

# Jumping the Identity S Curve

How to Achieve Privacy-Preserving Identity Verification and Federation While Reducing IT and Security Costs



**Dr. Tina P. Srivastava**

Co-Founder, Badge Inc.

Author, *Innovating in a Secret World*

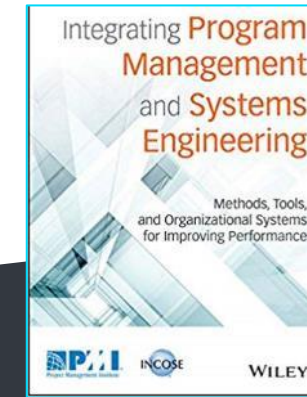


# Dr. Tina P. Srivastava

- S.B. Aeronautics & Astronautics, MIT
- S.M. Engineering & Management, MIT
- Ph.D. Strategy, Innovation, & Engineering, MIT



Founded security company with fellow MIT alums; exited to public company



- Board of Directors
- Co-author



Zero-Gravity  
Flight Testing

Pilot

Raytheon



Co-Founder  
Badge Inc.



- Chief Engineer, Raytheon
- \$40M Radar Program
- Team of 30
- Received National Recognition for Technical Innovation

Author



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## Lecture 2: Airplane Aerodynamics

2.5M views • 3 years ago



MIT OpenCourseWare

This lecture introduced the fundamental knowledge and basic principles of airplane aerodynamics. License: Creative Commons ...

CC



Intro | How do airplanes fly | Lift | Airfoils | What part of the aircraft generates lift | Equations |...

25 chapters ▾



## Aerodynamics Explained by a World Record Paper Airplane Designer | Level Up |

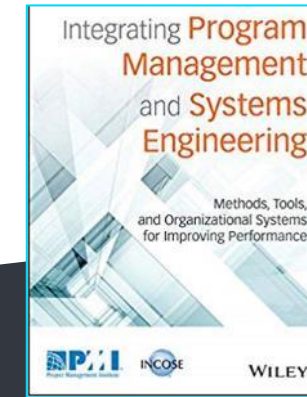
WIDE

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#### FURTHER READING

## Innovating in a Secret World: The Future of National Security And Global Leadership

By Tina P. Srivastava

■ “Our national security depends on advancements in science and technology,” writes Tina Srivastava, a former Raytheon engineer, and now an author, entrepreneur and technology expert. However, “it is no longer enough to support R&D and expect technology innovation, technological superiority and national security to follow. For the United States to maintain its position requires being the foremost at effectively transitioning R&D investment into technological innovation.”

The problem is what she calls “secure U.S. government R&D.” It is cloaked in secrecy, and that is at odds with modern means to achieve progress, or what the commercial sector calls, “open innovation strategies.”

Secret government R&D programs were once highly successful: the Apollo pro-

gram 50 years ago was one shining example, she writes, but not much has changed in how the government carries out its top secret research.

“While the commercial sector leverages new innovation strategies to great success, the restrictions endemic to secure U.S. government R&D persist, putting U.S. national security at risk,” she writes.

Srivastava ends the book with recommendations on how the government can foster innovation and increase the number of players participating in national security-related research and development. **ND**

