

- \* A secure national identity system for Irish Citizens using distributed ledger technology

## \* Securing Citizen ID

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- \* There are a number of problems with **physical identity**;
- \* It's based on the **possession** of certain documents.
- \* In reality I may have said documents in my possession, but I may not be that person.
- \* I can also **falsify** and change physical documents.
- \* Human **error** is also more likely when keying in information from physical paper

## \* Proving who I am

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Identity is a collection of pieces of information (**attributes**), that can come from multiple sources and that describes an individual and can ultimately determine their entitlements in different situations. Attributes fall under three groups

- \* Inherent - age, date of birth
- \* Accumulated - bank account, health records, education
- \* Assigned Attributes - National ID number, email address, PPS number

**\* Identity**

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The screenshot shows the MyGovID login page. On the left is a login form with fields for 'EMAIL ADDRESS' and 'PASSWORD', a consent statement, and a 'Login with MyGovID id' button. On the right is a callout box titled 'Login with MyGovID id' that lists the details shared with government bodies. A green arrow points from the callout box to the login button on the form.

**Login with MyGovID id**

Having trouble logging in?  
What details will be shared with Government Bodies?

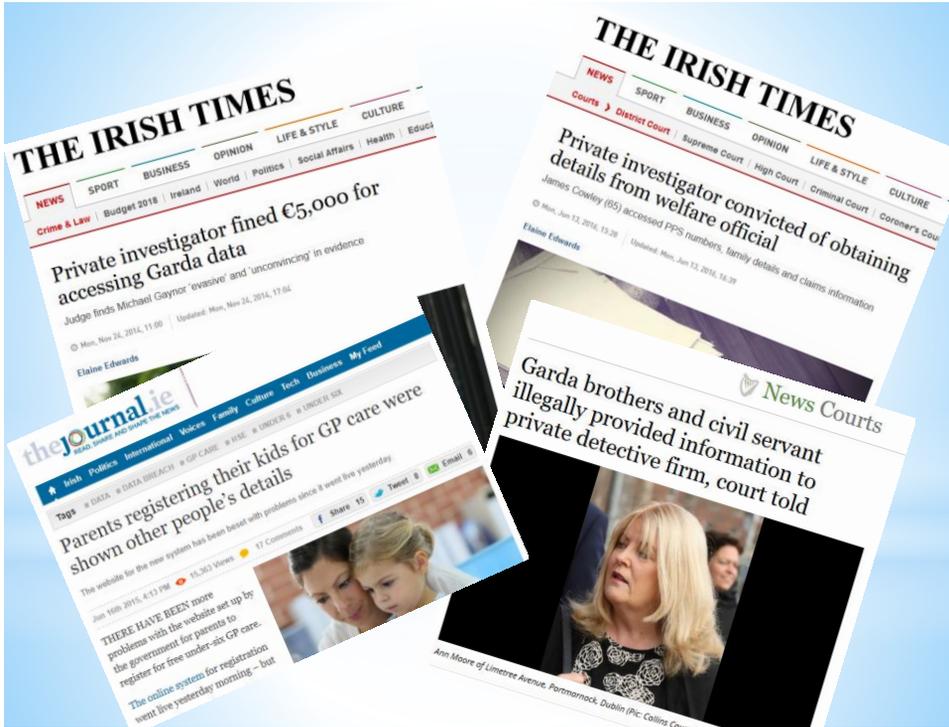
Some or all of the following:

<b>Personal details*:</b>	<b>Contact information:</b>
PPS Number	Full name
Previous PPS Numbers	Email address
Date of birth	Phone number
Gender	
Nationality	
Address	

\*As held by the Department of Social Protection

**\* Attaining real security & real privacy?**

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\*It's not really who you are, but what you are entitled to

\*ATTRIBUTES not  
Credentials

6

**Self-sovereign identity is...**

Lifetime portable digital identity for any person, organization, or thing that does not depend on any centralized authority and can never be taken away



## \* Self Sovereign Identity

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\*DIDs (decentralized identifiers) were a new type of identifier intended for verifiable digital identity that is "**self-sovereign**", i.e., fully under the control of the identity owner and not dependent on a centralized registry, identity provider, or certificate authority.

Source: W3C Draft Community Group Report 18 July 2017. *Decentralized Identifiers (DIDs) 1.0 Data Model and Syntaxes for Decentralized Identifiers (DIDs)* <https://opencreds.github.io/did-spec/>

## \* Decentralised Public Key Infrastructure

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- \* **Existence** Users must have an independent existence.
- \* **Control** Users must control their identities.
- \* **Access** Users must have access to their own data
- \* **Transparency** Systems and algorithms must be transparent.
- \* **Persistence** Identities must be long-lived.
- \* **Portability** Information and services about identity must be transportable
- \* **Interoperability** Identities should be as widely usable as possible.
- \* **Consent** Users must agree to the use of their identity.
- \* **Minimization** Disclosure of claims must be minimized
- \* **Protection** The rights of users must be protected

## \* Principles of SSI

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- \* Taking the ledger analogy in Blockchain, we need to focus on the **transactions** rather than the content

