

ReCRED

From **Real**-world Identities to
Privacy-preserving and Attribute-based
CREDentials for Device-centric Access
Control

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ReCRED Consortium

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Call Identifier: H2020-DS2-2014-1



www.recred.eu



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ReCRED Context

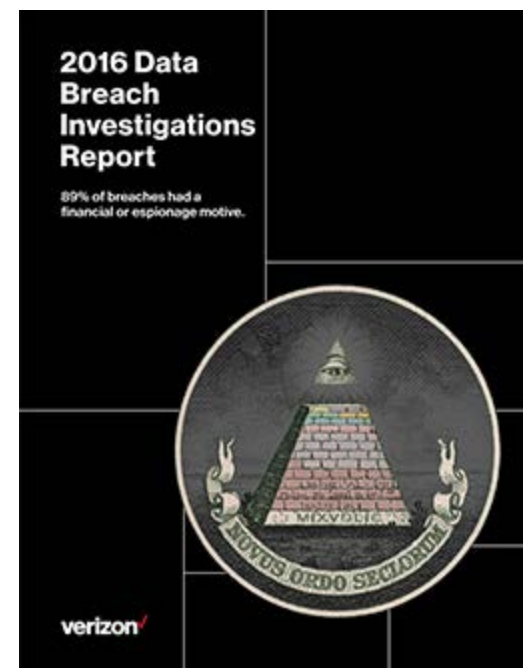
7.6 billion Mobile connections

4.7 billion unique subscribers

\$1.06 trillion Revenue/year

6.4 billion Connected "Things" Will Be in Use in 2016*

63% of confirmed data breaches involved leveraging weak, default or stolen passwords.



Source: <https://www.gsmaintelligence.com/>

*Gartner

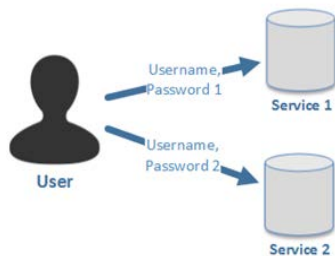


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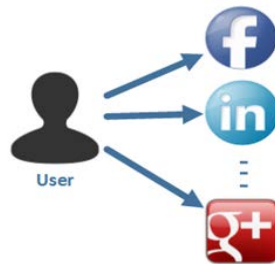
ReCRED's goal

To promote the **user's personal mobile device** to the role of a unified **authentication** and **authorization proxy** towards the digital world.