This article is reprinted from the September 2019 issue of *National Defense*



IDEAS MADE TO MATTER | INNOVATION

## Why the U.S. government is struggling with open innovation

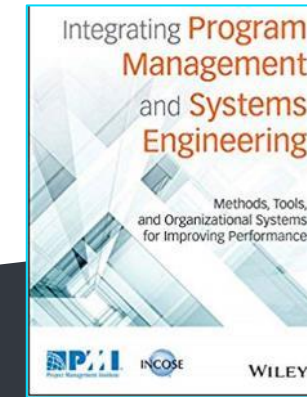
 by Meredith Somers | Sep 13, 2019

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# Identity S-Curve

Centralized Identity



# Identity S-Curve

## Centralized Identity



# Identity S-Curve

## Centralized Identity

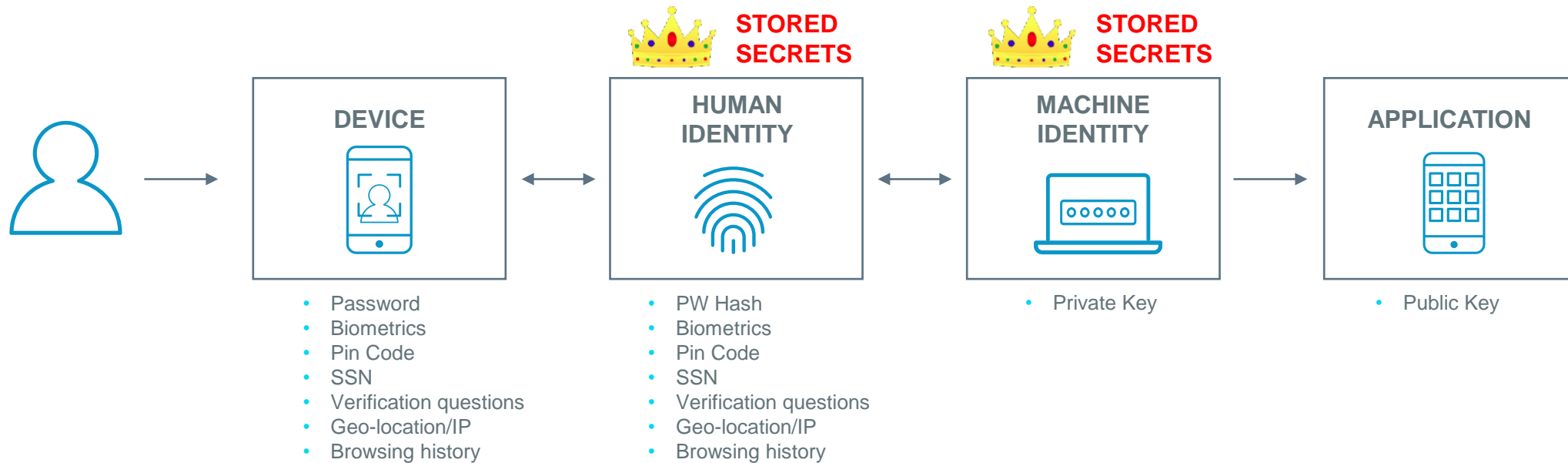




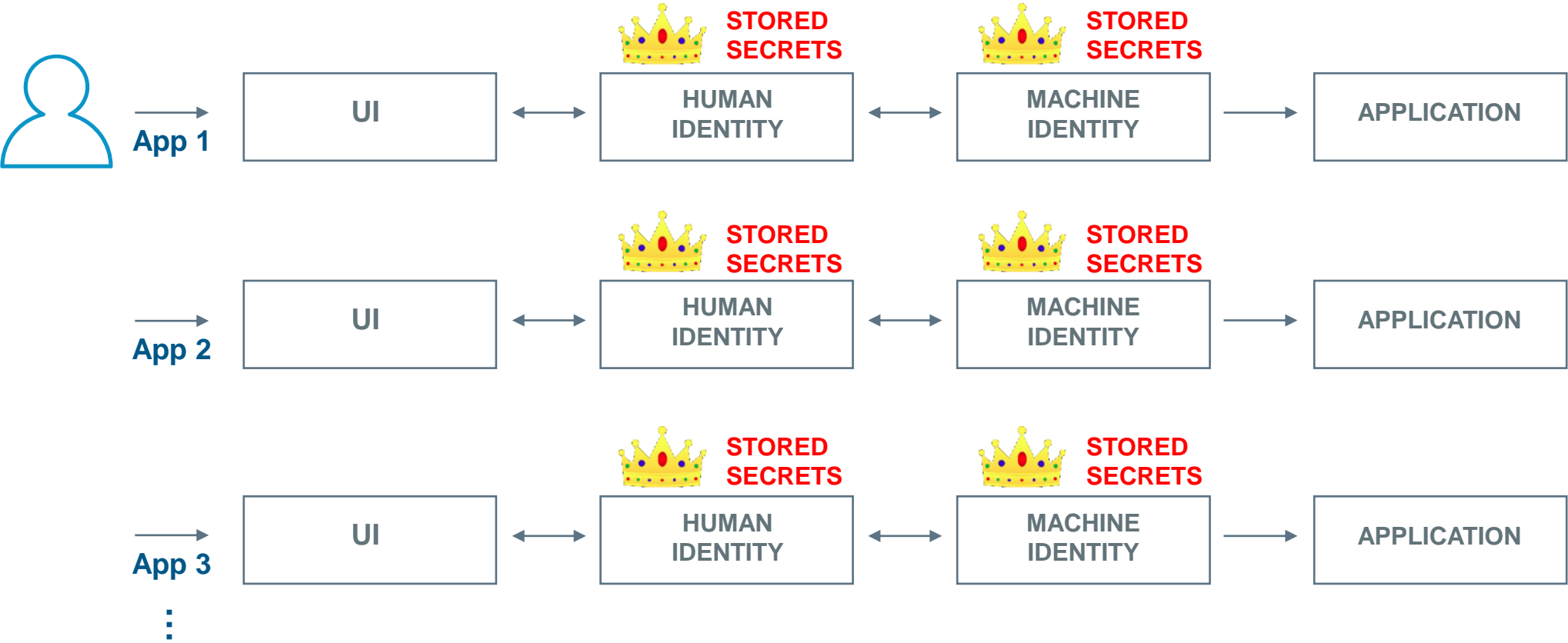
Every person has over  
**100 digital identities**  
giving access to banking,  
accounts, online merchants,  
mobility platforms, healthcare  
and online payments