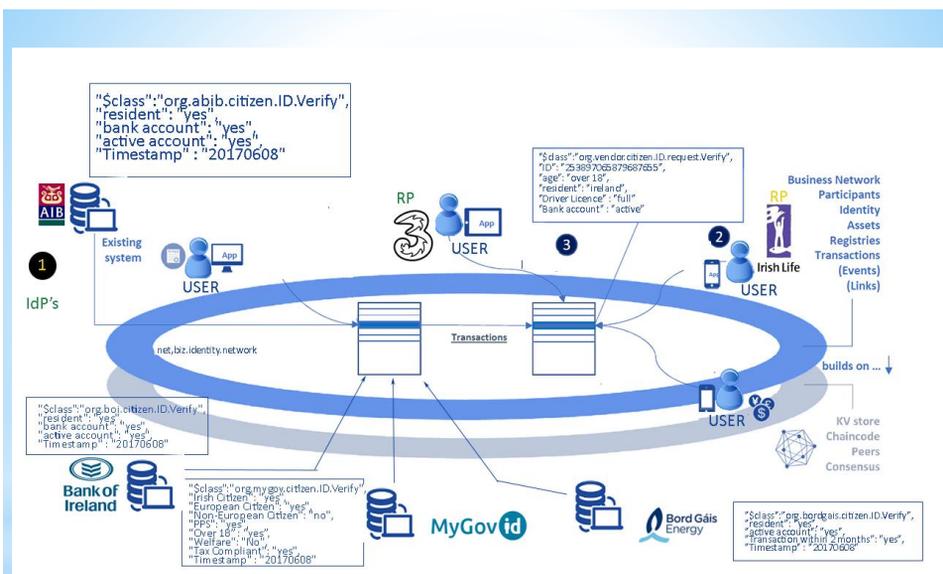
\* Ledger

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- \* Blockchain has evolved rapidly since 2017
- \* Many new options available in 2019
- \* Standards emerging rapidly (W3C)
- \* Many choices in terms of offerings and aspects of identity security
- \* Blockchain requires collaboration & interoperability

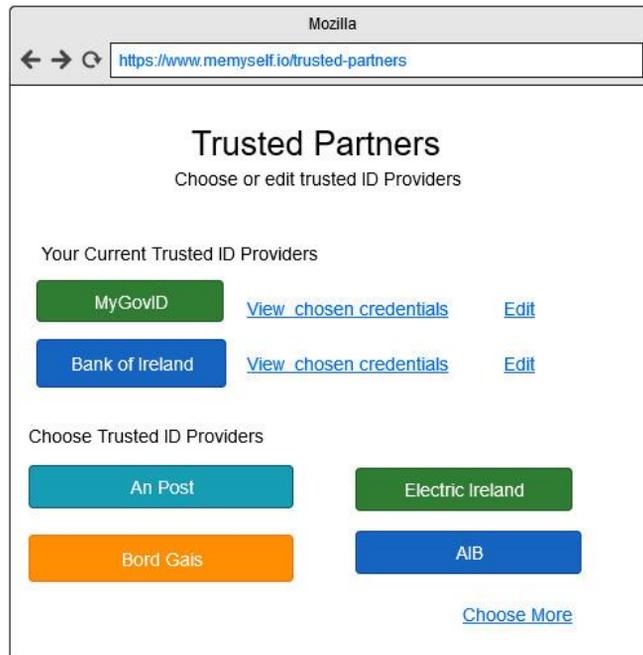
## \* Blockchain

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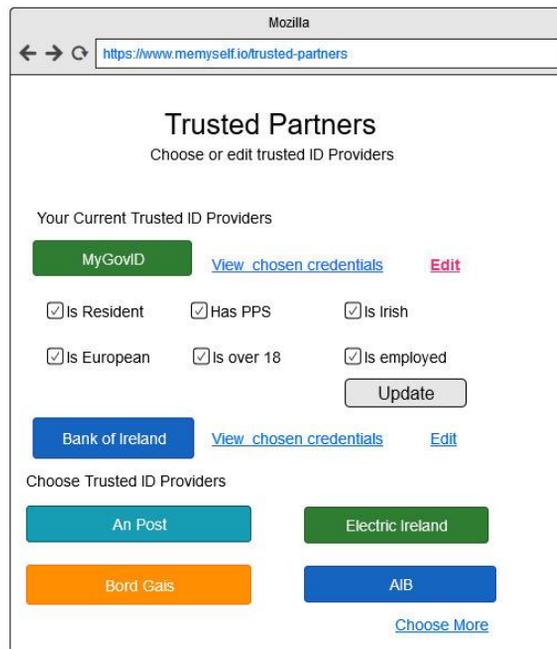


## \* Irish Identity Network

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## My BGE Dashboard

Hi      Welcome to your new My BGE Dashboard

### My Identity

 **You are currently signed up to our Identity Service** I want to: [View account](#)  
 You can use our identity service to verify your credentials with other service providers. [Add/Update](#)  
[View history](#)

### My Accounts

All of your accounts displaying ?

Dublin

<b>Residential Gas</b> ACC. No: 62 GPRN: 0067 Paperless: Yes Level Pay: NO	Balance: <b>€0.00</b>	I want to: <a href="#">View &amp; print bills</a> <a href="#">Make a payment</a> <a href="#">View account</a>
<b>Residential Electricity</b> ACC. No: 16 MPRN: 100C Paperless: YES Level Pay: NO	Balance: <b>€0.00</b>	I want to: <a href="#">View &amp; print bills</a> <a href="#">Make a payment</a> <a href="#">View account</a>

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**\*Contact Me**

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