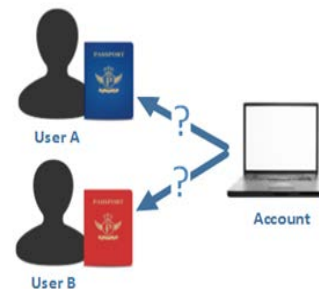
1. Password overload



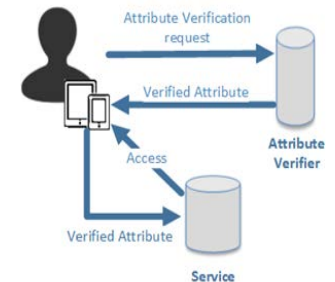
2. Identity Fragmentation



3. Lack of real-world binding



4. Lack of support for Attribute based access control



ReCRED concepts



User to Device & Device to Service authentication



Binding digital Identity with Real-world Identities



**Account less access through verified identity attributes
(eg. Age, location etc)**

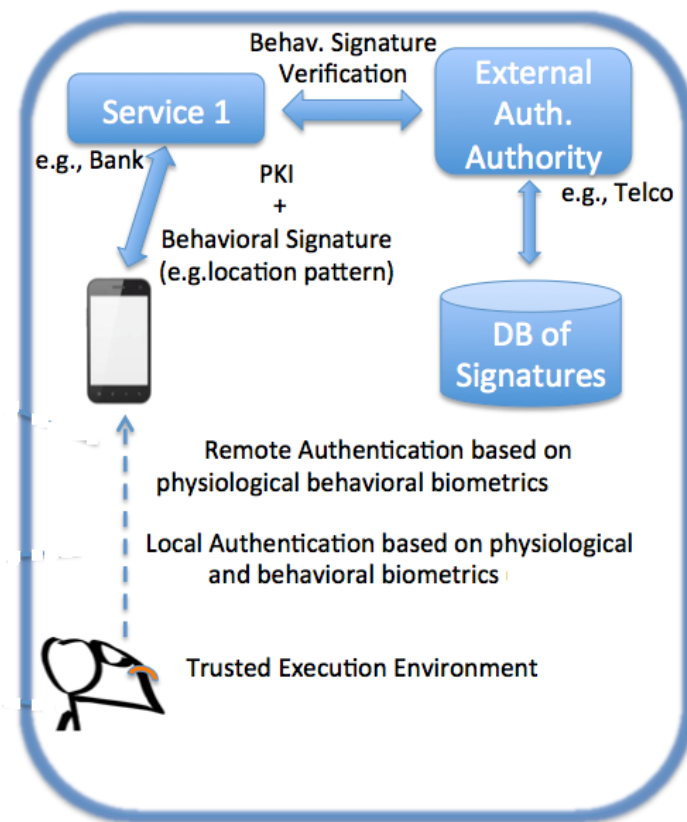
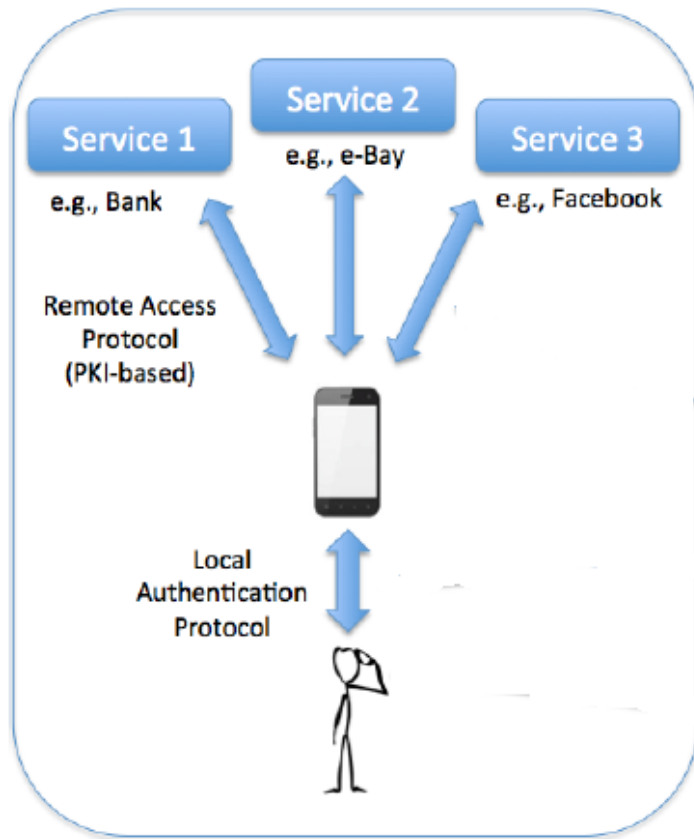




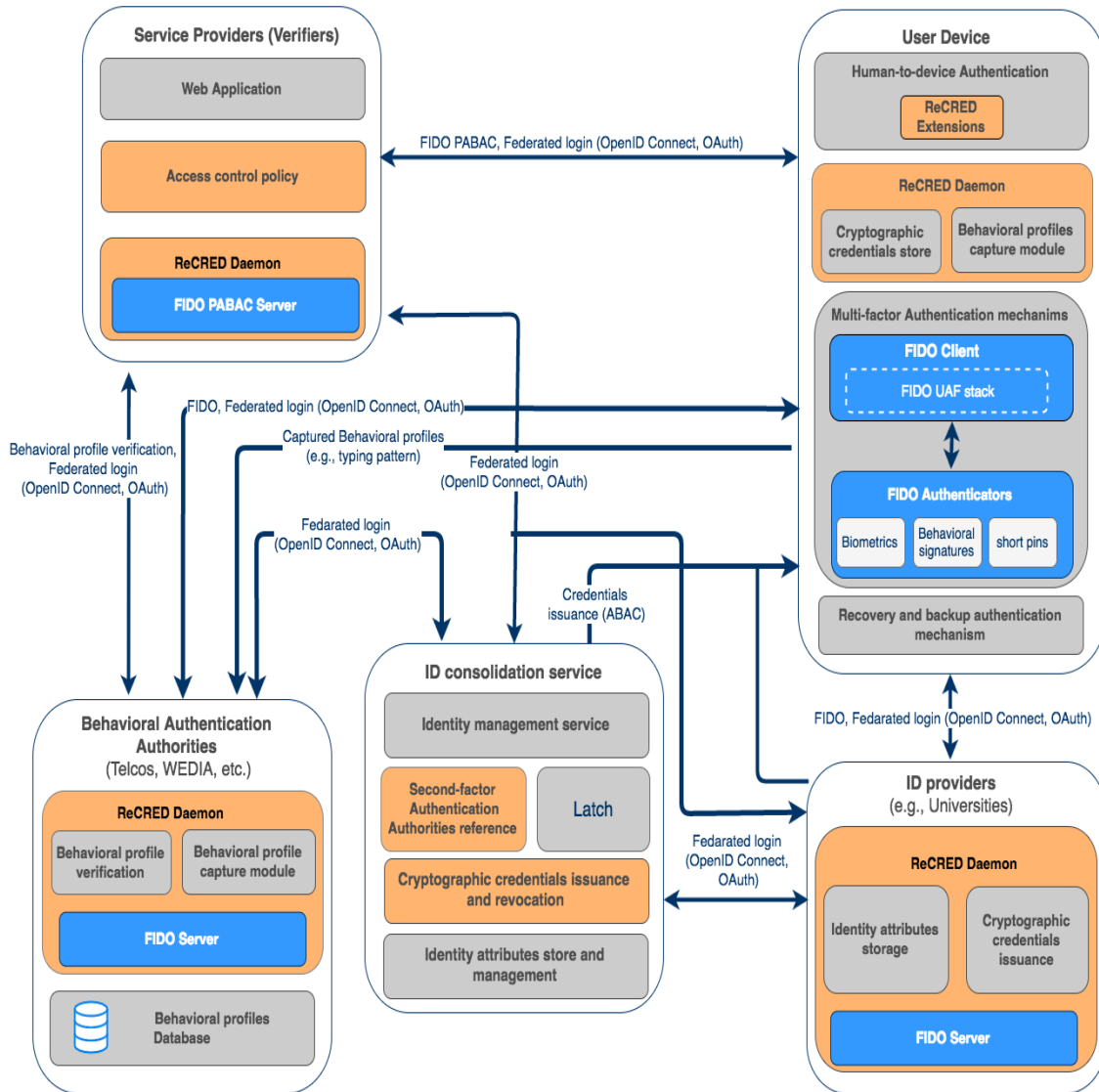
ReCRED's adopted Technologies and Standards