There are over  
**50 Billion**  
**authentications**  
every day

# All authentication today requires vulnerable secret storage

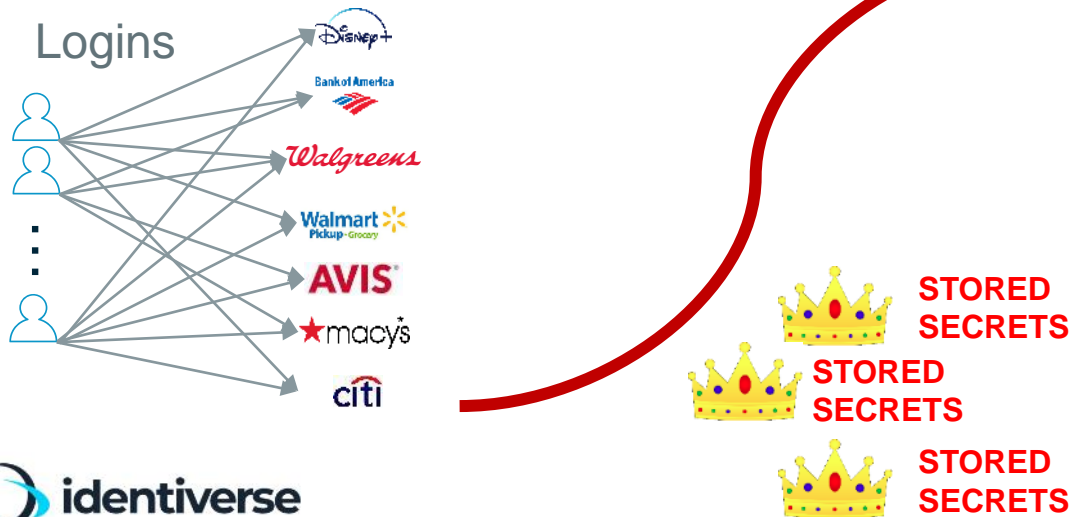


# Storage necessitates silos, user friction



# Identity S-Curve

## Centralized Identity



# Identity S-Curve

Cross-Domain Identity

Centralized Identity



# Identity S-Curve

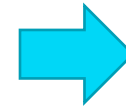
## Centralized Identity

- Consumer has to remember/maintain a digital identity for each product/service
- Each enterprise provides a digital identity to each consumer



## Cross-Domain Identity

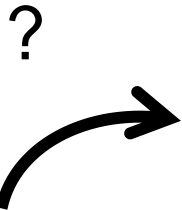
- Consumer chooses a single identity and uses it for multiple products
- Enterprises trust the digital identity



# Identity S-Curve

Cross-Domain Identity

Centralized Identity



# Identity S-Curve

Cross-Domain Identity

Bind **your device** to your Identity



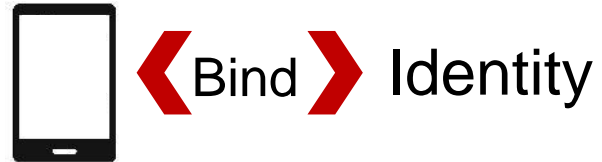
?

