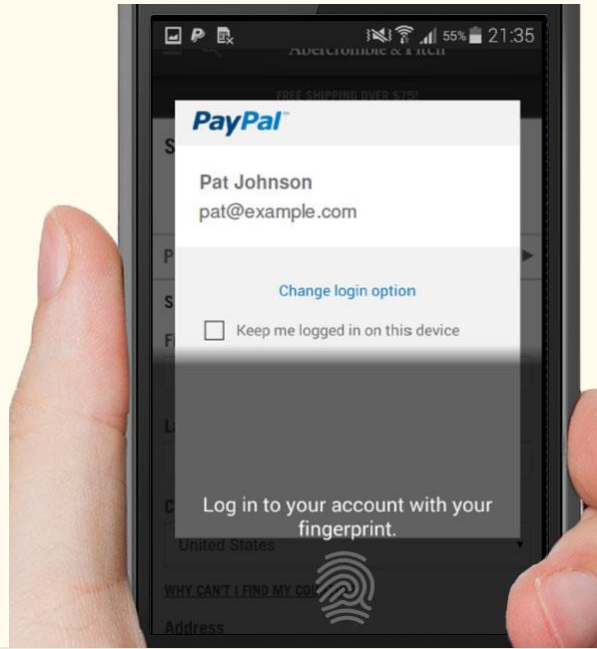
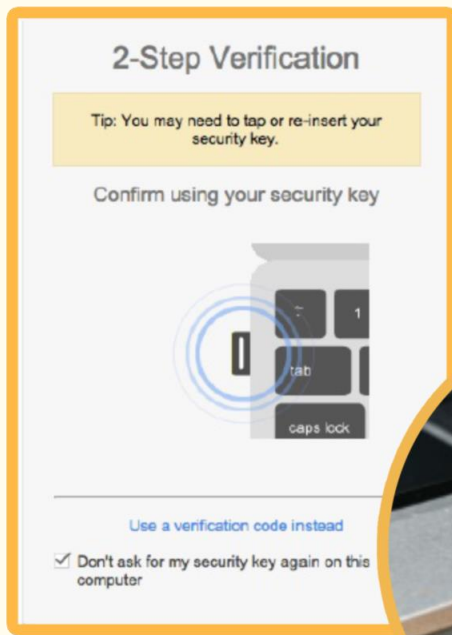
abs and FIDO MedImpact is

the nature of IDO

- ✓ **PayPal** continues FIDO enablement in improved mobile wallet app.
- ✓ **Google** has FIDO in Chrome and 2-Step Verification.
- ✓ **Samsung** adds touch to Galaxy® S6 and ships FIDO on all Galaxy® devices



2014 Deployments



A woman with curly hair is shown in profile, looking intently at a laptop screen. She is wearing a light-colored, short-sleeved top. The background is softly blurred, suggesting an indoor setting. The overall lighting is dim, with a subtle teal or blue tint. A semi-transparent grid pattern is overlaid on the entire image.

A range of
FIDO PRODUCTS
is now available

Online Services



Chip Providers



Device Providers



Biometrics Technology Providers



Implementing 1.0 Specifications (this is only a subset of active implementations)

Enterprise Servers



Open Source



Mobile Apps/Clients



WWW Browsers





JOIN THE
FIDO ALLIANCE



EXPERIENCE SIMPLER, STRONGER AUTHENTICATION