ReCRED's adoption of FIDO

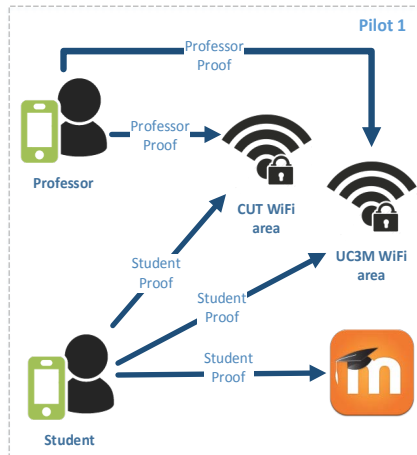


ReCRED reference Architecture

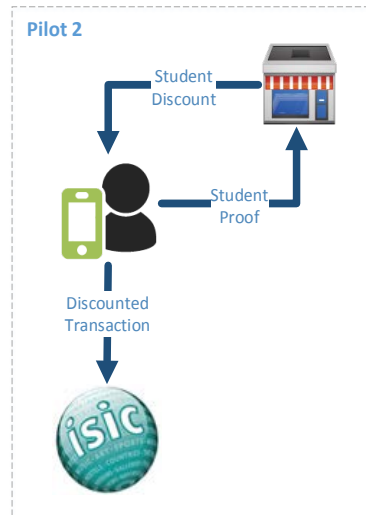


ReCRED's Pilots

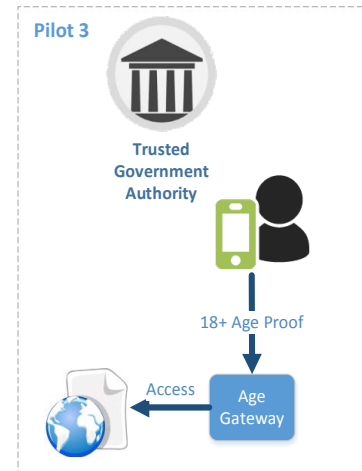
Pilot 1:
Device-centric
campus WiFi and
web services
access control



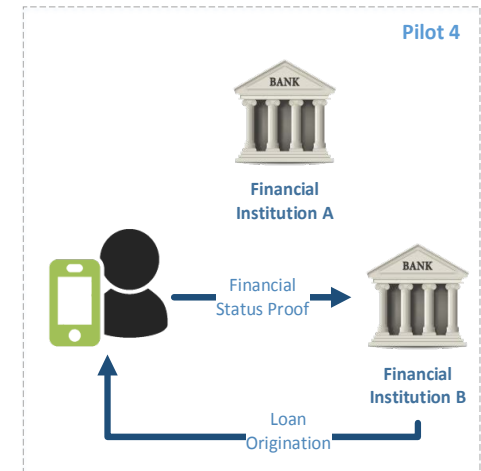
Pilot 2:
Student
authentication
and offers



Pilot 3: Attribute-
based age
verification online
gateway



Pilot 4:
Financial
services –
microloan
origination





ReCRED's Innovation

1. Device-centric Authentication, Password-less experience, FIDO UAF
2. Fine-grained control of identity attributes to be revealed (ABAC)
3. FIDO + OpenID Connect Integration
4. Support for privacy-preserving ABAC (Idemix, U-Prove, CP-ABE)
5. Biometrics and behavioral authentication
6. Single Sign On (SSO) with federated identities
7. Enhanced security & privacy by employing the crypto functions and secure storage of TEE
8. Unlinkability & untraceability





Where to find more information

www.recred.eu

Linkedin:: [ReCRED - H2020](#)

Facebook: <https://web.facebook.com/ReCRED-393935714133064/>

Twitter: @ReCRED_H2020

DBIR REPORT:

http://www.verizonenterprise.com/resources/reports/rp_DBIR_2016_Report_en_xg.pdf

Thank you.