Centralized Identity



# Identity S-Curve

Bind **your device** to your Identity



Inclusion, Equitability  
issues



# Identity S-Curve

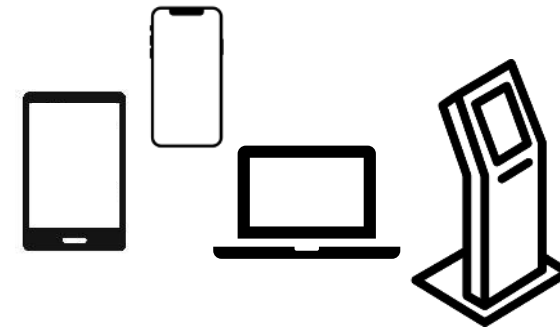
Bind **your device** to your Identity



Inclusion, Equitability  
issues



Use cases unsolved



# Roaming user experience is pervasive

- Employees with no dedicated workstation, device-restricted environment
  - Bank tellers
  - Retail workers
  - Healthcare clinicians
  - Call center agents
  - Factory floor workers
  - Transit, etc.

Banking



Healthcare



Manufacturing



# Customer Requirement: Users must be authenticated on different devices



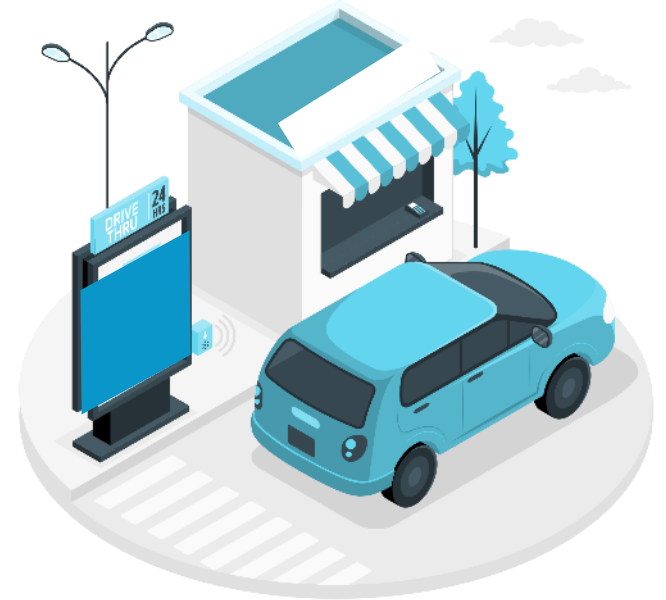
*Phones, Tablets*



*Laptops, Desktops*



*In-store, Kiosks*



*Drive-thru*

# Identity S-Curve

Cross-Domain Identity

Bind **your device** to your Identity



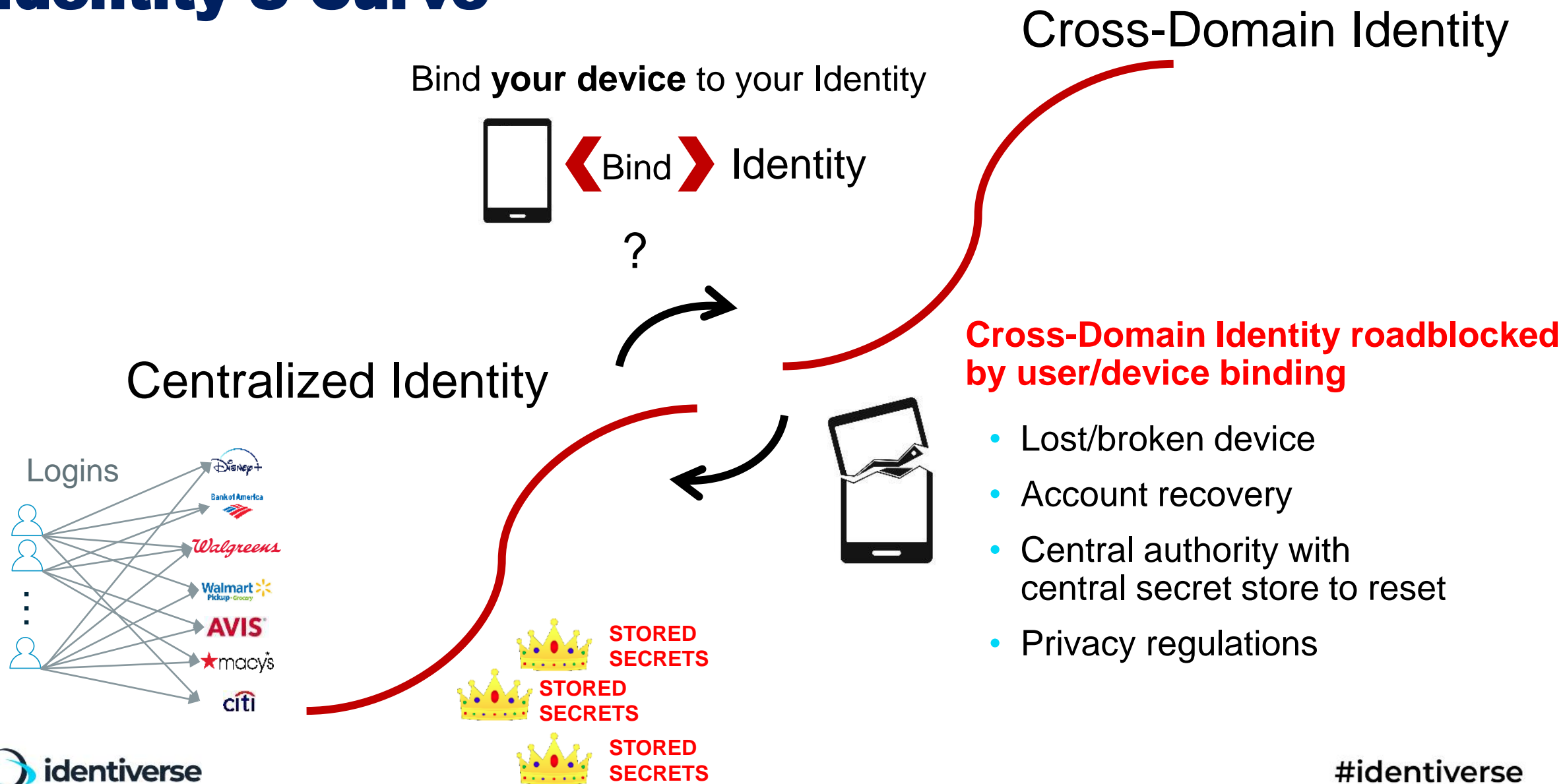
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Centralized Identity



# Identity S-Curve



# Identity S-Curve

you  
Bind your ~~device~~ to your identity

YOU **◀ Bind ▶** Identity

## Cross-Domain Identity

## Centralized Identity



- ~~Lost/broken device~~
- ~~Account recovery~~
- ~~Central authority with central secret store to reset~~
- ~~Privacy regulations~~

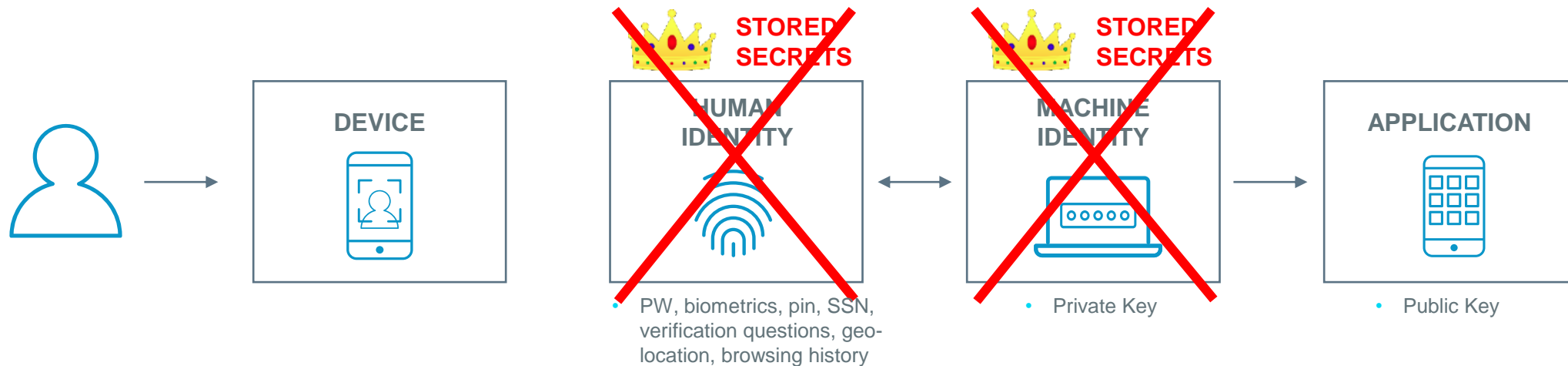
# Jumping the Identity S-Curve



## Identity without secrets™

Badge enables privacy-preserving authentication.

Enroll once and authenticate on any device without storing PII.



# Jumping the Identity S-Curve



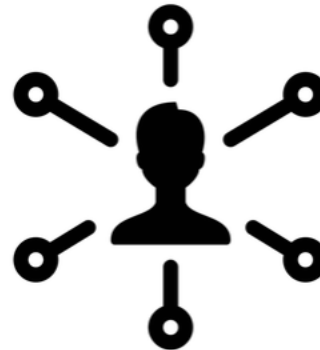
## Identity without secrets™

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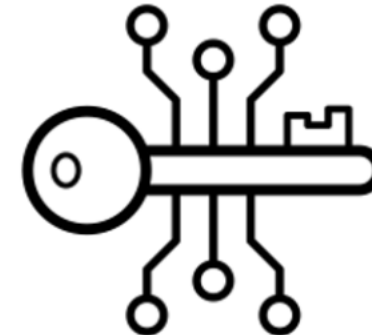
### User-Centric Privacy

Issue and revoke your digital identity and keys on-demand using your biometrics



### Authenticate on Any Device

Enroll once and authenticate on any device without passwords, device redirects, or KBA



### Unparalleled Security

No secrets or PII to steal!  
Auto-comply with privacy laws CCPA, GDPR, BIPA

# Jumping the Identity S-Curve

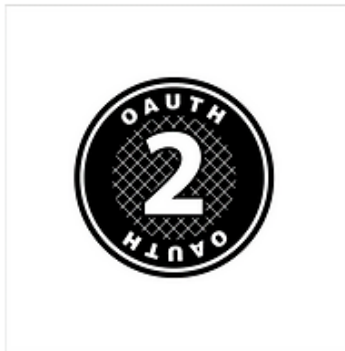


**Identity without secrets™**

Badge enables privacy-preserving authentication.

## How to leverage privacy-preserving technologies without disrupting your MFA workflows

Zero-code integration using standard protocols including:



# Ping DaVinci Live Integration with Badge

# Badge and Ping



< Back to Search

badge

## Region Served

North America

## Product(s)

PingOne DaVinci

## Partner Type

Technology Alliance

Partner Website

Contact Sales

## Badge Inc.

Badge enables privacy-preserving authentication for users to enroll and authenticate on any device without storing PII. This enables user-centric privacy, allowing users to issue and revoke digital identity and keys on-demand using biometrics and/or other factors.

## Technology

- MFA
- OAuth
- OIDC
- OpenID
- PAM
- SAML
- SSO

## Integrations

Badge DaVinci Connector

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badge

## Integration Details

### Release Date

10/31/2022

### About Partner

Badge Inc.

### Capabilities

- Multi-factor Authentication (MFA)
- Single Sign-on (SSO)

### Integration Type

API

## Badge DaVinci Connector

The Badge OIDC connector provides a no-code integration to seamlessly use Badge for privacy-preserving authentication in your PingOne DaVinci flow.

### Authenticating users with Badge



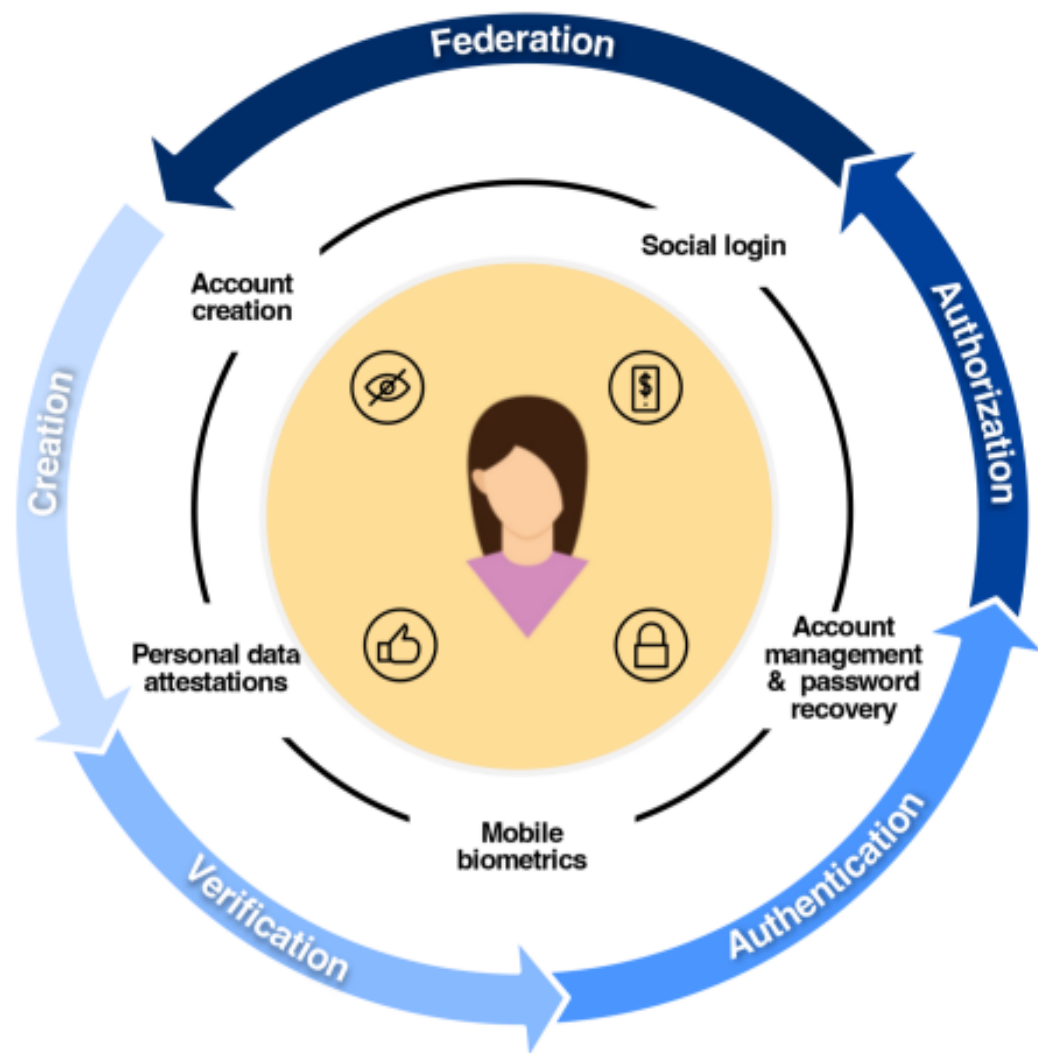
## Features / Benefits

- User-Centric Privacy Issue and revoke your digital identity and keys on-demand using your biometrics and/or other factors.
- Authenticate on Any Device Enroll once and authenticate on any device anywhere without passwords, device redirects, or knowledge questions.
- Unparalleled Security No secrets or PII to steal! Auto-comply with privacy laws CCPA, GDPR, BIPA.

# **Privacy challenges and the shift to consumer-centric identity**

# Reusable digital identities must be rooted in the consumer digital identity lifecycle

In order to succeed, reusable digital identities must meet the needs of enterprise and consumer stakeholders across a fragmented landscape that currently forces users to manage separate iterations of this lifecycle for each account they maintain



## Fragmented Credential Issuers / Relying Parties



Utility Providers



Hospitals



Banks



Employers



Universities



Airlines



Governments

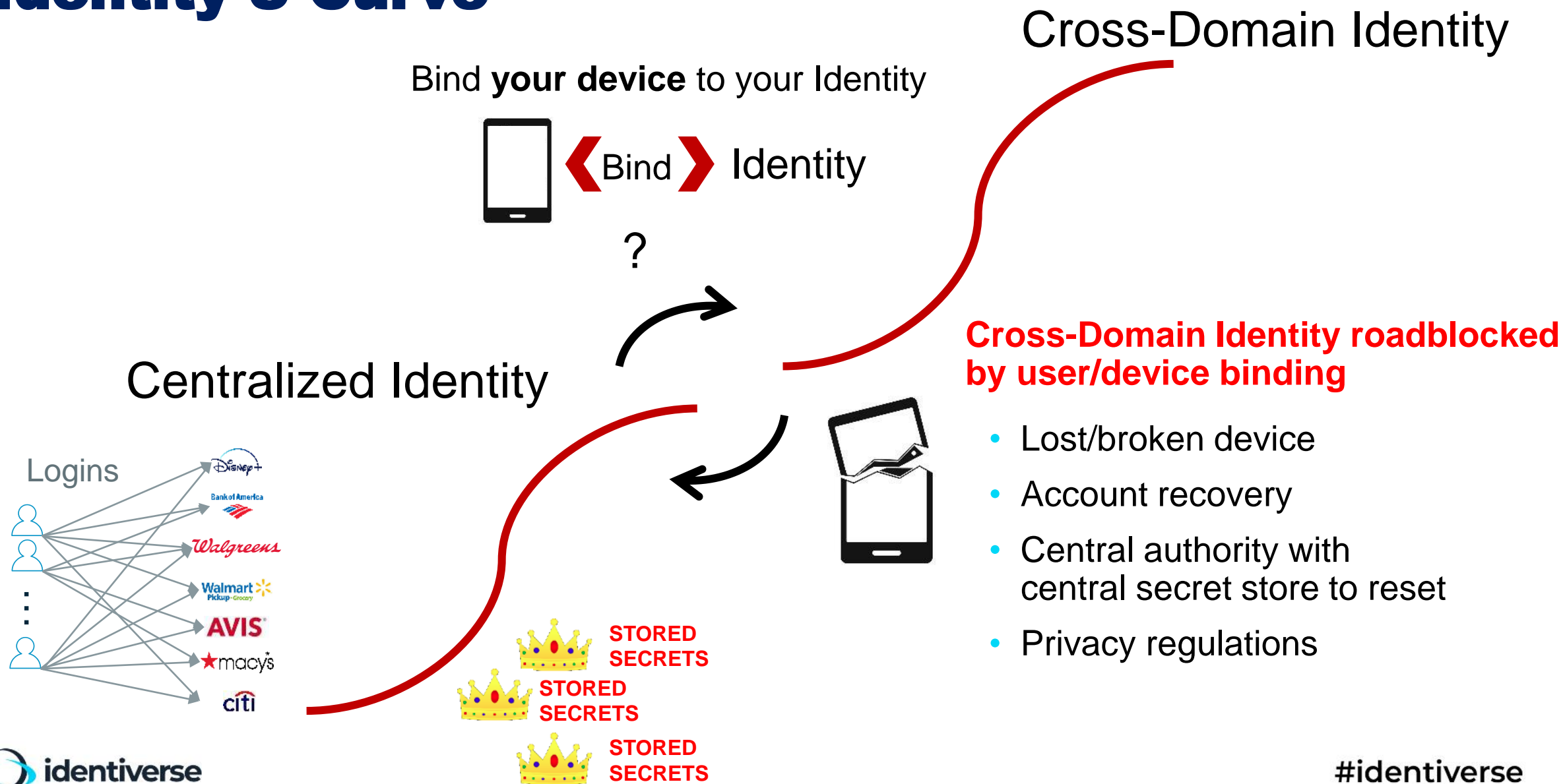


Online Marketplaces



Gaming Platforms

# Identity S-Curve



# Identity S-Curve

you  
Bind your ~~device~~ to your identity

YOU **◀ Bind ▶** Identity

## Cross-Domain Identity

## Centralized Identity



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# THANK YOU!

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